

# FOURTH ANNUAL REPORT TO CONGRESS

OF THE

## FEDERAL BOARD

FOR

# VOCATIONAL EDUCATION

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1920

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SECTION I. Report of the Vocational Education Division.—Promotion of vocational education in the States.

SECTION II. Report of the Rehabilitation Division.—Vocational rehabilitation and return to civil employment of disabled soldiers, sailors, and marines.

SECTION III. Report of the Industrial Rehabilitation Division.—Vocational rehabilitation and return to employment of persons disabled in industry or otherwise.

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<sup>1</sup> Appointed Sept. 15, 1920.



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**LETTER OF TRANSMITTAL.**

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FEDERAL BOARD FOR VOCATIONAL EDUCATION,  
*Washington, D. C., December 1, 1920.*

To the PRESIDENT OF THE SENATE AND THE SPEAKER OF THE HOUSE OF  
REPRESENTATIVES OF THE SIXTY-SIXTH CONGRESS:

By direction of the Federal Board for Vocational Education, and in accordance with the provisions of the several acts of Congress under which the board operates—i. e., the vocational education act of February 23, 1917, the rehabilitation act of June 27, 1918 (soldiers, sailors, and marines), and the industrial rehabilitation act of June 2, 1920—I have the honor to submit the following report.

Respectfully,

WILLIAM B. WILSON,  
*Chairman.*

JAMES P. MUNROE,  
*Vice Chairman.*



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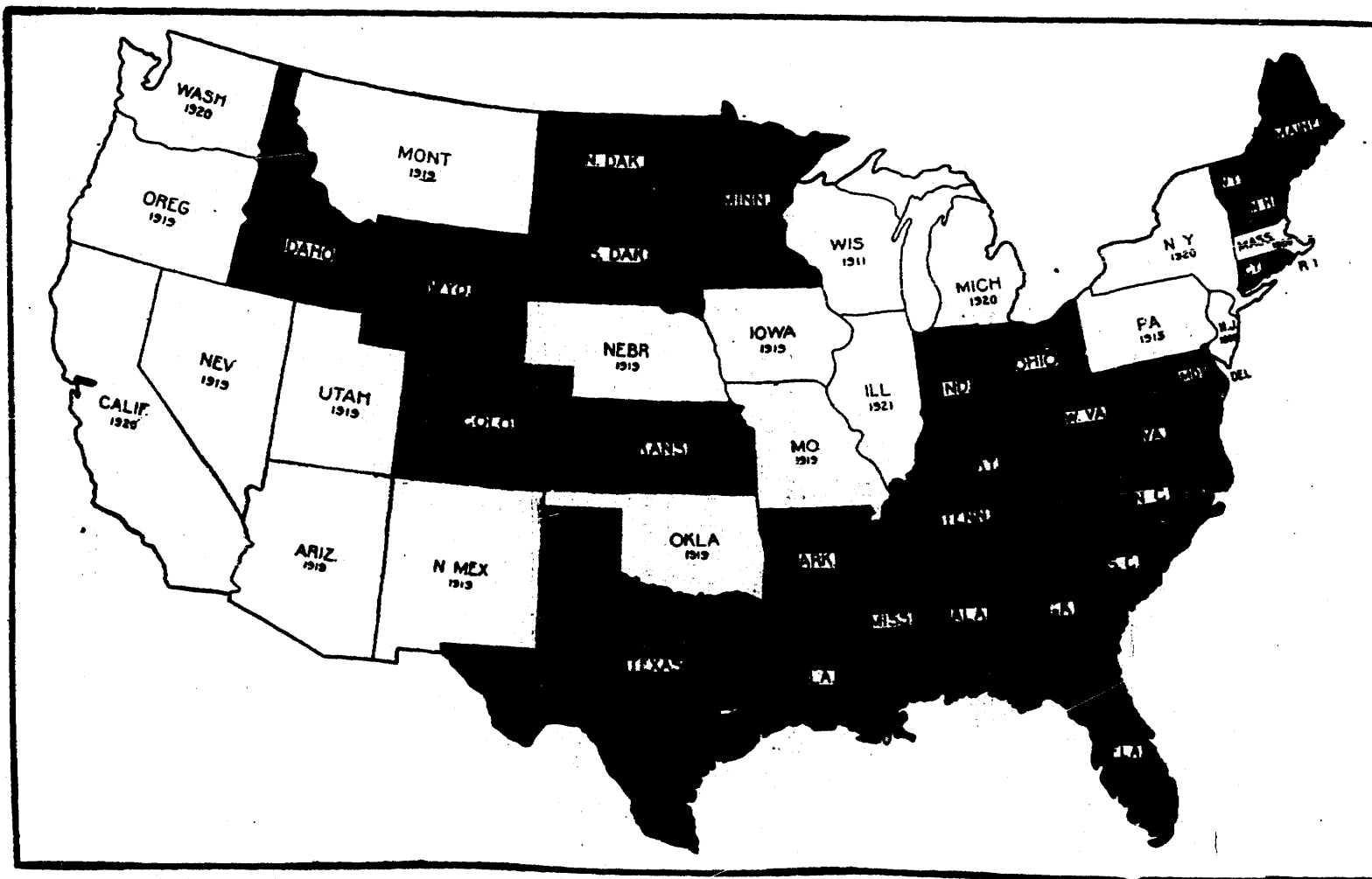
## **SECTION I.**

### **Report of the Vocational Education Division--Promotion of Vocational Education in the States.**

**PART I. Progress and Needs of Vocational Education.**

**PART II. Summary of Progress by States.**

**PART III. Statistical Report--Tabulations from State Annual Statistical and Financial Reports to the Federal Board for Vocational Education.**



Compulsory part-time school legislation in the United States. [States which have enacted compulsory part-time school legislation in white; with year in which law became or will become effective.]

## **PART I.**

### **PROGRESS AND NEEDS OF VOCATIONAL EDUCATION.**

#### **A. TRADE AND INDUSTRIAL EDUCATION.**

The slackening of interest in the establishment of classes for trade and industrial education, especially evening classes, so noticeable during the year preceding the last annual report, continued somewhat into the present year. This falling off in the number of classes established was almost entirely due to the signing of the armistice and the sudden relaxation from the tension caused by the necessity of furnishing large numbers of skilled workmen for Army occupations. In a few of the States the vocational work, especially the evening classes, had been merely a war measure, and the interest therein could not survive the urgent need. During the year just closed, however, a very noticeable reaction is apparent in many States. The war and the success of the short and intensive training in part-time and evening classes had taught the workers the possibility and value of a newer type of vocational education. Following the readjustment period demands began to be made upon the State and local authorities for similar forms of training to take the place of the classes discontinued. This reaction has in many instances been an important factor in helping to forward the general movement.

The reports of the States indicate beyond a doubt a very general forward movement in this country, as shown not only by an increase in the number of classes established and the number of subjects offered, but also by a better grasp of problems and improvement in the standards set up by the State and local authorities for the conduct of day, evening, and part-time classes in vocational education. The reports from more than 80 per cent of the States show decided advancement in at least some large phase of the work, and in many cases advancement in all lines. A better understanding of administrative problems is apparent, together with a conscientious effort to meet these problems through the employment of experts and additional supervisors. States with satisfactory progress usually show good leadership and good administrative machinery. It is interesting to note also that new types of schools and classes differing from those which have usually been considered have been established by the States more generally than heretofore, thus showing that the growth has been not simply numerical but also one in appreciation

of the fact that the vocational field is restricted only by the number and complexities of the vocations offered to workers in the communities where the schools are established.

One very gratifying factor in the development of trade and industrial education to fit the local needs is the evident use of the educational and vocational survey by the State. Through suggestive material and sets of blanks and by conferences the Federal Board has so carried this idea forward that it is now much more widely employed than a year ago.

During the present year, also, many new interests have arisen and some new modifications of older ones. The problem of training apprentices for railroad shops under a cooperative agreement between the public-school system and the shop has come prominently to the front. A large number of compulsory, or partly compulsory, part-time laws have also been passed in the various States, and the relationship between these laws and the general continuation and trade extension part-time classes has received much attention. For the first time serious consideration has been given to interstate questions which have necessitated joint conferences between State officials for the purpose of working out cooperative agreements and larger general principles. In bringing about such conferences some agency larger than the State is almost indispensable and here the Federal Board has been able to function to good purpose. The problem of women in industry, which came up acutely as a war measure, has led to renewed activity in investigating the various lines of industrial training for women. The passage of the vocational rehabilitation act for those injured in industrial employment has also aroused new interest and presented to the vocational worker an entirely new line of activity.

Besides the above factors, there is noticeable in the reports of the States an interest in problems of a less general nature, but of equal importance. Plans have been made for extensive training in the mining industry and similar plans are under construction for extending the training of Negroes in the South. Classes under public supervision have been established in navy yards. City directors have been appointed in large numbers at general increases in salary which have made it possible to secure improved administration. More effective results are noticed also in reports on the combining of teacher training for the trades and industries with supervision of the same and the establishment and improvement of general industrial education. Likewise the tendency of the State to administer teacher training and other forms of training directly rather than indirectly, as frequently in the past, is a most encouraging sign.

As a whole, therefore, the general improvement in the provisions made for providing education in the trades and industries is un-



disputed, and an advancement over any provisions made in previous years is clearly evident.

### SUPERVISION.

Reports from the various States and the experiences of the Federal Board all go to show that an improvement and extension of industrial education in any State varies directly with the excellence and amount of supervision which that State provides. In practically every instance where a report indicates the employment of a superior supervisor or an increased number of supervisors, the same report shows decided improvement in all lines of vocational schools. During the last two years special efforts have been made to assist the States in selecting and appointing supervisors of trade and industrial education and this is especially true of the year just closed. A most gratifying general improvement in supervision is reported from all over the country. More than one-third of the States report their supervision as decidedly improved over the preceding year and in many instances mention follows at once of increased activities in the State with consequent spread in vocational work. Only 1 State has reported a falling off in the quality of its supervision; only 1 State has no supervision; and only 7 States of the 48 now consider their supervision inadequate.

The above refers more specifically to supervision for men, although in most cases supervision of vocational education for women is included under the same head. A lack of special supervisors to handle the work for women alone is apparent in many sections. Constant effort has been made during the year to bring about the appointment of women supervisors who shall devote their time exclusively to trade and industrial work for women. It is also to be observed from these reports that in some sections there is a tendency to divide supervision among several part-time workers from other lines of instruction or from some institution. This tendency has notably decreased since last year, but has not yet reached a point that is wholly satisfactory to the Federal Board. The tendency of a large number of States to supervise directly various activities which were formerly left to supervisors loaned or assigned by other agencies is one which, being encouraged, will do much to centralize authority and responsibility and thus bring about a more efficient supervision.

### SCHOOLS AND CLASSES.

Because of the rapid growth in the schools and classes reported for the year ending June 30, 1919, some slackening in this spread of vocational work might have been expected for the year just past, but such was not the case. A generous increase in the number of schools and classes is reported from all sections of the country, and

many statements indicative of further growth are included in these reports. This is particularly noticeable in the South, where the extension of evening work has been so exceptional as to attract special attention, several States showing increases of from 50 to 300 per cent. As might have been expected, the part-time and evening classes have grown much more rapidly than the day schools, but these latter have shown healthy and satisfactory advancement.

#### 1. DAY SCHOOLS.

New day schools have been established in 22 of the 48 States during the past year. Twenty-four States report the same number of day schools as last year, while only 2 States show a falling off in the number of day schools in operation. Of the 24 States reporting no changes, 7 have never established any day schools whatever. This latter statement, however, must be received with full regard for the fact that States may establish part-time cooperative schools, with their students a half day in the classroom and a half day in the shop, such schools to take the place of the all-day trade school, in which case the State, while supplied with a system of education carrying on work similar to that of the day school, would report no day schools as in operation. Advance in the number of day schools and in the quality and standards of the work given in them, while gratifying, is not always the best evidence that a State is meeting its vocational educational needs. Day schools should be generally established only after educational and industrial surveys have disclosed definite opportunities for trade preparatory training on a full-day program, and have shown that this training is superior to other forms of trade training that might be established in the community.

#### 2. PART-TIME SCHOOLS.

All types of part-time schools and classes have grown rapidly during the year and the outlook for the coming year seems still more promising. Very important factors have been at work affecting the extension of part-time schools. A large number of States have passed compulsory part-time laws which have operated in some instances to force the establishment of part-time classes and in other instances to develop part-time classes on an elective basis as a preparatory means of meeting the requirements of the law at some later date. In all cases they have stimulated interest in the part-time problem. In some States dissatisfaction with the work of the day schools has led to an investigation of the advantages of part-time instruction; in other cases the need for labor, especially in certain industries employing large numbers of juvenile laborers, has caused manufacturers, associations, and individual employers to cooperate much more heartily in the establishment and maintenance of part-time education.

A better understanding of the part-time problem has also caused renewed interest; many pamphlets, bulletins, and articles dealing in a practical way with the establishment and maintenance of part-time schools, the aims and ideals of such schools and classes, and the educational philosophy underlying their use have appeared from time to time in various parts of the country and contributed to awakening among educational thinkers and others a realization of the possibilities of the part-time school.

The general continuation part-time classes show the greatest numerical growth, as these classes are more easily established and are generally the first to be opened after the passage of a compulsory law. Trade extension classes, however, are increasing rapidly, and trade preparatory classes have made a commendable showing. Thirty-six States have reported additions to their part-time schools and classes, only 1 a falling off in its part-time work, while 11 of the remaining States apparently have stood still so far as such work is concerned, 7 of them reporting no part-time education of any kind. The coming year should show a decided advance in all lines of part-time schools and classes, but especially in cooperative courses and trade extension classes, since these more nearly supply the vocational needs of those who have left the public schools and gone to work.

### 3. EVENING SCHOOLS.

The evening school reaches a wider field and proves more interesting than any other feature of vocational education. It covers apprenticeship training in part for many young men and women over 16 and under 18 or 20 years of age, and supplies opportunities for advancement to thousands of adult workers who have passed completely from under the influence of any other kind of training or chance for improvement. Evening-school classes, since they must hold adults without compulsion, must offer not only interesting and attractive courses but also work the value of which is immediately tested and proven by application to the everyday life of the student. Courses must be intensive, practical, and effective. It is proof of the success of the efforts of the year just past to find that during that time evening classes have shown a growth far in excess of that in all other lines combined.

The evening school affords the most practical method for effective cooperation of experienced men in industry to render teaching assistance. Employers, foremen, and skilled workers have the opportunity through evening classes to become most efficient teachers.

Reports of 44 of the 48 States show an increase in the number of evening classes—in some instances small, but in nearly all cases large. In Florida, for instance, the evening classes increased from 17 to 57, in North Carolina from 5 to 71, and in Tennessee from 14 to 42.

It is not easy in all cases to compare the increase in classes, owing to the fact that some States report their classes by cities and others by schools. The growth in evening work was by no means restricted to the South. The classes in New York grew from 54 to 234, while in Pennsylvania the number of cities having evening classes grew from 13 to 19 during the year just ended. Only 1 State reported a falling off in the number of evening schools or classes in operation, and only 1 State reported no advance in number. Just 2 States out of the 48 conducted no evening-school instruction under Federal aid during the past year. The fact that 46 of the 48 States are already committed in whole or in part to the evening-school program, and that 44 of those States have increased the number of schools and classes during the year is evidence of the permanency of trade training for those already employed in occupations for which they are not fully prepared, or seeking promotions for which the occupation itself does not supply the necessary preparation.

#### TEACHER TRAINING.

The success of the program for vocational education in a State depends very largely upon the scope and success of the State's plans for training teachers to conduct classes in the trades and industries. For this reason the Federal Board has always devoted much time and attention to assisting the States in perfecting their teacher-training programs, and during the past year has made a special effort to improve and increase this work. A very satisfactory response has usually been found, and whereas some few States have not as yet given serious attention to the problem, most of them have teacher training in progress and not a few have extended and improved their courses to a remarkable degree.

Two factors have aided greatly in this advance. The slackening in preparation of teachers for special war classes and of teachers in plants doing war work, which affected the spirit of teacher training in some places during the preceding year, has been followed by a renewal of interest for such training along normal lines. The revival of evening work has brought with it the feeling that these new classes need trained instructors as did the war classes. The war experience proved the value of short intensive teacher-training courses for mechanics, and State authorities naturally turned to such courses for their permanent evening-school teachers. This has caused an increase in the extension class for training mechanics as teachers, a class established at or near the homes of the men and women, even though it may be administered from some more distant point. Such classes are more and more being directed by State officers without intermediate agencies, which adds to the expert staff of the State. Where old-line institutions are conducting this work, it reacts favor-

ably upon them and upon their day residence courses for vocational teachers, often producing closer cooperation between them and the State department.

The second cause for the growth of teacher-training work is the need for teachers in plants. The readjustment following the war has again filled the plants and factories with untrained help. Employers are more and more appreciating the value of training courses in and out of their plants and are calling for teaching foremen and teaching mechanics to do the instructing work. The States are responding to this demand and the Federal Board is sparing no efforts to assist in this response.

Teacher-training plans in general call for classes for both shop and related-subjects teachers. The shop teachers are largely skilled mechanics drawn from the trade. Heretofore low salaries in educational work have made difficult the securing of high-grade mechanics for these classes and salaries are still lagging behind the wages paid for production. But in not a few places substantial advances have been made in the salaries of expert shop teachers, so that this field is becoming more attractive financially. One State, at least, has also established scholarships for preparatory expenses of mechanics leaving work to attend all-day instruction. For the most part, however, the work throughout the country is done in evening classes offering free instruction, but providing no financial assistance. More liberality for training practical men as instructors in trade education is needed in most of our States.

Considering the subject of the instructor training as a whole, advances have been made in the following points:

Methods of selecting and grading candidates.

Adaptation of trade analysis to teaching problems.

Concentration of courses of study.

Elimination of old-line and general material in pedagogy and general informational work.

Practice teaching opportunities.

Some States, however, still plan to try to train their mechanic teachers in long, general day courses at established institutions, and some are giving no training whatever. These are matters of immediate concern for the year just commencing. Along with them should go also special attention to the training of teachers for part-time schools in classes organized and conducted for these teachers alone. Another regrettable element not infrequent in reports is the statement that this or that institution has been designated by the State board as the official teacher-training institution for Negroes, but that no provision has been made for the carrying on of this type of work. A campaign for extensive teacher training for Negroes in trade and industrial subjects should be inaugurated, and if the institutions already desig-

nated will not take advantage of their opportunity, they should be replaced by others.

One State alone of the 48 offers teacher training in trade and industry work especially for women. In most of the States the courses when strictly related to industrial work are for men alone, although a few States are providing training for both men and women. A much more liberal provision for training women as instructors in trade education is needed in the majority of States.

Reports for the year ending June 30, 1920, indicate that 30 States are conducting teacher-training work that is either entirely satisfactory or very good, with many promises for improvement. Nine States have teacher training that may be classed as only fair, either because it has not covered the entire field of possibility in the State, or because the work has not been in the hands of men especially trained for conducting it. Eight States have no teacher training in trades and industries whatever, and one has such training only in summer courses offered for the most part to teachers already employed. The following table gives further concrete data regarding the teacher training offered by individual States:

State.	How administered (by State board or institution).	Kinds of teachers being trained				Number of instructor trainers.
		In residence courses.	In extension courses.	By itinerant teachers.	By correspondence.	
Alabama.....	University of Alabama.....	Related subjects.....	Shop.....	Shop.....		1, full time; 1, one-third time.
	Tuskegee Institute for State board (negro).	Related.....	do.....			1, full time.
Arizona.....	State board.....			Shop and related.....		1, part time.
	University of Arizona.....	Shop.....				1, 60 evenings; 2, 20 evenings.
Arkansas.....	University of Arkansas.....	Related.....	Shop.....	Shop.....		1, one-half time.
	University through branch normal (negro).	Related and shop.....				Do.
California.....	State board.....			Shop and related.....		1, part time.
	University of California, division of vocational education.	Shop and related subjects.....	Shop and related subjects—part time.			2, full time; 9, evening; 10, 24 hours.
Colorado.....	State board.....		Shop.....			
Connecticut.....	do.....	Shop teachers; related subject teachers for certain parts.		This could be promoted.		8
Delaware.....	do.....		Shop and related.....	Shop and related.....		
Florida.....	University of Florida.....		Shop.....	Shop.....		1, one-half time.
	Florida Agricultural and Mechanical College (negro).	Related and shop.....				1, two-sevenths time.
Georgia.....	State board.....			Shop and related.....		1, part time.
	Georgia School of Technology.....	Related and shop.....				1, one-half time.
	Georgia State Industrial College (negro).	do.....				1, part time.
Idaho.....	State board.....			Shop and related.....		Do.
	Idaho Technical Institute and by State board.	Related subjects and shop teachers.	Shop teachers.....	Shop teachers.....	Shop teachers.....	1, 24 hours; 1, one-half time; itinerant.
Illinois.....	University.....		Shop and related.....			2
Indiana.....	Both.....	Shop and related.....	do.....			9
Iowa.....	Institution.....		Shop.....			4
Kansas.....	State board.....	Related.....	Shop and related.....			1
Kentucky.....	Institution.....					
Louisiana.....	Nicholls Trade School and New Orleans City Normal.	Related and shop.....				
	State board.....			Shop and related.....		Equivalent of 3, full time.
Maine.....	State department.....	Related subjects.....				1, part time.
Maryland.....	Agricultural and Mechanical College.....	Related teachers not exclusively for that.	Shop and related in Baltimore.			2, part time.
Massachusetts.....	State board.....	Shop and related subjects.		Shop and related subjects.		1.
Michigan.....	Both.....					21.
Minnesota.....	State board.....	Shop and related.....	Shop and related.....			5.
			do.....			6.

State.	How administered (by State board or institution).	Kinds of teachers being trained				Number of instructor trainers.
		In residence courses.	In extension courses.	By itinerant teachers.	By correspondence.	
Mississippi.....	Agricultural and Mechanical College.....	Related.....	Shop.....			1, one-half time; 2, part time. Pending.
Missouri.....	Alcorn Agricultural and Mechanical College.					
Montana.....	State board.					
Nebraska.....	Institution.	Related.....		Shop and related.....		1, part time.
Nevada.....	State board.		Shop.....			2.
	do.....					1.
New Hampshire.....	State board for all except related day work at Agricultural and Mechanical College.	Related.....				No teacher-training given the current year.
New Jersey.....	State board.....					1.
New Mexico.....	do.....		Shop.....	Shop and related.....		4.
New York.....	State office, Buffalo Normal, Oswego State College for Teachers.	Shop and related.....	Related and shop.....		Related and shop.....	2.
North Carolina.....	Agricultural and Engineering College.		do.....			41.
	Agricultural and Technical College.			Shop and related.....		1, full time.
	State board.....					Pending.
North Dakota.....				Shop and related.....		1, part time.
Ohio.....	Institution.....					Preparations made for next year.
Oklahoma.....	State board.....					21.
Oregon.....	Agricultural and Mechanical College.....	All kinds.....	Shop and related.....	Shop and related.....		1.
				do.....		6, full time; 3, three-fifths time; 1, two-fifths time; 1, one-tenth time.
Pennsylvania.....	University of Pittsburgh.....	Shop and related.....	do.....			7.
	University of Pennsylvania.....	do.....	do.....			4.
	State College.....	do.....	do.....			2.
Rhode Island.....	State board.....					6-4.
	Agricultural and Mechanical College.....	Shop and related; teacher in service.				
South Carolina.....	Clemson College.....			Shop and related.....		1, full time.
	Agricultural and Mechanical College, Orangeburg (Negro).					Pending.
	State board.....					
South Dakota.....	do.....			Shop and related.....		1, part time.
Tennessee.....	University of Tennessee.....	Shop and related.....	Shop.....			2.
						1 director, one-fifth time; 4, part time.
	Agricultural and Industrial Normal.					Pending.
	State board.....			Shop and related.....		1, part time.



Texas.....	Agricultural and Mechanical College.....		Shop.....			2, full time; 1, one-third time.
	University of Texas.....		do.....			2, full time.
	Normal and Industrial for Colored Youths (Negro).					Pending.
	State board.....					
Utah.....	University of Utah.....		Shop and related.....	Shop and related.....		1, part time.
				Part time and related.....	Related subject (sugar, evening class).	One and one-half years.
Virginia.....	Richmond school board.....	Shop.....				1, full time.
	Virginia Normal and Industrial College.....	Shop and related.....				1, two-thirds time.
	Virginia Polytechnic Institute.....	Related.....				1, full time.
	State board.....					1, part time.
	Norfolk school board.....	Shop.....		Shop and related.....		Do.
Washington.....	University of Washington.....	Day and night school; shop and related.....				1, two-thirds time;
Wisconsin.....	Both.....	Shop and related.....				2, 48 hour each.
Wyoming.....	University.....			Shop.....	Shop.....	1.

### REGIONAL CONFERENCES FOR INDUSTRIAL EDUCATION.

The Federal Board has held each year regional conferences on trade and industrial education for the purpose of discussing with the State representatives general and specific problems common to the region. Previously these conferences have dealt largely with the legal and administrative aspects of the State and Federal acts, but during the past year they have been enlarged to cover many educational and industrial questions. The beneficial effects of regional conferences in the past have been continued and decidedly enlarged by this change, and the Federal Board feels justified in concluding that such conferences and conferences of even a lesser number of States than those of a whole region are so highly desirable that they should be held regularly as a matter of permanent policy.

The service extended the States in regional conferences this year has been made to include technical instruction in several different lines. Special agents of the Federal Board have conducted short training courses in centers within the region, usually where the regional office was located. Each State was invited to send official representatives from its staff of supervisors and instructor trainers, and as a result every State in the Union has had representatives at one of these conferences where courses for industrial teachers have been given, and the delegates were also supplied the latest information and records of development in industrial education.

Intensive courses of instruction covering a period of two weeks each were held at Atlanta, Ga., Denver, Colo., San Francisco, Calif., Indianapolis, Ind., and Sound Beach, Conn., representing the five administrative regions of the Board.

In these conferences the main emphasis was placed on the subjects of instructor training and educational trade analysis. The subjects of foreman training and industrial surveys were also an important part of the program. A brief synopsis of each of these subjects is given under the following general heading.

### SPECIAL TYPES OF SERVICE TO STATE BOARDS.

Under the national vocational act the Federal Board for Vocational Education, in addition to its administrative responsibilities, has a function in conducting research work to promote the efficiency of trade and industrial education. During the period immediately following the passage of the act the concern of the Board was naturally to establish administrative procedure and to assist the States in establishing forms of training that met the provisions of the law. As the administrative problem has become stabilized the Board has turned its attention more and more to the development of service to the States through research work in different

fields of trade and industrial education and in putting the results of this work at the disposal of States through bulletins and conferences with representatives of State boards. In a number of cases these studies could only have been made through the cooperation of workers and employers, since they dealt in nearly all cases with matters about which information could be obtained only from those actually engaged in industry. The results of this service work as carried on this year have encouraged the Board to look forward to providing for a further development of this service work the coming year.

#### 1. SERVICE TO STATES IN THE TRAINING OF TRADE AND INDUSTRIAL TEACHERS.

The national vocational act provides Federal aid for the training of teachers for the various types of vocational education for which vocational aid is provided in that act. The development of this work in the various States has shown that the most serious problems in the work as carried out under the approved State plans lie in the training of shop teachers rather than in the training of teachers of related subjects.

Since the efficiency of all trade and industrial education depends largely upon the efficiency of the shop instruction the Board has considered the promotion of effective teacher training for this type of instructor as an extremely important part of its service work. The provisions of both the national vocational act and the corresponding State legislation as to qualifications of such teachers, whereby trade and industrial instructors must have had adequate practical experience in the trades or occupation which they teach, have made this problem one of dealing with men and women who already know their own trades, but are not acquainted with the principles and practices of "the teaching trade."

In promoting the training of this group of teachers the Board has felt that, at least in the majority of cases, working men and women who wish to become instructors either in day, part-time, or evening trade-extension schools, should continue to work until they actually secure teaching positions, or, if employed as evening trade-extension teachers only, should continue in their regular occupations during the day. As in many cases they are unable to arrange to leave their regular employment to attend training courses, the main efforts of the Board have been directed toward promoting the development by the State boards of training courses so organized and located that working people desiring some training for teaching their trade could secure it while still working.

As a result of the study of teacher-training work of this type as has been done up to the present time, it has appeared to the Board that the essentials of such teaching can be given in evening classes

established at numerous points throughout the States rather than by undertaking to draw students into one or two central institutions for relatively long training courses. The Federal Board, through its agents and staff, has not only given assistance to the States at first hand in establishing this work, but has also brought the State representatives together for actual instruction in these matters during the regional conferences. Discussions and interchange of opinions, reports of experiences, and actual instruction methods used by special representatives of the Federal Board have spread the gospel of short, intensive, carefully planned and executed courses of training for shop teachers. Work of this character has commended itself to a number of the State boards and is now in successful operation in many parts of the country.

The typical course as laid out in the conference has included the following:

(a) How to analyze and classify the trade, including—

- (1) Jobs that could be taught to a learner.
- (2) Trade mathematics.
- (3) The trade science.
- (4) The trade drawing.
- (5) The safety precautions.
- (6) The care of tools and equipment.
- (7) The trade terms.

This means testing out and classifying what the teacher must teach in order that the learner may be properly trained.

(b) How to arrange the successive jobs and lessons so that the learner progresses from the easiest to the most difficult work, which requires a study of learning as distinguished from production difficulties, and the arrangement of what must be taught into courses of instruction.

(c) The essential elements of the teaching process, i. e., giving the prospective teacher an insight into the teaching methods common to all good teachers and providing an opportunity for him to practice them with the help of a good teacher.

—(d) Instructional management, including—

- (1) Organization for teaching.
- (2) Handling learners under instruction.

This means a consideration of the various possible kinds of organization that have been developed for trade and industrial training as distinguished from organization for production, and consideration of methods of handling learners in so far as they differ from methods used by foremen in handling competent workers.

Experience has shown that men and women who have taken such courses as described above have shown marked superiority in their ability to teach their trades as compared with those who have gone into teaching directly from the trade without such a teacher-training course.

Formulation of such courses, especially as regards analysis and classification of trades has been greatly facilitated by the second class of service rendered the States, "Educational trade analysis."

## 2. SERVICE TO STATES IN EDUCATIONAL TRADE ANALYSIS.

A similar form of service to the States, carried on by the Federal Board during the past year, both by actual assistance to the States through studies made on the ground and by a series of regional conferences on the subjects, has related to educational trade analysis. At the various conferences the survey blanks, prepared by members of the staff of the Federal Board, were taken up and explained. Sample blanks were used and analysis charts developed. Discussions were held regarding the methods of securing information and the best means of analyzing the same; and regarding the making of programs and courses of study from the various analyses obtained. These discussions and explanations, when carried back to the States by the various representatives, have aided materially in introducing the idea of trade analysis into the educational programs of the various State departments.

The representatives of the Federal Board have also conducted surveys of the machine-shop trades, coal mining and coke manufacturing, boiler making, potteries, textiles, and the paper and pulp industry, either independently or with the aid of the State-men. In all cases, however, this work has been done in cooperation with the State offices. As a result of these various analyses seven bulletins have been published—namely, No. 52, dealing with the machine-shop trades; No. 30, on textiles; and Nos. 38, 39, 40, 41, and 42, giving information regarding mining and coke manufacturing. In addition, a bulletin on the pottery industry is ready for the printer, and one on paper and pulp will be ready shortly. Another on boiler making is in progress, as is also a small pamphlet on silk textiles, prepared by an official of the New Jersey State Department of Education cooperating with a representative of the Federal Board.

A number of States are now conducting or proposing to conduct industrial surveys for educational trade analysis. Representatives of the Federal Board are assisting in organizing and analyzing the information obtained.

The publication of Government bulletins containing this information in a form to be easily grasped and utilized both by those connected with the industries and by the educational authorities of States and cities is one of the greatest services the Federal Board can perform. From every side come letters of application for material already available and repeated requests for the results not yet in print. As lack of funds has been the greatest hindrance to getting these bulletins before the people, it is hoped that some fixed sum will be provided each year sufficiently large to insure the printing of all bulletins dealing with concrete teaching material gleaned from our surveys or occupational inventories. No better use can be found for the money required for this purpose.

## OCCUPATIONAL INVENTORIES.

Since the Board holds that trade and industrial education will be efficient only so far as it deals with principles and practices as they are actually found in occupations, and that only persons actually engaged in the work are competent to give such information, the occupational inventories have been built up from information secured from expert workers in typical plants. Furthermore, these expert workers have been closely observed at their work and information obtained showing what they do, how they do it, and what they must know to do it well. The plants have been inspected not with a critical eye but with an eye to improve the conditions for trade instruction. The method used in performing this service is described in the preliminary statement of the following survey or inventory of the pottery industry.

## SURVEY OF THE POTTERY INDUSTRY—SYNOPSIS OF METHODS USED AND CONCLUSIONS ARRIVED AT.

In submitting the report of the pottery survey as a supplement to the annual regional report, the following statements regarding the methods by which the information was collected are submitted as requested by the assistant director:

The agent first visited the administrative officers of four plants and obtained permission to make studies of the pay-roll jobs in the plants. He next secured the names of the under executives and foremen with whom he would come in contact in the two plants where the first studies were made. One of these plants was selected and a day or two spent in going through the plant as a whole, meeting the under executives and foremen and collecting all of the general data and information which could be given without a specific study of each pay-roll job.

Next, the agent studied the workers in each pay-roll job individually; noted exactly what they did, exactly what they needed to know to do their job, and at the same time working conditions, sanitation, safety, etc.

He followed a similar course in the second plant, omitting all pay-roll jobs that were identical in the two plants.

The results of this investigation were then written up in the form of a report, copies of which were submitted to the two plants studied. While these copies were being reviewed by the men in the plants, similar copies were taken to the two plants which had not been studied and were reviewed in the presence of the best pottery experts in those two plants, and whatever suggestions, criticisms, and differences of opinion these men held were noted. As a result of these conferences and with the returned and corrected copies from the plants originally visited, a final report of the survey was made. Upon this report a conference was called between Mr. Charles R. Allen, of the Washington office, and the regional agent, at which was made a full analysis of the pottery industry on analysis blanks, such as are attached to this report.

These analysis blanks were then taken to the potteries originally visited and to the potteries in Beaver Falls, Pa., East Liverpool, Ohio, and Newell, W. Va., where experts in the different lines of pottery work went over the analysis with the regional agent and the agent for the middle west territory and offered

many valuable additions and suggestions. The revised charts were then recopied and submitted to the potteries originally visited for final inspection.

The composite report, which is here presented, contains, therefore, a report of the actual investigations of the agent, which has been several times recopied, resubmitted, and verified by different potteries, and a set of analysis charts which have been twice recopied and submitted for verification and criticism to the different potteries.

Undoubtedly this procedure might continue indefinitely, and there would still be differences of opinion and opportunities for criticism from other potteries in the country, but in the opinion of the agent sufficient time and attention has been given, not only to the collecting, but to the recopying and verification of information, to insure that in practically all cases this report is correct.

The general character and detail of the information so obtained is best indicated by submitting here exact samples of all the blanks used in making a study of one pay-roll job in a pottery plant—the job of the caster. The blanks used, the information obtained, and the resulting analysis chart are all given in order.

*Department—Clay shop—10.*

*Name of pay-roll job:* Casting.

*Work jobs:* 1. Stirring slip.

2. Straining and pouring.

3. Pouring molds.

4. Pouring out molds.

5. Drying.

6. Trimming in molds.

7. Opening and taking ware out of mold.

8. Cleaning molds.

9. Finishing.

*What he does:* The slip is mixed in a barrel by the foreman or some one delegated for that purpose. The caster must stir this thoroughly and add water if needed. The slip is then turned out into a container. Using a pitcher the strained slip is poured into the mold and left until the plaster absorbs enough water from the clay to form an outside shell of clay of the proper consistency with soft inside. The inside is then poured into a container and the mold set away to dry.

The molds are set on a bench upside down on a slant so as to drip. When sufficiently dry, the ware is trimmed before opening the mold. The top of the mold is scraped clean with a scraper. The excess clay in the mold above the form is pushed from the edges by hand and cut out or pulled off. The upper edge of the ware is then trimmed with a knife, so as to bevel up the side of the mold; then the inside of the top is smoothed and pressed in with the thumb and fingers to the edge of the mold.

The mold is then opened and the ware taken out. The clay is picked and scraped from the mold, which is put back together for the next pouring.

The ware is then finished by scraping and sponging. The ware is scraped with a knifelike tool to remove all lines left by the mold and is then sponged. It is now set on drying racks or bars and is ready to go to the kiln.

Teapots, when spouts or handles are stuck on, have holes drilled on the inside of the pot, so as to afford an opening into the spout before the spout is stuck on.

In sticking on a hollow piece, as, for instance, the bottom cut in a match-box holder, a small hole is drilled to let the air out, or it will crack when fired.

Ware in which handles are cast when they dry do not fill up flush with the side of the ware. They draw in, leaving a conical depression. This is plugged with clay.

The cast sides and pressed plug do not contract alike, making difficulty here when the fire heats it, causing cracks if not properly done.

Where pitchers, jugs, and hollow ware need a heavy bottom, or where the bottoms are to be even, the caster on pouring out leaves some slip standing in the ware, which dries and gives thickness. Thus the bottom of a thin gravy bowl is weighted on the inside—if a footed pitcher it is made smooth, due to the fact that the necessary liquid slip is left in the bottom of the piece of ware. In case of jugs, pieces of ware requiring the handle to be stuck on the top edge, a metal tool is used for working the top of the handle and piece of ware together before sponging.

*What he must know:* He must know the consistency of the slip for pouring; must know when the mold is dried out just to the right point for pouring it out. This latter may be found by cutting the top of the clay, but it is usually done by eye from experience.

*Theoretical training possibilities of pay-roll job.*

*Name of pay-roll job:* Caster.

- (a) Is it difficult to find persons who can do the work and who will stay on the job? No.
- (b) Are there recognized jobs of different degrees of difficulty? In some plants, no; in others, yes.
- (c) Do all people on the job do work of the same grade? Yes; difference in quality.
- (d) Do green employees require a certain amount of experience before reaching capacity production? Yes; six months to two years.

*Industrial education survey; practical training possibilities; data from industry.*

	Does the worker on this job belong to highly organized, partly organized, or unorganized working groups?	Is the job ranked as highly skilled, medium skilled, or low skilled labor?	Hygienic conditions.	Is the number of apprentices limited? If so, by whom?
Casting.....	Unorganized in Syracuse.....	Medium.....	Good.....	Limited, 1-5.

*Industrial education survey, training provided.*

WITHIN THE INDUSTRY.		NO APPRENTICESHIP AGREEMENTS.	
	Method of training.		
	Apprentice training.	Organized trade training.	Unorganized training.
Department of, kind of work.	1. Apprenticeship agreements... 2. Supplementary training by the plant or by corporation. (none). 3. Period of training.....	1. Covering all or part of "green" help. 2. Period of training (none)..	
Caster.			Six months.



Promotions and recruiting of employees (to determine the community value).

Name of pay roll job: Sponger (finisher).

Lines of Promotion:

- (a) Kinds of work: Sponging ware, finishing ware, and so on up, same as a finisher.
- (b) Advance to: Finisher, caster, handler.
- (c) Requirements to advance: For handler—good eye, deft hand; for caster—knowledge of slip, of molds, and of finishing.

Qualifications for employment (to determine entrance requirements).

Department: Clay shop.

Pay-roll job: Casting.

Sex.	Skill.	Educational and mental.	Physical.	Age at entrance.	Nationality.
Men. Women.	Average.	Special knowledge. Special skill. General intelligence. Reliability.	Active. Strong. Dextrous. Eyesight.	16	

Checking list.

- Pay-roll job: 1. Caster and presser.  
2. Batter out.  
3. Handle maker.  
4. Finisher.

I. Shopwork or manipulative content:

- 1. Production jobs-----
  - Assembling.
  - Shaping 1, 2, 3.
  - Forming 1, 3.
  - Miscellaneous 4.
- 2. Service jobs.

II. Related subject or technical content:

- 1. Technical jobs
  - Trade drawing-----Sketching 1 (perspective only).
  - Trade mathematics.
  - Trade judgment 1, 2, 3.
  - Trade terms-----
    - Material 1, 2, 3, 4.
    - Machines 2.
    - Operation 2.
- 2. Auxillary information
  - Trade science.
  - Knowledge of stock--
    - Recognition 1, 2, 3.
    - Working Properties 1, 2, 3, 4.
  - Care of tools and equipment.
    - Carelessness 1, 2, 3, 4.
    - In use 1, 2, 3, 4.
    - Not in use 1.

Name of pay-roll job.	Course of study.	Remarks.
Caster: Select boy from any kind of work.	Care of molds. Cleaning molds. Unhandled ware: Taking from molds. Pouring molds. Finishing. Handled ware: Also to make handles, cut, stick on, and finish. Larger ware. Fine quality ware.	These courses were suggested by the journeyman workers who were asked to think up the points in the order needed for instruction. They are not offered for adoption.

Chart 2-B. Job No. 4.

Job.	Objective.
<i>Castng and finishing:</i> Clay is cast "hollow" in plaster of Paris molds. A caster in some plants makes pressed handles.	Man can cast and finish any piece of ware that is made by this process.

*Auxilliary information.*

1. *Trade terms.*

*Material:* Trade names and special terms for all ware made by this process.

Slip, scrap, body, clay, sand, green clay, fired clay.

*Machine, tools, equipment:* Mold, scraper, fettling knife, sticking-up tool, handling tool, polishing rubber, sieve, slip container, chumm, sponge, hole puncher, trimmer, setting bat, whirler, dripping bench, drying bars, carrying board, kiln, green room.

*Operating:* Casting (pouring-in slip) pouring slip out of molds, finishing, trimming top including pulling scrap, bevelling and rubbering, trimming ware, fettling seams, sponging, working handles on other pieces or portions on ware, stirring slip, tempering, drilling and punching holes, sanding up, cleaning molds.

*Location:* Top of mold, inside and outside of mold, on the bars.

*Special:* None.

2. *Stock.*

*Recognition:* Knowledge of different kinds of slip if more than one is used (seldom).

*Working properties:* Know slip of proper consistency for pouring different kinds of ware. When mold is ready to pour out. When ware is ready for finishing. Know when slip must be poured out of mold (when ware is thick enough).

3. *Care of tools and equipment.* Care in handling molds and in cleaning, especially edges. Allow mold time to dry out between fillings.

4. *Safety.* None.

MATHEMATICS.

1. Count dally and weekly output.

2. Figure number of molds he will pour before he starts pouring out (based on eye estimate of the thickness of the ware). Experience.

<i>Drawing.</i>	<i>Science.</i>
None.	<ol style="list-style-type: none"><li>1. Plaster of Paris takes up water.</li><li>2. Taking water out of slip hardens it.</li><li>3. Alkali causes slip to become more fluid and acids have the opposite effect. Sodium carbonate (<math>\text{Na}_2\text{CO}_3</math>) makes slip cast more quickly, but after pouring out ware is soft. Sodium silicate makes slip cast more slowly, but ware becomes hard.</li></ol> <p><i>Heat.</i>—Expanding inclosed air exerts pressure and causes breaking. Pressed clay and cast clay do not contract alike in firing or drying in a green state.</p>

Having completed such an inventory and using the results in laying out courses of study for training apprentices and other beginners, it is natural that the next service required of the Federal Board should be in some way connected with the foremen who are in direct charge of these beginners and their journeyman teachers.

### 3. SERVICE TO STATES REGARDING FOREMEN TRAINING.

A third form of service to which the Board has given attention during the year has been promoting the development of effective programs for foremen's conferences and in working out methods for making such conferences effective.

These conferences are a great aid to foremen in improving their work, and the development of training for foremen has become a matter of great interest both to State boards and to industrial concerns.

As in the cases of the teacher training and industrial inventories just discussed, the Board has considered this matter of sufficient importance to warrant special study, and hence a part of the time of members of the staff has been given to research in this field. The results of their work have been presented to the representatives of State boards through conferences covering practically all the States where the development of foreman-training courses was urgently recommended.

A wide variety of possible foremen-training courses have, of course, been developed to meet various real or assumed needs. Out of these possibilities only one has engaged the attention of the Board. This particular type of foreman training has been characterized by the fact that it was intended to be operated through conferences of small groups where discussion could be free, and to afford foremen, through discussion under leadership, an opportunity to work out improved concrete methods of dealing with their responsibilities on their own special jobs. The possibilities of work of this kind were first developed in one large industrial plant through the cooperation of the foremen and the management, and the results published in bulletin form (Bulletin No. 36, Parts I and II) and, through further cooperation with various concerns, checked up still further. Foremen's conferences of this character have been successfully conducted in several plants in a number of States, and the work is still in process of development.

The general method of developing these foremen's conferences has been first to determine the definite responsibilities of each group of foremen; then, with the aid of the foreman and the management, the special responsibilities where it was felt that conference was desirable, and on that basis to lay out a program for a series of meetings at which were discussed: (a) The exact nature of the responsibility;

(b) The causes of the difficulty; (c) The problem that must be dealt with to improve the situation; (d) Ways and means for dealing with the problem.

It will be noted that the special form of foreman-conference work outlined above will only apply to groups of foremen already employed as such, or to members of the operating force of a plant who desire to fit themselves for foremanship; that is, it is for trade-extension work only.

#### 4. SERVICE TO STATES ON SURVEYS.

The fourth important line of research activity that has engaged the attention of the staff of the Federal Board for the benefit of State boards has been in developing methods of conducting simple and inexpensive local surveys, to secure the information necessary for the setting up of a program for industrial education that meets the needs of a given community. A plan for carrying on such local surveys was worked out in the office of the Board, prepared in mimeograph form, and was presented and discussed at conferences with representatives of State boards in practically all the States. This plan commended itself to the State representatives and has proved of value in a number of cases.

A modified form of the plan has also proved of great value in studying individual plants for the purpose of preparing the occupational inventories already referred to. As the survey plan referred to offers some peculiar characteristics a brief description is given below.

As already pointed out, this type of survey is of a specific character, in having for its purpose a determination of the vocational needs of the community for industrial education, the best types of training agencies, the instructional content, all on the assumption that the survey is to be followed by a constructive program, this program to be put into effect and carried out by the same people who took part in the survey. It provides for the following steps:

(A) The collection of field data from which to determine the occupations for which training can be given effectively in that community.

(B) The determination of the particular training agencies through which the training can best be given in harmony with local conditions.

(C) The analysis and classification of content for those occupations or parts of occupations for which it has been established that effective vocational training can be given, through a determining agency.

The *methods suggested for use* may be likened to a series of eliminating screens where certain grade or quality of material only is permitted to pass through each successive screen. As the survey work becomes more difficult, detailed and technical, it is progressively confined to those occupations, or groups of occupations, for which a training community value has already been shown to exist. In many

communities there are occupations for which no training is needed, or the training value is so slight as not to justify the community in including them in its program. On the other hand, in some communities occupations requiring training are already taken care of by various agencies, such as private schools, corporation schools, and public schools. For some of the occupations offering satisfactory training possibilities and not already included in an effective program, it may be impossible to give effective training under public auspices. It has seemed, therefore, that the information called for should take into consideration the following questions:

1. What are the industrial occupations in the community?

2. Which of the above occupations have a theoretical training value? By theoretical value is meant that a study of the occupation indicates that effective training can be given in so far as the manipulative and technical content are concerned. It is evident that of all the occupations in the community a considerable number will, without question, fail to pass this eliminating test, and the total group will be to that extent reduced.

3. For how many of the occupations having a theoretical training value is training practical when we consider such factors as the community attitude and the special equipment necessary for the training in view of the resources of the community? As an illustration, it is possible that a needed type of training might be effectively given in certain textile operations, and that the attitude of the community was favorable, but the money investment involved in supplying the necessary equipment might be entirely beyond the resources of the community. Here the test of "practical training value" as against theoretical training value will greatly reduce the number of occupations to which still further consideration can be given.

4. For how many of the occupations possessing a practical training value has adequate provision been furnished? This involves consideration of private apprentice schools, such as railroad apprentice schools in railway shops, or endowed private trade or technical schools of secondary grade in which the training agency provides lines of training that adequately meet the needs of certain occupations. In this case it would be unwise for any community to duplicate such work; but, on the other hand, it could devote its energy with greater efficiency to lines of work for which the institutions had made no adequate preparation. Here again the eliminating screen still further reduces the number of occupations for which training can and should be given.

As a result of this eliminating process, out of the very great variety and number of occupations carried on in any community, it will finally appear that of a relatively small group can it be said: "Certain occupations exist in this community for which training can be given; the training can be given by the community; there is no agency in the community in which adequate provision for training has been made. Therefore it is the obligation and responsibility of the community to make provision for such training agencies as will meet the needs of this group."

The use of these eliminating steps saves the energy of those engaged in the survey, and as the work becomes more and more in-

tensive only a few occupations need to be considered. After the final determination of occupations for which training provision should be made, a careful consideration of the determination and classification of instructional content should be undertaken. To make an analysis and classification of the instructional content for any given occupation requires the careful thought of those highly skilled in education, and the assistance of a master workman in the occupation.

It is therefore of great value to the work of the survey to reduce the total number of occupations through the "screening process," to those for which training can effectively be given, and a training agency be provided.

#### TRADE AND INDUSTRIAL EDUCATION FOR GIRLS AND WOMEN.

The national program for vocational education is adapted to meet the needs of girls and women, inasmuch as it provides an opportunity for training the woman as an industrial wage earner as well as a home maker. These occupations are not necessarily mutually exclusive. Both may be pursued by the same woman simultaneously or at different periods of her life. Increasingly, however, girls are participating in employment with and without preparation for it. The Federal vocational education act is drawn in terms broad enough to assure each individual the opportunity of doing the highest type of productive work in either or both capacities by providing training for each field.

Trade and industrial education concerns the preparation of the worker, man or woman, primarily for wage earning in the fields of industrial employment. Its purpose, for women, is threefold:

- (1) To prepare the girl to enter the field of wage earning;
- (2) To enable the girl or woman already employed to improve or to change to a more congenial or profitable occupation; and
- (3) To insure progression or advancement in the type of work in which she is already engaged.

To the employer it means an improved product and increased output; to the worker it means higher wages, better standard of living, and fuller participation in civic affairs. The training is intensive for one specialized occupation, or such groups of related occupations as will insure placement and steady employment for the worker.

The importance of the problem in view of the numbers of workers, the diversity of their work, and the economic and social factors bearing upon the employment of women, together with the details of establishing and operating a program under the terms of the Federal act, are fully set forth in Bulletin No. 58, Trade and Industrial Series No. 15, entitled "Trade and Industrial Education for Girls and Women." This is published by the Federal Board for Vocational Edu-

cation for the purpose of stimulating States to give serious consideration to this phase of vocational education, so urgently needed and yet so tardy in development.

Prior to the war it was generally assumed that few of the industrial occupations at which women were commonly employed admitted of any training and that the period of women's employment was too brief to warrant specific preparation. Facts have, however, established these general conclusions: (1) that lack of vocational training works an immeasurable hardship on the young wage earner by holding her productive efficiency below the normal standard of wage; (2) that inexperience, lack of confidence, and ignorance of industrial organization and requirements seriously embarrass and handicap the mature woman who returns to employment or who enters an industrial occupation for the first time; and (3) that the adult woman worker continuing in employment, partly through lack of opportunity for training and partly because of the prevailing attitude that greater responsibilities and their rewards are closed to her, seldom advances from the lower or intermediate stages of employment to positions of responsibility which increased maturity and experience justify.

An enlightened public opinion relative to industrial employments for girls and women based on facts is necessary to reach the groups of industrial wage earners with a program for vocational education adequate to the needs of the girl who is preparing for employment, or is already employed, and the adult wage earner.

Educators, employers, employees, and prospective workers must strive to bring about a realignment of attitudes toward one another and must cooperate in determining what instruction can be most advantageously offered, the best method of providing it, and the service which the local public school may render in establishing the program.

Many women-employing industries, such as garment making, textile, knitting, manufacture of light metal and other products—including automobile parts, watches, clocks, locks, optical instruments, sewing machines, typewriters, computing machines, hardware, electrical appliances, celluloid products, pianos, rubber shoes—as well as public-service corporations, such as the telegraph and the telephone, are maintaining successful schemes of instruction, which have passed beyond the experimental stage, for operative, directive, and supervisory employees.

Training in plants was given in the interest of the prosecution of the war—not in the interest of the woman worker. The war being over, the training is less urgent in plants, and hence the obligation on the part of the public to preserve and increase the availability of women's labor and to assure her right to every opportunity for service is correspondingly increased.

The plants frequently offer a minimum of training absolutely necessary on a pay basis during working hours. The women therefore do not see the necessity of taking additional time for training, because they feel that promotions are open to them only on a very limited scale. For this reason they have not entered classes in which the instruction was such that they could profit by it. Again, we find women taking excursions into the newer field of training in such numbers that private schools and pay classes have been instituted for them in localities where men were being instructed in the same subjects in classes under public supervision and control. To develop a program for vocational education means to develop opportunities according not only to women's capabilities but also to the needs of the community. It will not necessarily increase the number of wage earners, but will benefit those who earn their daily bread in the pursuit of industrial occupations. The presence of competition does not lessen the need of training for girls.

The year has been significant in the revelation concerning the trend of employment of women, particularly in the highly specialized and subdivided industries. It is a matter of common knowledge that a limited number of women, following tradition, will always be engaged in the food and clothing trades, which are practically universal. It is also assumed that the training for these trades and their related occupations, though undergoing constant modifications to meet changing conditions due to the curtailment of service and the high cost of the common commodities of life, has been developed in private and public vocational schools and may serve as an example to localities planning similar programs. It is natural to expect that in the inauguration of plans and programs the school administrators should proceed along these already established lines.

The public, including the authorities responsible for vocational education and the workers themselves, are only remotely aware of the large numbers of women in industrial employment. The increase in number, which has been continuous for the past two decades, was accelerated by war needs, public approval, and the insistent desire of the women themselves to work. Representation of women's interests has been accorded in national and international organizations of safety employment and industrial relations during the present year. The President's Industrial Council and the Second Industrial Conference on March 21, 1920, issued the following recommendation relative to training of women:

They should not be discriminated against in respect to opportunities for training or advancement or the representation of their interests.

The most astonishing increase of women workers has occurred in the iron and steel, automobile, instrument making, and woodworking



industries. The proportion of women in the total number of workers employed likewise has increased and indicates a redistribution of workers in the same industries. The significance of these facts and their bearings on vocational education are shown in two recent bulletins published by the Women's Bureau of the Department of Labor entitled, respectively, "Effect of War on the Employment of Women" and "Industrial Opportunities and Vocational Training." The findings are particularly significant to the ten following States in planning their programs for vocational education: Connecticut, Illinois, Indiana, Massachusetts, Michigan, New Jersey, New York, Ohio, Pennsylvania, and Wisconsin.

An active campaign is necessary in almost all localities to arouse communities and employers, as well as girls and women themselves, as to this need for industrial education. The irresponsibility of youth, the timidity of older women, and the tendency of some employers to promote the policy of retaining women workers at the same deadening task and repeated operation, raise barriers against industrial education, tend to the restriction of women to less skilled and less remunerative jobs, and leave their self-reliance undeveloped.

That this type of industrial education is a legitimate field of service for organized agencies of public instruction has scarcely yet come to the consciousness of school administrators. That industry may utilize the public agencies of vocational education for assistance in the development and training of plant teachers and supervisors has not been common knowledge among either employers or employees. It is not possible to state what extension of available educational service may be evolved to meet the requests of workers and employers as they become aware of their own needs, the terms of the Federal vocational act, and their State plans. There is a growing realization that women workers in the expanding fields of labor need:

- (1) An initial training for their occupation.
- (2) A supplementary training to furnish an intelligent background of technical and related knowledge.
- (3) Familiarity with details of plant organization, management, and production methods.
- (4) A civic and industrial consciousness which will enhance the value of a woman as a citizen, a worker, and a member of a social group.

These needs may be met by the various types of possible service extended to workers, whether men or women, under the terms of the Federal act and the plans of the State.

In the development of part-time work it must be remembered that, as far as employment records are at present available, the number of girls between 14 and 16 gainfully employed varies from one-third to one-half the total number of employed youth. The part-time school must extend a service to these girls during the transition from school

to work, conserving and extending their education and helping them into the highways of employment which lead out of juvenile jobs.

The day vocational schools for girls and women continue about 25 in number with a few additions during the present year and some expansion of courses of instruction. The tendency to develop vocational departments in regularly organized high schools has led to the initiation of educational experiments in this field.

Evening classes of one type only—trade extension—are recognized. These classes do not recruit themselves. Definite thought and investigation are needed for the development of this work, taking into account the diverse occupations in which women are engaged. Where men and women are working in the same occupation, frequently in the same plants, it may be possible to enroll both in the same classes.

The training of teachers must accompany the development of the work and precede the establishment of classes. It is not advisable to train greater numbers than can be reasonably sure of placement.

A survey of the present status of trade and industrial education of women in the various States indicates that State authorities in charge of vocational education should be reminded of the facts—

(1) That trade and industrial training for girls and women as a joint responsibility of Federal and State agencies has received little consideration outside a few States.

(2) That under the terms of the Federal act and the State plans the same opportunities are open to women as to men and the same provisions apply to the establishment of classes for both.

(3) That incidental supervision means only incidental progress in a type of education with so many odds against it, so little understood, and concerning which the educators and public are so apathetic, unless some person of authority is constantly striving to determine the needs for industrial education and the ways and means of developing a program to meet these needs.

There is no phase of vocational education that requires to the same extent the constant vigilance of leadership, adjustment to conditions, and persistent propaganda for the development of the sentiment of public approval as trade and industrial education.

#### **FUTURE PROBLEMS IN TRADE AND INDUSTRIAL EDUCATION.**

In considering the future problems affecting trade and industrial education the following fundamental assumptions have been made:

(1) It is assumed that educational experience culminating in Federal and State vocational laws has been sufficient to establish the fundamental principles of trade and industrial training.

(2) It is generally understood that all trade or industrial programs have for their aim the preparation of new workers for advantageous entrance into industrial employment and the improvement in efficiency of those already employed.

(3) It is assumed that as a result of the Federal and State vocational education acts, practically all, if not all, of the States have set up satisfactory

working plans for preparing new workers for service and for the improvement of those already employed.

(4) It is generally believed that progress within the States in providing State directors and supervisors for carrying out the provisions of the State plans has developed much more rapidly than was to be expected when the vocational program became effective.

On the basis of these assumptions it appears (1) that the immediate future of trade and industrial education does not require additional Federal legislation and State legislation except as affecting part-time compulsory attendance; (2) that State plans and administrative organizations within the States have progressed beyond the actual development of trade and industrial schools within the States, and (3) that the immediate problems before us have to do largely with the field for training, the content of instruction, and instructor training.

#### 1. THE FIELD FOR TRAINING.

The Congressional Commission on National Aid to Vocational Education, in its report published in 1914, considered carefully the field for training as well as the kinds of grants in aid which should be given for trade and industrial education.

More than five years have passed since the report of the commission on vocational education was published and the vocational education act has been in operation for nearly three years. It would seem therefore that sufficient time has elapsed to warrant our taking an inventory of progress as a means of determining to what extent the need for trade and industrial training as outlined by the commission has been met. This inventory should consider carefully that large portion of the millions at work whose needs must be met through the evening school. The commission recommended in its report that national grants be extended for the salaries of teachers of trade and industrial subjects in evening schools for instruction supplemental to the daily employment of the students. This recommendation was made because it was believed that so far as evening classes are concerned instruction extending the trade knowledge to those who are already at work is most in need of Federal stimulation. At the same time the commission recognized the value of general evening classes for those who worked during the day. It also recognized that in some places considerable value may be attached to what may be called trade preparatory evening schools. In the belief that the comparatively small amount of money available from the national grant should be expended for trade-extension courses when used in evening classes, the appropriation was limited to such courses, leaving the responsibility for general education to States and local communities. It would seem that three years' experience in the admin-

istration of the vocational education act has demonstrated that the position of the commission was justified. We are now confronted with the duty of determining to what extent the need for trade-extension instruction is being met through the agency of the evening school.

Of those employed who are between the ages of 14 and 18 a large proportion are under 16 years of age. Many of these young people are not prepared to choose a vocation intelligently, nor to follow it with sufficient prospect of future advancement, because the schools have assumed no responsibility for their preparation for employment before becoming wage earners and have not provided for a continued training through part-time schools after they have gone to work. By far the largest proportion of this immense group must be reached through part-time schools, which will take a part of the working time of young persons between 14 and 18 years of age for continued education either along the line of a chosen vocation or of general civic intelligence.

While 19 States now have compulsory part-time attendance laws in effect and other States have made some progress toward the development of a program of part-time education for working youth, the problem of securing similar laws in the remaining States is still a definite responsibility.

With approximately 1,000,000 new workers entering into gainful employment each year, it is safe to assume that the field for training in which the day school is intended to function includes at least 2,000,000 young people. (A two-year course is assumed as an average length for the all-day school.) Although the day school is not expected to give a complete apprenticeship training, experience shows that it can go a considerable way toward preparing boys and girls over 14 years of age for advantageous entrance into wage-earning employment.

The degree to which the field for training is being met is shown by the following comparison: With more than 10,000,000 persons over 18 years of age at work in trade and industrial pursuits, the fourth annual report of the Federal Board for the year ending June 30, 1920, indicates a total of but 48,354 enrolled in evening schools; with several million workers between the ages of 14 and 18 years employed in wage-earning occupations, only 123,059 are reported as enrolled in part-time classes; and with approximately 2,000,000 young persons within two years of entrance into employment, the all-day trade or industrial schools show an enrollment of 21,224.

## 2. DEVELOPING A WORKABLE PROGRAM FOR THE COMMUNITY.

— It is generally recognized that no community is justified in establishing a vocational program without first taking into account the

needs of the community for specific kinds of training. Many vocational schools have failed in their purpose because of attempting to give a kind of training for which the community had no need. An industrial education survey may represent a very small or a very large expenditure of time and money. Before the survey is undertaken a well-defined program should be prepared and all useless information eliminated. In so far as the survey enters into this discussion, it is assumed to have three functions:

- (1) To determine the field for training.
- (2) To determine the training agencies and entrance requirements which should be set up.
- (3) To determine and classify the instructional content.

Each of these objectives may be reduced to a minimum of details, and if the results secured are sufficiently accurate, so as to establish qualitatively the facts about the community which will enable it to organize an efficient training program, the survey will have accomplished its purpose.

*Selecting the training agency.*—The selection of the training agency which will meet the need for occupations for which training is to be given may be compared to the action of a skilled mechanic in selecting a specific tool to accomplish a required mechanical operation. Is the problem one involving the preparation of new workers for entrance into the occupation, or has the survey shown the need of improving the efficiency of those already employed? What are the hours during which instruction may be given most satisfactorily? Are the pupils mature men or women, or do they belong to that large group of boys and girls who have entered into employment under minimum-age conditions? These questions and others must be carefully considered in selecting the training agency. It is believed that the provisions of the vocational education act and the policies of the Federal Board as they relate to the all-day, part-time, and evening schools offer ample opportunity to select a particular type of school which will efficiently meet any given need.

This formal consideration of the occupations and training agencies may involve the survey of a single industry or a much larger survey of all the industries in a given community. As a result of a survey of the industries of any given community those responsible for proper instruction ought to have pointed out to them the opportunity and need for trade and industrial training in specific occupations. For many years trade and industrial schools have been established in communities on the basis of unused buildings, old or out-of-date equipment, or courses of study set up in other communities. As a result, a very large portion of the day schools throughout the country, as well as many of the evening and part-time classes, have functioned only in training for partial instruction for such occupations as ma-

chine-shop work, carpentry, cabinetmaking, plumbing, sheet-metal work, and foundry work. There are many industrial centers in the United States in which these occupations are of secondary importance and others in which they are of scarcely any importance whatever. The field of mining, of textiles, of the pulp and paper industry, modeling, horology, instrument making, packing industry, and miscellaneous plants manufacturing dyes, potteries, fertilizers, and cement are all vitally concerned with the problems of increasing the mechanical and technical efficiency of their employees. It is a very grave responsibility in the administration of trade and industrial education to make certain that the program provides equal opportunities for training men and women as wage-earning employees in all these different industrial activities.

*Cooperation between the public schools, employers, and labor organizations.*—It is believed by some that trade and industrial education, since it is so closely related to production, is a function which should be exercised by the industry itself; and by others since vocational schools have for their purpose the increased efficiency of the individual and are, therefore, agencies for increasing wage-earning capacity, they should be organized and maintained by labor organizations. On the other hand, it is more universally recognized that the uncalled for differences existing between employer and employee make it difficult for industry to function in the conduct of these schools; while if the schools are organized by labor unions, the many more millions of men, women, boys, and girls who are not affiliated with labor organizations might not attend. Experience has shown that the public schools can operate as a disinterested third party between employer and employee, and that schools organized under public control have the confidence of both.

There is no question as to the agency which should organize and operate trade and industrial schools, although practical difficulties are encountered. Public schools until recently have given little or no thought to instruction for those who can not attend the day school from 9 in the morning till 4 in the afternoon. School officials have been wont to think only in terms of a formal educational program, a program which has accumulated many subjects and much content since the organization of free schools. Teachers in teacher-training departments of normal schools, colleges, and universities have been educated largely in the content, the informational side of their job as a teacher, and to a much less degree in the mechanics of teaching. The content of these instructor-training courses has to a very limited degree met the need of vocational schools. Public-school teachers can seldom be found who are qualified to give the instruction demanded by industry, and so sorely needed by the employee. It is a comparatively new idea to many school superintendents to seek the

services of a first-class mechanic or foreman as a teacher in these classes—a mechanic who knows from experience the content of instruction which should be taught to learners in his trade, but who has never had an opportunity to attend institutions of college grade.

Not only the teacher problem, but also that of determining upon types of schools to be organized to meet the conditions under which those at work may attend, confront and perplex public-school officials. It is generally conceded among those who have been engaged in the organization and administration of vocational education that the all-day school, either as a unit trade school or as a general industrial school, is of very minor importance in our vocational program as compared with the evening and part-time schools which are provided for the specific purpose of meeting the needs of men and women who have entered upon employment. The organization of evening schools is quite general throughout the country, in so far as they have been conceived as agencies which meet a need for general education, but the necessity for the organization of special classes in which instruction is made supplementary to the daily employment is not generally appreciated by school officials.

The part-time school, with its trade preparatory, trade extension, and general continuation school features, is comparatively little understood, and as an educational tool is used to a very limited extent when we consider its total possibilities. The use of the part-time school by the local community involves the fullest cooperation on the part of the school itself, the employer, and employee. School officials must be made to realize that while vocational classes are more expensive from the standpoint of equipment, qualification of teachers, and number of pupils in the class, that, on the other hand, the courses are usually short and that the instruction is given to that large group of boys and girls and men and women who have not had the full use of the opportunities offered in the usual public school. This opportunity was lost to them through the necessity of becoming wage earners at an early age. One of the problems confronting State and Federal boards in further promoting and perfecting the trade and industrial education program, therefore, depends quite largely upon successful propaganda which may be carried on by State and Federal agencies and which will have for its ultimate purpose the full cooperation of public schools, employers, and employees in the development of an efficient training scheme.

*Women in industry.*—Statistics indicate that approximately one-sixth of those employed in trade and industrial occupations are women or girls. While the publications and pronouncements issued by the Federal Board and statements relating to trade and industrial education in State plans do not distinguish between the trade and

Industrial classes organized for men and for women in so far as fundamental principles are concerned, it appears that an impression has become somewhat general to the effect that adequate provision has not been made in the vocational education act, the policies of the Federal Board, and in the State plans for meeting the needs of women in industry.

It is the general opinion among those administering trade and industrial education that no separate statement of policies for the organization and administration of women's work should be made. On the contrary, the principle of "equal opportunity for both women and girls and boys and men" is advocated. Wherever in a given community women or girls are employed in trade or industrial occupations, adequate training facilities should be provided for giving trade-extension instruction. In the same manner, wherever it is found that women and girls are entering occupations for which pre-employment training can and should be given, training classes having for their purpose the preparation of these workers for advantageous entrance into these groups should be made available. Vocational training should not be organized on a sex basis, for single groups of individuals, for certain kinds of industries, nor for specific localities, but should be made equally available to men and women, boys and girls, trade-unionist and nontrade-unionist, and to all industries wherever it can be shown that a trained worker can do a given job better than an untrained worker.

It is generally agreed that the addition of qualified women to the supervisory staff of State boards and in industrial centers will do much toward extending the benefits of vocational laws to the girls and women in industry. As the problem stands it is not one of additional Federal or State legislation, new policies, nor additional provisions in State plans, but solely one of operation.

Too many of the States now depend upon the supervisors for home economics or the supervisors responsible for the work of men and boys, both of whom have duties and responsibilities which prevent them from giving sufficient time and attention to the work of women and girls in industrial employment. It is to be noted that in those States where adequate supervision is given to women's work and to the training of women teachers satisfactory progress is being made.

More women supervisors for trade and industrial education are needed who possess adequate trade experience and who are charged with the responsibility of determining not only the need for training but also the training agencies and the subject matter which will best meet these needs.



### 2. RESPONSIBILITY FOR THE CONTENT OF INSTRUCTION.

No employer would think of sending out an employee to do a specific job without making certain that that employee was adequately equipped with the knowledge of his trade and with the necessary tools and materials required in getting the productive job under way. In the same way, one of the very great responsibilities of the school superintendent is to make certain that instructors are provided with outlines of the content of instruction. The subject matter must be considered with reference to its relation to the occupation, the work of the individual, and the time and facilities for giving it to the pupils. These facts can best be determined by a careful study of the occupation itself, an analysis of the jobs involved, and of the field of related information. It is not to be expected that all teachers who possess the required qualifications for instructors in these classes will be able to make an analysis of their occupation or trade and arrange the instruction in the most effective order without some specific assistance. This assistance might be furnished in the form of textbooks or in the form of outlines containing an analysis of the occupation, together with suggestions on the subject matter, and on how to impart the instruction most effectively. By using a modification of Richard's formula, in which "E," the equipment possessed by an efficient worker, is represented by  $M + (T + I)$ , we may visualize the character of the instruction which should be given. It is assumed that the instructor already possesses the "manipulative skill" or "M" value, and that he knows also the related content ( $T + I$ ), though this is less likely in the case of shop instructors. The difficulty is in determining how much or how little of the total field of knowledge in such subjects as drawing, science, and mathematics is related to the job of the worker. This can only be determined by a careful analysis of the working jobs of the occupation for the "T" value, the so-called "trade technical content," or that knowledge which the worker must use in the doing of his task, and by an equally careful analysis of certain fields of knowledge, such as drawing, science, and mathematics, to determine the minimum "I" value, or "general trade content," which it is believed the worker should possess in order to be ready for emergency jobs, ready for promotion, or able to think and work out his ideas of new devices and inventions.

A brief consideration of this need indicates that there are three kinds of publication which should be made available:

(a) Outlines of the trade technical content, based upon an analysis of the occupation.

(b) Outlines of the general trade content, based upon analyses of so-called general trade subjects, such as drawing, science, and mathematics, for the purpose of determining the particular content which may be regarded as necessary to the individual in his development as a skilled worker in the occupation.

(c) Suggestive outlines in methods of instruction or the mechanics of teaching. These outlines can not be formed on the basis of the usual courses in educational psychology, history of education, methods of instruction, etc., but must be set up with due regard to the educational limitations and needs of those for whom they are prepared.

The Federal Board has undertaken to make these analyses and to publish the outlines of subject matter in the form of bulletins for certain trades or groups of trades. The number of trades and occupations in which instruction is being given is so considerable that it will be necessary for some other agencies to assume a part of the responsibility if the job is to be completed in any reasonable time.

It is not intended that these outlines shall become textbooks which may be placed in the hands of the pupils, but rather that they shall be used as aids in teaching.

Part-time and day schools organized as departments or classes in cosmopolitan high schools are usually confronted with a very difficult administrative problem in making certain that the instruction given to the trade or industrial classes is not unduly influenced by the character of work given in high-school courses. The regular courses of study and textbooks common to these high schools have generally been in use for many years. Teachers are thoroughly acquainted with their provisions and subject matter. Where high-school instructors are employed in vocational classes it is often very difficult to secure instruction modified to meet the needs of the specific group being trained. These statements are made not for the purpose of discrediting the character of instruction usually given in high-school courses but for the purpose of calling attention to the necessity for modified instructional content in order to meet the specific needs of the student in the industrial classes.

#### 4. INSTRUCTOR TRAINING OF THE FUTURE.

It is generally recognized, not only by those directly responsible for the administration of trade and industrial classes but also by employers and employees, that the job of teaching depends to as large a degree as the job of a mechanic upon skill gained through experience. The successful vocational school must, therefore, ultimately secure for its shop and related subjects instructors, men and women, who not only are skilled in the trade but also have acquired through some formal study or practice an additional experience in the trade of teaching.

It is quite generally recognized that at the present time the supply of men and women who can qualify in this double capacity is extremely limited, and that the factors and methods entering into the solution of this problem are unfamiliar and foreign to our usual instructor training program. When we speak of training teachers, the average

individual thinks of a normal school, college, or university, and of a residence course set up on a 9 or 10 months' basis of formal instruction, of which 80 or 90 per cent relates to informational content and 20 or 10 per cent to educational subjects. Both the academic or informational content and the educational subjects are planned on the basis of a set curriculum requiring the individual to pursue a certain sequence of subjects. There is no place in this program for the skilled mechanic, man or woman, who has found it necessary to enter into wage-earning employment at an early age before having finished high school, and hence is unprepared for pursuing either the academic or the usual professional courses.

It is also foreign to the customs and traditions of many institutions to think in terms of training courses carried on as extension centers, meeting for two or three evenings per week with attendance ranging from 1 to 15 individuals, or training carried on through correspondence and occasional personal visits by the instructor in charge. It is likewise foreign to the thinking of those in charge to conceive of the valuable instruction which may be given through an itinerant teacher.

All of these devices have been developed as a means of meeting the conditions surrounding the group of individuals who possess the informational content required of instructors in shop and related subjects.

Most of the poor work being done in these training courses is due largely to a lack of the proper apperceptive base with respect to the needs of vocational teachers and the educational limitations of those who are selected to receive the training.

Another problem affecting instructor training is how to select suitable candidates for these training classes. Since each class may be comprised of workers from several different crafts, it will be difficult to determine the trade experience as one of the qualifications for entrance. It would seem that here is a place where committees of superior workmen or foremen should be available to pass upon the applicants from their respective crafts.

Several of the States have prepared more or less elaborate rate sheets to be used in these tests. The State of New Jersey has recently completed a set of forms which will be found to satisfy most, if not all, of the requirements.

The first requirement for admission should be a demonstration of having made good as a journeyman worker in the trade or occupation itself, and it should be understood that the salary offered will be sufficient to induce the best mechanics and shop foremen to take up the profession of teaching.

In summarizing, it must be emphasized that the responsibility for securing the full cooperation of public-school officials represent-

ing the local communities, of employers representing industry, and of trade-unions representing the employees rests with State boards for vocational education, with such supplementary assistance as may be rendered by the Federal Board through national organization. This cooperation can not be secured in a month, a year, or two years, but will come as the result of constant effort on the part of all concerned. It is essential that constant efforts be made to establish this local cooperation base and maintain it as a permanent organization.

The responsibility for instructor training rests, first, upon State boards for vocational education, and then upon the shoulders of the various State agencies designated by the State board for carrying out the program. Here again the Federal Board is in a position to render a considerable amount of assistance in the development of standards and principles and in making studies and investigations to increase the efficiency of the program.

The responsibility of the instructor-training institution as to the character of instruction and the requirements for admission should be a matter of agreement between the institution and the State board. The State board should also consider carefully the possibilities for further extension of the work through various instructor-training devices, such as residence courses, extension courses, correspondence courses, and the employment of itinerant instructors.

The responsibility for publishing bulletins containing outlines of the trade technical content, and of general trade content in the field of science, drawing, and mathematics, and for the preparation of suggestive outlines on the organization and methods of the instruction should be assumed by the Federal Board for Vocational Education. In carrying out this program the Federal Board will recognize and profit by the experiences and developments in the States and cooperate with institutions in making studies and investigations which will be of value to the national program.

#### INDUSTRIAL TRAINING UNDER PUBLIC OR PRIVATE CONTROL.

From time to time there has been more or less discussion and argument at various educational meetings and among groups and conferences of industrial educators, as to the value of industrial education supported entirely by the public and under public control, and those types of industrial education, established particularly in plants and manufacturing concerns financed by private enterprises and controlled by private administrative agencies. While some have taken the extreme view that all trade and industrial training should be conducted by the public, others have held that in many cases the plants were better able to give such training than

were the public schools. As is usually the case, more careful investigation of the advantages of each of these systems has shown that they both have their place in the vocational education work of the country. The following specific statements with regard to this matter are made as a result of the conferences in which State representatives and others working in the field of public education have been brought in contact with representatives of individual plants either conducting or having supervision over private-controlled vocational classes. The purpose of these conferences was not only to arrive at some agreement in regard to the differentiation of this work but also to promote a more hearty cooperation between these two groups of educators, looking to a general improvement of both the public and private trade education of the State.

It should be the policy of the State to assume the responsibility of promoting the initiation and development of efficient vocational education whether conducted under public or private control, and whether the expenses are borne from public or private funds, the ultimate purpose of vocational education being to increase the vocational efficiency of the community, the State, and the Nation.

A consideration of the ways by which trade or industrial training may be carried on indicates three possibilities:

1. Under public control and the cost paid from public funds.
2. By the industry under its own control and at its own expense.
3. Under public control through cooperative agreements between the public schools and cooperating industrial plants and the cost paid from public funds.

The choice of means will vary somewhat for the different types of vocational training, whether for (a) trade preparation, (b) trade extension, (c) instructor training, or (d) foreman training.

#### 1. TRADE-PREPARATORY INSTRUCTION.

It is the consensus of opinion that all forms of vocational training and instruction given in advance of employment or prior to the point of effective entrance into employment should be given under public control and at public expense.

We may consider that the beginner has reached the point of effective entrance into industry when conditions of age, wage, and advancement in an occupation are such that he may look forward to permanent and progressive employment corresponding to increased maturity and skill.

In trade-preparatory training two classes of individuals are concerned:

- (1) Individuals desiring training for an occupation prior to seeking employment in that occupation.
- (2) Individuals employed in occupations, so-called "dead-end" or "blind-alley" jobs, that they must leave as soon as they reach an age where they can secure employment on a permanent basis.

In the case of the first group it is evident that if they are to secure training at all, such training must, since they are unemployed, be given either at public expense or at their own expense or by philanthropy; and in the case of the second group, since the training is for the future job rather than the present job, the same conditions prevail, and the same recommendations hold.

*Trade-preparatory instruction subsequent to the point of effective entrance into employment.*—It is recognized that the State should assume the ultimate responsibility for the initial vocational training of those persons in this group who are employed without adequate preparation for the work and who require preparatory training for effective employment. The responsibility for such initial training that rests upon the educational authorities who represent the State can be discharged in any one or all of the following ways, depending upon the local conditions that are to be met:

(a) By extending all possible advice and assistance to industry and by giving all possible information to industry in the establishment and operation of effective vocational training.

(b) By advising, supervising, and inspecting schools established by the industries in those cases where the State through legislation has established minimum educational standards applicable to the training of this group. Such standards have been set up in certain States by the enactment of continuation school laws.

(c) By assuming full responsibility for the supervision and maintenance of the training to be given to this group.

Under present conditions it appears probable that in the case of larger plants having necessary resources the public interest can be sufficiently conserved by plans of training conducted by the plant itself for the initial training of its employees, if it desires to do so; on the other hand, it appears probable that the small plants will not ordinarily be able to carry on initial training for their employees as advantageously as it can be provided under public control. Under these conditions, therefore, such training should be conducted, in general, at public expense and under public control.

## 2. TRADE-EXTENSION INSTRUCTION.

On the basis of past experience it appears probable that trade-extension training for ordinary skilled trades, such as carpentry, machine shop and sheet-metal work, can be handled better under public supervision and control than by the industry, provided the public authorities will make adequate provision for the same. It is also believed that promotional or upgrading training for standard technical jobs can best be given under public control.

On the other hand, low index jobs involving large, bulky, and expensive equipment, a relatively small extension of training and a short period of training for horizontal trade-extension instruction

can best be given by the industry itself. Promotional training for specific technical jobs involving a knowledge of secret processes can also best be given by the industry.

### 3. INSTRUCTOR TRAINING, INCLUDING FOREMAN INSTRUCTORS.

Training in teaching is generally recognized as a function of the State. For vocational teachers training in principles and methods of teaching should be given under public control and at public expense, and the State should possess an effective organization for rendering this service.

### 4. FOREMAN TRAINING, INCLUDING MINOR EXECUTIVES.

To meet the needs of small plants located in one community, and having limited financial resources, experience seems to indicate that the State or local community can most effectively conduct foreman training under public control at public expense. On the other hand, large industries having central administrative organizations, operating plants in various States or communities where a uniform policy is desirable and where the plant possesses adequate financial resources, and large industrial concerns with ample resources and located in a single community, can in all probability best operate their foreman training plans under their own control and at their own expense.

#### *Summary of conditions for public and private control.*

Kind of training.	Under public control and at public expense.	By the industry under its own control and at its own expense.
Trade-preparatory instruction.	The State should control all instruction given prior to the age of effective entrance into industry. Above the age of effective entrance into industry training for high index trades and occupations can best be given under public control and at public expense.	Training for low index jobs can best be given by the industry at its own expense.
Trade-extension instruction.	1. Experience has shown that for ordinary skilled trades, such as carpentry, machine-shop and sheet-metal work, the public schools can handle the job better than the industry. 2. Promotional training for standard technical jobs should also be given under public control.	1. Low index jobs involving large, bulky, and expensive equipment and a relatively small extension of training, short training period for horizontal trade-extension instruction can best be done by the industry itself. 2. Promotional training for specific technical jobs involving a knowledge of secret processes.
Foreman training, including minor executives.	The State or local community can most effectively conduct training to meet the needs of small plants located in one community and having limited financial resources.	1. Large industries having central administrative organizations, operating plants in various States or communities where a uniform policy is desirable and where the plant possesses adequate financial resources. 2. Large industrial concerns with ample resources and located in a single community.
Instructor training, including foreman instructors.	1. Training in teaching is generally recognized as a function of the State. 2. The State already possesses an organization and has experience in instructor training.	

## B. HOME ECONOMICS EDUCATION.

## REPORT OF PROGRESS.

Real progress in vocational education in home economics for the year 1919-20 has characterized the country as a whole, and is plainly shown by reports from the individual States, detailing provisions for meeting the vocational needs of girls and women by a capable State supervisory staff, by programs based on the local community needs, and by cooperation with teacher-training institutions to the end that teachers may be trained who measure up to good vocational standards.

Marked progress has been made in the supervision of home economics education in the States, as it relates to increase in staff numbers, in their salaries, and qualifications. At the present time 46 of the States have women with training and experience to aid local communities in organizing and promoting home economics education, 24 States have full-time supervisors, 22 have part-time, and 4 have assistant State supervisors.

In the year 1918-19, 463 schools and classes in home making, with an enrollment of 39,414 pupils and 1,433 teachers, were reimbursed from Federal funds. In 1919-20 these schools numbered 700, with an enrollment of 48,938 pupils and 1,637 teachers. The growth of part-time and evening classes was a feature of the 1919-20 program, 19 States having evening classes for the first time. So great has been the stimulus for vocational education in home economics following the organization of these schools and so limited the Federal funds for the purpose that the above statistics do not give an accurate account of the status of the work in the country, inasmuch as many schools which maintained vocational courses in home economics and sought approval for aid could not be reimbursed. Although 27 States used the total funds available for salaries of teachers of home economics and 14 States used more than three-fourths of such funds, home-making instruction reached comparatively few of the large groups of women who need and seek such instruction.

## —SUPERVISION.

State boards for vocational education, recognizing that supervision is probably the most important factor in the future development of vocational education in home economics, have added to their State supervisory staffs women of experience and training and made them responsible for the organization and promotion of home economics education within the State.

In 1917-18 there was little State supervision except through the services of State teacher-training institutions, where a member of the staff was loaned on part time for the purpose.



In 1918-19 there were 10 full-time supervisors and 34 part-time supervisors. In 1919-20, 29 full-time, 21 part-time, and 5 assistant State supervisors for home economics were employed. This rapid growth shows how the States are realizing more and more the importance of having a person employed on full time to study the needs of the State and assist local communities in organizing schools and classes.

In a majority of the States the field duties of the State supervisor are threefold:

#### 1. PROMOTIONAL.

In a movement as new as vocational education, promotion must necessarily be one of the important activities of the State supervisor, who must point out to the school people of the State the advantages of vocational education and bring the girls and women to a realization of the value of home-making training, thereby creating a demand for such education. To accomplish this, cooperation with all available agencies for promoting the program is essential. Therefore, much of the time of the supervisor in these initial years has been given to establishing desirable points of contact, especially with schools other than Federal aided, in order to interest them in standards for approved vocational education.

#### 2. ASSISTANCE TO TEACHERS IN ORGANIZED SCHOOLS AND CLASSES.

A wise supervisor appreciates that her big source of aid in a constructive educational program is good teachers, and therefore her big duty is to improve the teachers already in the vocational schools and, indeed, all home economics teaching in the State.

#### 3. COOPERATION IN THE PREPARATION OF HOME ECONOMICS TEACHERS.

There is no piece of work so fundamental to success in an educational campaign as the preparation of teachers qualified to offer the needed vocational instruction. A right point of view, proper professional and technical training, and real vocational experience are essential qualifications for teachers of vocational schools, and the State supervisor can bring to the teacher-training institution rich returns from her field experience that will guide in modifying the curriculum and methods of work.

Avenues for carrying out these field duties are found in surveys, conferences, personal visits, pushing helpful legislation, and publications. As the needs and conditions of the States are not identical, the specific problems of the State supervisor of home economics have varied. In States with compulsory part-time laws the problem of outlining courses of study for part-time classes has been uppermost. A few States have centered on the function and content of work in related science and art as part of the home-making curriculum. In

one State the problem of the organization of the school lunch as an activity in the vocational work of the school was worked out, and in another courses of study were developed to correlate education in home making with training for wage-earning pursuits outside the home, such as retail selling, dressmaking, catering, millinery, and nursing.

The work for 1919-20 plainly indicates that each State is considering its own problems and needs as a basis for the organization of vocational work in home economics, and the State supervisor is indispensable in the study of these problems and needs and in setting up a functional program.

### WORK IN THE SCHOOL.

The majority of the States are now offering vocational work in home economics in three types of schools—evening, part time, and all day, and as these schools reach widely different groups it is important that State boards urge the development of the three types.

#### 1. EVENING CLASSES.

In 38 States 193 evening centers were reimbursed in 1919-20, with 786 teachers and an enrollment of 24,768 pupils, a marked increase over the preceding year when there were but 127 such centers with a total enrollment of 22,691 pupils. A number of these centers in the South were for the instruction of Negro women and in the Southwest for Spanish-American women. The most popular units offered in evening classes have been millinery, renovation of clothing, and meal planning and preparation. Improvement in evening-school work is shown by a better organization of the work on the basis of the short unit course, by the number of pupils who complete a unit of work and enroll for a second unit, and by the qualifications for teachers measured in terms of ability to give classroom instruction, possession of technical information and skill, and actual experience in vocational fields.

In several of the States professional improvement is required of each teacher, and this may be secured by attendance on special classes held for the purpose, by summer study, or by a special piece of research work.

#### 2. PART-TIME SCHOOLS.

In 1918-19, part-time classes in only 6 States were reimbursed from Federal funds, while in 1919-20 part-time classes with an enrollment of 7,733 have been reported from 11 States. This growth is due largely to the operation of compulsory part-time laws in 19 States.

The qualifications of teachers in these classes are with few exceptions the same as for teachers of all-day schools, although some States

have set up emergency standards temporarily to meet the scarcity of qualified teachers. On the whole, however, the standards require training beyond the high school and evidence of teaching ability.

### 3. ALL-DAY SCHOOLS.

All-day courses, reimbursed from Federal funds, are organized in 43 States, the total number of such schools reaching 462, with an enrollment of 16,437 pupils and a staff of 714 teachers. These all-day schools are either independent schools or departments in elementary, junior high, or high schools. The majority are still found in high schools, a clear indication that there is need for vocational education in home economics for the normal high-school girl who does not expect to go to college and who yet desires a training that will fit her for home-making responsibilities.

In the elementary schools these all-day departments are designed especially for over-age girls, frequently of foreign parentage or Negro girls. The members of such all-day groups are over 14 years of age, usually ungraded, and are found in the larger centers. The courses of study are generally one or two years in length, although a few schools offer four years of work. Improvement in 1919-20 over the two preceding years is shown by a better grouping of subject matter, tending to make each year's work a complete unit in home making, including problems of home management along with those of cooking and sewing. By this plan an attempt is made to reach the girl with a type of instruction that will fit her for present home-making responsibilities and thus build sound vocational education work in the school. Almost universally the States have fixed for the qualification of teachers of all-day home-economics schools or classes the completion of a four-year's home-economics course beyond the high school. Two or three States accept two years of college work, a provision that must continue so long as a scarcity of teachers prevails.

In a few States a minimum salary has been fixed for home-economics teachers in all-day vocational schools. In one State 50 per cent of the home-economics teachers get \$150 per month, while in another the salary for all home-economics teachers in day schools is \$150 per month. These minimum salaries will tend to raise the standards for qualifications of teachers.

In the States of the southern region and in all States where separate schools are maintained for white and Negro children provision is made for vocational education for Negroes, although as yet the number of schools for Negroes where Federal funds are used in reimbursement is small. In several States the instruction is given in the country agricultural schools, while in others it is often found in the elementary schools.

Home-project work is growing in favor as a part of the vocational program. Five States last year required home-project work of all vocational students, while six other States advised this work as a supplement to the schoolroom instruction. Some of the so-called projects have been little more than work done at home, but many are excellent, requiring both managerial ability and manipulative skill. The length of the projects varies and the type has depended upon the vocational experience and the advancement of the student in classroom work. There has been an effort to make the home-project work a part of the vocational course rather than an addition to the half day of required work. Adequately to supervise home projects, the teacher's schedule must of necessity be greatly reduced as no teacher can carry a full teaching program and also supervise projects, while the project, as a fundamental part of vocational instruction, is valueless unless carefully directed by a well-qualified person.

In 13 States 12 months' teachers are employed. This is a splendid step on the part of State boards, since the 12 months' teacher can supervise not only the summer projects of the girls in the all-day school, but can also instruct groups of women in the community.

The statistics in this report, including, as they do, only such vocational schools and classes in home economics as are reimbursed from Federal funds, by no means cover the field or give an adequate picture of the actual status of this phase of vocational work, since Federal funds appropriated for home economics education are very limited as compared with those for training in agriculture and trade and industry. In order to maintain a well-balanced State program and meet the needs of girls and women for home-making instruction, a number of State legislatures have made special appropriations for this work from which they reimburse schools that Federal funds are insufficient to reach.

#### TEACHER TRAINING.

Teacher-training funds are appropriated under the Federal vocational act to train teachers of home economics, and since in the majority of States good home-economics departments were already in operation in State institutions, the State boards have, as a rule, delegated to such institutions the responsibility for this training.

In 1919-20 such work was done under the general supervision and control of the State boards in the following types of institutions: Land-grant colleges, State universities, women's colleges, and normal schools. Four State boards carried on their own training, using the plant and equipment in one or more of the colleges of the State, made available for this purpose. In all the teacher-training institutions, the total number of seniors enrolled in the vocational classes in 1919-20 was 876.

In addition to the teacher-training work carried on within the institutions, seven States report 44 centers outside of the institutions, offering special courses for the preparation of teachers of part-time and evening classes. The students enrolled in these courses have been mature women with vocational experience and the length of the training has been, for the most part, about 80 lessons, devoted largely to general principles of vocational education and special methods of teaching.

Teacher-training institutions also cooperated with the staffs of the State boards in offering some form of teacher-training improvement to employed teachers. Six States report special short courses conducted at the teacher-training institutions for teachers in service. Others report special forms of itinerant training by means of special conferences, distribution of bulletins and other material especially prepared by the teacher-training staff of the institution for the use of State boards in aiding teachers in the field, or by special visits of members of the teacher-training staff to the teacher in her own school, to give advice on immediate problems.

The question of the organization and administration of the work of training teachers within the institutions is an interesting and important one in its bearing upon the future development of the training of vocational teachers. In some institutions the home economics department is entirely responsible for the training of teachers, in others it is the educational department, while in a few the organization is by joint agreement of the two departments concerned. There has been a marked tendency within the past year to center the responsibility for the training of home-economics teachers in a member of the teacher-training staff, who is to cooperate with all departments concerned in the training of these student teachers. This move should strengthen the work by encouraging higher standards of professional training and a closer understanding between those departments responsible for technical subject matter and those responsible for professional education courses.

Practically all the institutions now training vocational teachers of home economics offer four-year courses, while in the past year special emphasis has been placed on adequate facilities for supervised teaching. Every institution with senior students in vocational courses made some provision for supervised teaching; in a number of institutions the local public schools were utilized for this purpose, where formerly the only recourse was to the preparatory classes or training schools of the institution, in which vocational courses were rarely maintained. In some instances the apprentice-teaching plan is used, which also gives the student teachers the advantage of working under normal schoolroom conditions.

Many institutions have enlarged the scope of the home-management courses. For the year 1919-20, 75 institutions reported supervised home management in a special house for this purpose or in an apartment or dormitory where satisfactory experience could be gained.

A few of the States are carefully studying the problem of vocational experience and making some attempt to provide home-making experience for their students in training. This may vary from a requirement of a summer of employment in some wage-earning occupation connected with the field of home making, to a few weeks spent in a home-management cottage. This is a step in the right direction, but the question needs earnest consideration.

The States where Negroes are given instruction in separate schools have undertaken the problem of training teachers for these schools, and in 1919-20, 12 institutions in 11 States were approved for this training. All of this teacher-training work is conducted in the agricultural and mechanical colleges for Negroes, where they are attempting to organize courses that will really train teachers to handle the vocational needs of the Negroes. The courses vary in length from two to four years, and emphasis is placed upon methods of teaching, good standards of home practice, and study of community problems.

The work in the teacher-training institutions for the year 1919-20 shows a much better appreciation of the real problem and its needs than in the two previous years. There seems to be a much clearer understanding of the necessity for training women to be proficient in the vocation of home making and in addition skilled in the profession of teaching.

#### CONFERENCES.

Conferences have been one of the very important means of promoting vocational education. They have given opportunity for discussion of administrative questions, as well as for an exchange of opinion and experience by those responsible for vocational education in the field of home economics. These have taken the form of national, regional, and State conferences, and have been attended by State supervisors of home economics, by those interested in and responsible for training teachers, and by vocational teachers.

The national conference was held in connection with the annual meeting of the National Society for Vocational Education, the general topics for discussion being the relation between supervision and teacher training, particularly in that phase of supervision which deals with improvement of teachers in service, ways and means of providing adequate vocational experience as a part of the training of teachers, and the plan and purpose of school visitation by supervisors.

Two regional conferences were held—one of the group in the southern region and the other a joint conference of the West Central and Pacific Coast States. There was a splendid representation from all these States, and the following important problems confronting them were discussed: Organization of part-time education and preparation of teachers for such work, related subjects as a part of the half day of vocational work, the home project work as a part of the program in the all-day vocational schools.

A large number of the States held conferences of a week or more, to which all vocational teachers of the State were called and at which the problems of particular interest to the respective States were discussed. Some of these conferences were held in connection with the meetings of the State teachers' associations and others at the teacher-training institutions as a part of the summer-school work. Every State meeting was made an opportunity to bring together for conference teachers, superintendents, and principals interested in the future of vocational work in home economics.

#### COOPERATION WITH OTHER AGENCIES.

The home economics section of the Federal Board has cooperated with various agencies in forwarding the program of vocational education in home economics. This has been accomplished—

(1) Through conferences for mutual help and understandings with other Government agencies interested in home economics education. A special piece of cooperation with the Children's Bureau, Department of Labor, has resulted in the preparation of a course in child care and child welfare to be used in the training of vocational teachers of home economics and plans for a course on the care of the child, which may be given in short units as part-time or evening instruction to mothers and prospective home makers.

(2) Through participation in the programs of national organizations, such as the National Education Association, the National Home Economics Association, the Southern Home Economics Association, the National Society for Vocational Education, and the Association of Land-Grant Colleges, where important problems of vocational education as they relate to the training of girls and women for home making and to the training of teachers for schools and classes have been discussed.

(3) By the appointment of national committees that have studied some of the important problems now facing the States in the organization and administration of home economics education.

These forms of cooperation offer large opportunities for service and have proved sources of valuable help in the fulfillment of our responsibilities to the States.

## NATIONAL COMMITTEES.

Some excellent work has been accomplished by the States through national committees made up of State supervisors and others interested in teacher training. The following national committees are now considering problems of general interest to vocational education in home economics:

1. *Home-project work.*—The value of the home projects in a program for vocational education is a subject of great interest to home economics teachers. The committee is making its study of the home project as it affects the work of pupils in school and in the home, as it affects the teacher's school schedule, as a summer project, and how to supervise it.

2. *The analysis of home making as a basis for a vocational course.*—The importance of analyzing the vocation is now fully recognized as a basis for the organization of training for the vocation. The committee is studying the problem of vocational analysis from the standpoint of how best to apply it to the teaching of home makers.

3. *Vocational experience as a requisite for a teacher of home making.*—The need of vocational proficiency as a requirement for a teacher of vocational classes in home economics is well understood. The groups of girls and women in training for teachers have had varied experiences and the committee is considering how best to devise plans for procuring vocational experience, as well as how to evaluate such experience and how to supplement the very limited experience which many prospective teachers have had.

4. *The community survey as the basis for the establishment of vocational classes.*—In offering vocational instruction it is essential to know the needs of the students to be reached by such classes, as well as the vocational opportunities of the community. This can best be accomplished by making a survey of the community. There are not available at this time satisfactory outlined suggestions for such a survey, as it relates to the vocation of home making, but the committee is compiling the necessary material.

5. *Training teachers for part-time and evening classes.*—The problem of training teachers for vocational work in home economics, particularly in part-time and evening schools, is one of the most fundamental pieces of work the States have undertaken. The committee is studying this problem as it is being worked out in the various States and is formulating recommendations for such training.

6. *Negro education.*—The group of States which are particularly interested in the vocational training of negroes are working on this problem. It is very important that the needs of the negro girls and women be understood and material organized in the form best for use in these classes. From a study of conditions in the States which are



attempting to solve this problem, it is hoped that real help and constructive recommendations will be made for dealing with special groups in need of home-making training.

7. *Related subjects.*—There is urgent need of related-subject material which will supplement the manipulative skill required as a part of vocational training. Educators who have been studying this problem realize that art and science as ordinarily taught in a general education do not satisfactorily meet the demands. The committee is considering this question from the standpoint of the specific vocation and its requirements, as a basis for providing the related science and art which will satisfactorily function in home-making training.

A piece of constructive work has been undertaken by these committees, and their findings will be of real value in promoting home economics education.

#### RECOMMENDATIONS FOR FURTHER DEVELOPMENT.

The future development of the vocational work in home economics is limited because of the small amount of Federal funds available for home-economics work. In 1919-20 more than half of the States used the total appropriation which was available for home-economics education in the States. The vocational education act does not make special provision for home-economics education, but does provide that 20 per cent of the trade and industrial fund may be used for home economics. The fact that the States have so generally used this money for home economics shows clearly that they believe in the value of this type of instruction. Many more schools are now applying for aid than can be reimbursed from State and Federal funds; therefore, if vocational work in home economics is to keep pace with the demands for it either additional State funds will have to be appropriated for the work in the schools or there will have to be a special Federal appropriation which will adequately provide home-making training in this country.

##### 1. PROMOTIONAL WORK.

It is important that the country as a whole better understand the scope and purpose of vocational education in home economics and that educators realize the place of home-making education in a national program of education. This can be accomplished by representatives of State and national boards for vocational education working with a better mutual understanding and in closer cooperation with national organizations whose aims are the betterment of American life. Through more conferences, which will bring together those agencies responsible for the organization and administration of vocational education and the groups of people particularly interested in the results of this training, as well as those de-

sirous of such training, vocational education in home economics will be given a new impetus.

Promotional work can and should be pushed by the preparation of literature and material which represent fairly the work of vocational education in the States and which show the wide opportunities offered to our people by such training.

## 2. STUDIES AND INVESTIGATIONS.

There are several very pressing problems now before the States on which they need help. With the passage of part-time laws in 19 of the 48 States, the general continuation schools, as well as special forms of part-time vocational classes, are being organized to meet the needs of the large group of young workers who are re-entering school. It is, therefore, of great importance that the home-making teacher study the problems of the girls and the occupations in which they are employed, so that she may be able to utilize her teaching in a way that will be of immediate help to them in their present employment and of real assistance in their further advancement. Home-economics instruction in the general-continuation school program should be in a true sense a service subject. This is particularly essential in the various activities which have grown out of home making, such as those of lunch-room work, waitresses, employment in the needlework trades, household employment, laundry work, and nursing. It is also essential in the commercial field, where so many young workers are employed in the various occupations connected with retail selling, and where home-making instruction, if wisely adapted, can do much to benefit the worker and to increase her wage-earning capacity. Such instruction also reaches out into the unskilled occupations of the trade and industrial field, which the majority of young workers must enter for their first employment.

The great need of training teachers who can adequately handle the problem of part-time and evening instruction is evident, and as the States are only beginning to undertake the preparation of such teachers, help is very necessary for guidance in this problem.

The training of household employees has been practically neglected in the vocational education program. This question should be studied both from the standpoint of the girls and women who go into household employment and from that of the home maker and her needs.

It is important that the vocation of home making be studied in detail, so that we may see more clearly the demands of the vocation for which we are organizing training. This means a survey of a large number of homes, differing in the size of the family, income, standards of living, and in those other elements which affect to so

large a degree the home life of our people. Such a study should be made not only to determine what the home-making activities of the various home makers are, but at the same time to review rather critically the work of the average home maker so as to help her see more clearly what are the essentials and what can with advantage be eliminated from her work.

### C. COMMERCIAL EDUCATION.

In the second annual report of the Federal Board for Vocational Education certain needs in the field of commercial education were pointed out, and the establishment of a department to consider ways and means of meeting these needs was announced. In the third annual report of the Board progress was reported in this field of vocational training. Further progress during the fiscal year 1919-20 is indicated below. For convenience in referring to previous reports and noting progress the same subheadings are used in the present report as were used in the previous statement of problems.

#### STATE SPECIALIST IN COMMERCIAL EDUCATION.

That the business training offered by public-school boards in the senior high school, the junior high school, the evening school, the continuation school, and the teacher-training school should be coordinated and articulated in such a way as to make a continuous program of training for business is becoming apparent to all who think on this subject. It is equally clear that such coordination and articulation of courses can be brought about only by placing the responsibility for the achievement of this result on the shoulders of one man who, by natural ability, training, and experience, is qualified to deal with the many and difficult problems of business education.

New York has pointed the way for better promotion and supervision of business training by transferring its commercial education department to the division of vocational education. An additional commercial specialist is being appointed to assist in the special problems of the continuation and evening schools.

While no other State has as yet gone so far in this direction, the directors of vocational education in the following States have, during the past year, established a cooperative arrangement with the commercial education directors in their cities, to the end that their experience may be made available in the solution of continuation school commercial education problems: Washington, Montana, Iowa, Indiana, Pennsylvania, and Oregon. Efforts are being made to interest State vocational education boards in the appointment of a supervisor of business training in connection with their State vocational education program.

## COMMERCIAL TEACHER TRAINING.

Some progress has been made in this phase of commercial education during the past year. The work of this kind begun in Indiana, New Jersey, Minnesota, Iowa, Pennsylvania, New York, and Washington last year has developed satisfactorily during the 1919-20 year.

*California.*—A course of training for commercial teachers was offered at the University of California, Berkeley, for six weeks, beginning June 21. The Federal Board's commercial education representative cooperated with the university in this work the first two weeks of the term.

*Massachusetts.*—The Prince School of Education for Store Service has been taken over by Harvard University and affiliated with its Graduate School of Education. This gives to retail selling education a status it has not heretofore enjoyed, and indicates definite progress in the field of vocational commercial training.

*New York.*—The first retail selling teacher-training class, at New York University, has enrolled 39 members. The first year's experience — indicates clearly the ultimate success of this venture which was made possible by the generous financial support of New York merchants. A special summer school for vocational education teachers, provided by the State in the normal school at Oswego, N. Y., offered a separate course for commercial teachers, with special reference to continuation school business training. The Federal Board's representatives assisted in the preparation of this course and in giving instruction to the teachers enrolled.

*Ohio.*—The Ohio State board, realizing the demand for better trained retail selling teachers, has given the necessary financial support to establish such a teacher-training course in the University of Cincinnati. Great results are expected from the venture, as this university is the pioneer in the field of cooperative university training.

*Pennsylvania.*—A retail selling teacher-training course has been given at the Carnegie Institute of Technology, Pittsburgh, during this year. It has been fostered by Pittsburgh merchants. From this course a number of students were graduated this year, some of whom accepted public-school teaching positions.

*Virginia.*—A commercial teacher-training course has been organized at the State Normal College for Women at Fredericksburg, Va., under the direct authorization of the State board of education. A class of about 25 young women will be enrolled for this work. The Federal Board's representative, at the request of the president of the college, outlined the course and gave other aid in establishing it.

The Federal Board is doing all in its power to stimulate this much-needed type of vocational instruction, to the end that vocational com-

mercial training may keep pace with constant developments in business.

### PART-TIME COMMERCIAL CLASSES.

#### 1. THE COOPERATIVE TYPE.

Largely through the Federal Board's efforts, directors of commercial education are rapidly coming to an understanding of the advantage that accrues from establishing business training on a cooperative or part-time basis. Many high schools are arranging that their commercial students shall get some contact with actual business before their formal training ends.

In some cities, this practical experience is secured by assigning all commercial pupils of certain grades to the various school offices for definite periods each week. In others, it is secured through a cooperative arrangement with business men, who make places in their offices and stores for commercial students who have not yet finished their courses.

During the past year, a great many retail selling part-time courses have been established. These will be referred to under a subsequent heading.

Part-time or cooperative office-training classes have been conducted in Los Angeles, Calif., Seattle, Wash., Salem, Oreg., Des Moines, Iowa, Cincinnati, Ohio, Rochester and New York City, N. Y., and Springfield, Mass. This is by no means a complete list. By the end of the current year, definite and more complete data will be available on this subject, since the following States have provided for this type of work in their State plans: Ohio, Indiana, Iowa, Wisconsin, Washington, Rhode Island, Texas, California, Arkansas, Pennsylvania, Mississippi, New York, and Minnesota.

The following States mentioned commercial courses in their State plans for vocational education, but have not as yet crystalized their thought on this subject into definite form: Arizona, Oregon, New Mexico, Nebraska, Oklahoma, Kentucky, Missouri, and Illinois.

The following cities have during the past year indicated their growing interest in this field by calling for the help of the Federal Board in the development of cooperative store and office commercial courses:

*Southern section.*—Richmond, Va.; Knoxville, Nashville, Chattanooga, and Memphis, Tenn.; Birmingham, Ala.; Atlanta, Ga.; Jacksonville and Tampa, Fla.; New Orleans, La.; Austin, Dallas, Fort Worth, San Antonio, and Houston, Tex.

*Middle western section.*—Pittsburgh, Pa.; Indianapolis and Terre Haute, Ind.; Peoria, Galesburg, and Chicago, Ill.; Des Moines, Iowa; Detroit and Grand Rapids, Mich.; St. Paul, Minneapolis, and Duluth, Minn.; Cleveland, Sandusky, Canton, Columbus, Dayton, Toledo, and Cincinnati, Ohio; Wichita, Kans.; and Kansas City, Mo.

*Eastern section.*—Buffalo, Rochester, and New York City, N. Y.; Portland and Augusta, Me.; Boston, Worcester, and Springfield, Mass.; Providence, R. I.; Waterbury, Conn.; Philadelphia, Pa.; Baltimore, Md.

*Western section.*—Helena, Billings, and Butte, Mont.; Spokane, Seattle, Tacoma, Olympia, and Walla Walla, Wash.; Portland, Salem, Eugene, and Corvallis, Oreg.; San Francisco, Oakland, Berkeley, Stockton, and Los Angeles, Calif.

## 2. THE CONTINUATION SCHOOL TYPE.

As stated in a previous report, provision should be made for giving business training to continuation school pupils who are commercially employed. It is evident, however, that the usual type of business training will not meet the needs of this group.

To find out just what education such workers have had, what duties they perform, what promotional opportunities are open to them, and what training they require, the Federal Board made, during the past year, a survey of commercial occupations open to boys and girls from 14 to 17 years of age, inclusive. This study was made in cooperation with the State directors of vocational education in each of the 22 States having a continuation school law. One or more cities were selected in each State, and 19 cities in 16 States carried the survey through and made a full report in time for inclusion in the general report of these surveys, prepared and published by this Board, as Bulletin No. 54—Commercial Education Series, No. 4, entitled "Survey of Junior Commercial Occupations." In this report 26 elementary commercial courses are presented, based upon job analyses of the junior commercial employments shown by the survey to be important in the training of young people for commercial service. This bulletin is bound to exert a powerful influence on business training throughout the country.

Many cities and States are interested in the phase of commercial education, known as retail selling training, as it is affected by the compulsory continuation-school laws. Groups of young store workers are being brought together in many cities for training along the lines of their store work.

New York, Pennsylvania, and California are studying this particular problem at the present time. An increasingly large number of stores are now asking that beginners be at least 16, preferably 17 or 18, years of age. Courses of study suggested for these groups of store workers, under 18 years of age, will be found in the above bulletin, under the retail selling education section.

## FOREIGN TRADE EDUCATION.

The new foreign trade bulletin, announced in last year's report, was printed during the past year by the Bureau of Foreign and Do-

mestic Commerce, and is known as "Miscellaneous No. 97, Training for Foreign Trade." As a statement of its contents was given when it was announced, this need not be repeated here.

The bulletin, announced on training for the steamship business, was also published during the past year by the Bureau of Foreign and Domestic Commerce through a cooperative arrangement with that bureau, and is known as "Miscellaneous No. 98, Training for the Steamship Business."

A text for use in teaching foreign trade paper work, just issued, is the joint product of the Federal Board and the Bureau of Foreign and Domestic Commerce, and is known as "Miscellaneous Series No. 85, Paper Work in Export Trade." A portfolio of forms accompanies the text.

As a result of the Federal Board's work in this field, part-time foreign trade courses have been established in many cities where such courses were greatly needed. The extent to which the Board's efforts have been helpful in making available material for instruction in foreign trade classes is shown by the fact that over 9,000 copies of one of the foreign trade bulletins prepared by the Board have been purchased at 50 cents a copy from the Superintendent of Documents. Further extension of this type of training is expected.

#### RETAIL SELLING TRAINING.

During the year ended June 30, 1919, the Federal Board published, in response to a growing demand for help in training store workers, a retail selling education bulletin. As a result of this publication and the work of others interested in this phase of vocational training, classes for store workers have been organized in nearly every city in the country; retail selling courses have been established in many public and private high schools; and elementary store training has been demanded by junior store employees who are now required to attend the continuation schools. To meet the increasing demand for help in this field, it became necessary, at the beginning of the past fiscal year, to appoint a special retail selling agent.

The widespread interest in retail selling training, as evidence by calls for the aid of the Federal Board in developing this work in various sections of the United States, is both significant and gratifying. It means that this largest single group of commercial workers are to be transferred through suitable training from the unskilled to the skilled classification.

During the past year, Virginia, Tennessee, Alabama, Georgia, Florida, Louisiana, Texas, Kansas, Pennsylvania, Michigan, Minnesota, Iowa, Ohio, Maine, New York, Rhode Island, and California have taken definite steps to include retail selling in their State plans for vocational education.

**COOPERATING AGENCIES.****1. NATIONAL RETAIL DRY GOODS ASSOCIATION.**

During the past year the interest and support of the National Retail Dry Goods Association has been particularly helpful. The managing director, the director of education, other executives, and members of the organization have done everything in their power to foster the development of retail selling training courses. Many of the merchants, appreciating keenly the value and need of this training, maintain educational departments in their own establishments. Educational directors, store managers, and members of firms where educational work is maintained are always interested to cooperate helpfully in the establishment of public school retail selling courses. The members of the Retail Research Association, with headquarters in New York, emphasizing the need for organization and training where personnel problems are concerned, are working in close association with those interested in this phase of vocational education, both in this country and in England. Where the stores work in sympathetic and intelligent cooperation with the public schools, the results are most successful.

In Baltimore, Md., for instance, where six stores employ educational directors, even the first year of retail selling work in the public schools has been successful and has met with fewer obstacles than is usual where new work is introduced into a school system.

**2. CHAMBERS OF COMMERCE AND RETAIL TRADE BOARDS.**

In the organization of the work in new fields the State boards for vocational education have found it advantageous to work with or through local chambers of commerce or retail trade boards. In several of the cities mentioned the initial meetings were called by the chamber of commerce and held in its assembly rooms. The committee of the chamber of commerce works with committees appointed by public-school authorities.

**3. UNIVERSITIES AND COLLEGES.**

The interest shown by the universities in this new vocational work is encouraging, and proves that it is well past the pioneer stage. Nothing could demonstrate this more clearly than that Harvard University has invited the Prince School, the pioneer school in the retail selling teacher-training field, to be affiliated with its new graduate school of education. This demonstrates also in the strongest possible way, to those who need convincing, that such a course is educational in its content. It has put commercial education into the ranks of a recognized profession.



**4. HIGH SCHOOL COOPERATIVE RETAIL SELLING COURSES.**

The greatest interest throughout the country on the part of merchants and public school authorities centers in the part-time cooperative courses given in the third and fourth years of the high school, for boys and girls preparing to enter the retail business. This work differs from the subject of salesmanship in being a course in which all subjects contribute to the business training of the pupil, with approximately half time given to work in the store. Store practice forms the basis for the classroom work, which should be conducted by a specially trained teacher.

This store work may be done under such arrangements as seem best to the individual high schools. It may be done on the "week-in and week-out" basis, alternate weeks being spent in store and in school, or on the "half-day" basis, the school arranging its program so as to permit the pupil to report for store work each afternoon. Nearly all the cities are at present experimenting with their programs. The difficulties of program arrangement are lessened where retail selling courses are put into the separate cooperative high school, or the vocational high school, or the commercial high school. These newer schools are so organized that the programs are not easily upset by the irregularities of this and similar courses.

In the year's review we note progress in many directions, but particularly in the breaking down of prejudice. It is encouraging to observe how many teachers and superintendents now see that it is not only possible but also distinctly advantageous to the community to have these courses in the public high schools.

High school cooperative part-time retail selling courses are being conducted in the cities listed below. Although these courses may be interpreted as qualifying for aid from Smith-Hughes funds, the majority of them are carried on without State or Federal aid. Boston, Springfield, Worcester, Mass.; Chicago, Galesburg, Ill.; Cincinnati, Toledo, Ohio; Indianapolis, Logansport, Terre Haute, Ind.; Los Angeles, San Francisco, Calif.; Seattle, Wash.; Grand Rapids, Mich.; Baltimore, Md.; Richmond, Va.; Houston, Tex.; Providence, R. I.; New Haven, Waterbury, Conn.; New York City, N. Y.; Pittsburgh, Pa.; Duluth, Minn.; Wichita, Kans.

New high-school classes have been organized to begin in the following cities in September, 1920: San Francisco, Stockton, Calif.; Nashville, Tenn.; Battle Creek, Flint, Mich.; Cleveland, Canton, Ohio; St. Paul, Minneapolis, Minn.; St. Louis, Mo.

**5. VOLUNTEER RETAIL SELLING CLASSES.**

While new courses in retail selling are being offered to high school, vocational school, and continuation school boys and girls, older

workers in retail stores are not being neglected. The value of training for store service is evidenced by the fact that volunteer classes for sales people have been well attended in many cities, including the following: Lowell and Lynn, Mass.; Kalamazoo and Grand Rapids, Mich.; Logansport and Terre Haute, Ind.; Galesburg, Ill.; Richmond, Va.; Wichita, Kans.; Tampa and Jacksonville, Fla.; Waterbury, Conn.

#### D. AGRICULTURAL EDUCATION.

##### COOPERATION WITH THE STATES.

The abnormal demand for trained men at high salaries for administrative and supervisory positions in the States during the past year had its effect upon the staff of agricultural agents of the Board in that the Board was lacking in three agricultural agents for almost the entire year. In spite of this fact the agricultural education service of the Board continued to take to the States the accumulated experience in agricultural education of the country, and devoted a large part of its time to a study of the principles of job analysis, which is believed to be fundamental to the organization of a course of study in vocational agriculture. The results of this study have stimulated many of the States to undertake similar work.

During the year the three agents spent a combined total of 250 days in the States visiting approximately 105 different schools receiving Federal aid for agriculture, made 59 visits to institutions preparing teachers of vocational agriculture, attended State conferences of agricultural teachers, and aided very materially in the solution of some of the special problems of State supervisors of vocational agriculture.

As the State programs develop, there appears to be more and more need for specific assistance to the States in the development of suitable subject matter and adequate courses of instruction. One of the agents has devoted considerable time during the year to preparing a manuscript on the teaching of vocational agriculture. In cooperation with one of the teacher-training institutions a study was also made of the problem of segregation of classes in teacher training. It is hoped that this study will result in a more satisfactory organization of such classes.

##### COOPERATION WITH OTHER AGENCIES.

Under the authority granted in section 6 of the act, the Federal Board has cooperated with the United States Department of Agriculture in studies resulting in the publication of a bulletin entitled "Lessons in Plant Production for Southern Schools," and also in the preparation of a manuscript entitled "Lessons in Animal Production for Southern Schools." In addition to these two studies the depart-

ment has cooperated with the Board in the preparation of "A Unit Course in Poultry Husbandry."

### GENERAL SURVEY OF PROGRESS.

The progress in the development of vocational agricultural education in the States during the year 1919-20 has been normal. This is measured by the increase in the number of schools offering vocational work and the number of boys and men reached by such work. The increased interest in vocational agricultural education and the better understanding of its problems, as shown in the setting up of State programs for vocational agricultural education, are also evidences of progress.

The results of a study of the problems of agricultural education and the relation of the school work to farming needs are evidenced by the increased number of men and boys outside of high schools who have been reached by short and part-time courses. Real progress can not be measured in statistics alone, but is better shown by a changed attitude on the part of school people toward the work, and by the growing appreciation of its value to the community aside from Federal reimbursements received.

The ultimate objective in the development of vocational agricultural education is to reach all groups of boys and men on the land with a type of education which will be of immediate use in solving the daily problems of the farm. Most of the agricultural instruction offered by the public schools has been a part of the high school program for boys who are regularly in school. Much of the instruction in agriculture in our high schools has indeed an important place in the general education of a boy, but the aim of a vocational agricultural education differs from this in that it is planned not so much to improve general information as to train a boy for the specific vocation of farming.

The first and governing motive underlying all vocational agricultural instruction is to prepare men for the farm in the most economical, practical, and efficient manner. Its scope is broader than that of general agricultural instruction in the schools, in that it proposes to reach all groups of boys and men, whether they be attending high schools, graded schools, engaged in farming, either on their own or other farms, or preparing to enter that vocation. Because of this difference of aim and scope, certain demands are made upon any system of vocational agricultural education which are not made upon general agricultural education. Vocational courses must be of varying lengths to meet the needs of all the different groups of boys and men. Equipment, methods, and subject matter must be worked out to cover all the essential phases of the farmers' different enterprises.

The increased interest in vocational agricultural education is evidenced by the number of applications for approval of schools and classes, the desire of school authorities to have more State funds to match Federal funds for work in the States, the increased attention given to supervision and administration, the steps taken by the States to eliminate from their plans the emergency clauses regarding qualifications for agricultural teachers, the increasing number of regional or sectional conferences of teachers, the larger attendance of State representatives at regional and national conferences, and the demands made upon the Federal Board for assistance to the States in the development of their programs of vocational agricultural education.

#### SUPERVISION.

Experience of the past three years has shown that the most satisfactory supervision is secured when at least one supervisor is employed on full time as a member of the staff of the State board for vocational education. The best results have been obtained where the supervisors can spend their entire time in supervision and in studying the needs of the States. In such States there is better equipment, better instruction, and very much better adaptation of the courses to the needs of the groups reached. In many cases the borrowing of supervision from a teacher-training institution or locating the supervisor at the teacher-training institution has proved of value. It has brought the work of the State board and the work of the teacher-training department into very close touch with each other, and has thus enabled the State board to have the advantage of the services of a well-trained man which it could not otherwise have secured with the limited funds available. During the past year 36 States employed full-time State supervisors; 12 States employed supervisors for part time. The increase in the number of supervisors over the previous year was 16.

Probably the most distinctive progress made in supervision has been in the employment of men for improving teachers in service; some of the important results of this work and of the increased number of supervisors are:

1. Courses of study have been planned more specifically to meet the needs of vocational pupils.
2. A general plan of vocational work, whereby the people of the State may be interested in vocational agricultural education, has been provided in an increasing number of States.
3. The teaching has been decidedly improved by giving individual help, extending over several days at a time, to the teachers in service.
4. A State plan and program are taking form for the development of vocational agricultural education.

5. Better standards for vocational work within the States are being set up.

There has not been much variation in the methods of supervision of the vocational work in the States, as this depends largely upon the amount of time devoted to supervision and the problems which need most immediate attention. In general, supervision has been conducted by personal conferences of the supervisor with the teachers, special preparation of material in the way of outlines for directed or supervised practice in agriculture, bulletins covering the main points in the administration of vocational agricultural education in the State, blanks for reports from the schools to the State Board; through community surveys to determine how best to adapt the vocational agricultural instruction to the needs of the vocational pupils in the State, and through State-wide, regional, and sectional conferences. Such conferences were held in probably every State and did much to bring the problem of vocational agricultural education before the school people and thereby secure their interest.

#### SCHOOLS AND CLASSES.

A study of the schools and classes organized during the year shows that there has been a general improvement in all kinds of agricultural education and that the encouraging conditions to be noted at the present time will continue throughout the coming year, with very decided improvement in some States and further general improvement over the entire country.

The three kinds of vocational agricultural education schools and classes developed in the States are growing out of the needs of the following groups of boys and men: (1) Boys who are in school, (2) boys who have left school and are employed on farms as laborers or tenants, but who come back for part-time or short-course instruction, and (3) older men who have left school, are tenants or owners of farms, but who can be reached by evening classes.

Up to the present time most of the agricultural training has been offered to boys who are in school, but the number of part-time or short courses and evening classes aided from Federal funds in 1919-20 indicates a recognition of the needs of those groups which are not reached through public school courses.

Wherever numbers of boys have left school and entered the vocation of farming without training enough to equip them for their duties as farmers, short courses and evening classes afford the best opportunities for training. There is every evidence to believe that almost every State will give additional consideration during the next few years to the establishment of short courses and evening classes.

In 1919-20 there were reported to the Board 59 vocational agricultural evening schools, with an enrollment of 1,541. The type of instruction found to be most effective in the evening work is the short-unit course, varying from 10 to 40 lessons. These classes usually meet twice a week for about two hours.

The teachers in the evening schools have been in the majority of cases the same as those in the day schools. Most of the States, however, realize that the night-school teacher must be of greater maturity than the average high-school teacher. He should have had years of vocational experience to fit him to do well the particular thing which he is to teach, and in addition must know how to present his knowledge to a class in such a way as to secure results.

Part-time and short-course classes in agricultural instruction reimbursed from Federal funds in 1919-20 reached a total of 117, with a total enrollment of 2,487 pupils. The whole movement of part-time and short-course work in vocational agricultural education is in its infancy. Some excellent work has been reported, but for the States as a whole the problem is yet to be worked out.

The progress of day work in vocational agricultural instruction has been limited only by an inadequate supply of qualified teachers. Forty-eight States reported day work reimbursed from Federal funds for the year 1919-20, with a total of 1,375 schools, an enrollment of 31,301 pupils, and a staff of 1,570 teachers. In 1918-19 there were 863 schools, with an enrollment of 19,933 pupils and a staff of 1,201 teachers.

With the development of vocational agricultural instruction in all the States, the directed or supervised practice in agriculture, as an important part of the work, is demanding a great deal of study and attention. It is a feature of vocational agricultural instruction which is definitely practical and applied. The farmer functions as a business man, a manager, and workman or operator. The major portion of the day work is devoted to furnishing vocational agricultural extension information, which fits the future farmer to act as a manager and as an operator. The opportunity to apply this information and to gain skill and experience is furnished by the directed or supervised practice in agriculture. The total net income from directed or supervised practice in agriculture in 1918-19 was \$832,487.60. This figure is rather significant in that the total income from directed or supervised practice in agriculture in some States was greater than the sum of the amount spent in the States for agricultural education by the Federal Board, the several local boards, and the State boards combined. In one State it is more than five times as much as the State legislature appropriated for vocational education for the year. All this in spite of the fact that stress is not laid upon financial gain but rather upon educational attainment.

As a result of the decided increase in the number of men engaged in the improvement of teachers in service, the methods of teaching have improved, for the individual prospective farmer and his needs have to an increasing extent set the standard of the classroom, laboratory, and field instruction, and methods are being worked out which will make of our future farmers more independent thinkers and workers. This entails a careful analysis of the minimum essentials which must be taught and the application of the directed or supervised practice in agriculture to the classroom work. With the methods now employed the results show a very decided increase in the correlation between the actual manipulative work on the farm and the related instruction necessary to make an intelligent worker.

#### TEACHER TRAINING.

All the land-grant colleges have been designated by State boards as teacher-training institutions. In 1919-20 the enrollment in teacher-training classes was 2,348, with a teacher-training staff of 293, as against an enrollment of 1,334 and a teacher-training staff of 222 in 1918-19.

The development of teacher-training work during the past year has been along the lines of more and better professional teacher-training courses and improved means of providing professional experience for the students. Professional courses which have received the most emphasis have been the special methods courses and supervised practice teaching. The provision for practice teaching was usually either the high school in the community in which the college is located, or a special practice school like a university high school, established in connection with the teacher-training institution. In a few institutions the supervised practice teaching is conducted through a system of apprentice teaching, the seniors spending the greater part of the last half year in teaching in one of the approved vocational departments of agriculture in the State, under the direction of a member of the teacher-training staff of the college. The adoption of this method of supervised practice teaching is apparently on the increase.

To no phase of teacher-training work has there been so much attention given as to that of the improvement of teachers in service. Almost every State now makes such provision and requires such improvement of every teacher. In the organization of the work the trend seems to be directed toward the employment of the teacher-training staff of the designated institution for this particular service to the State board.

PUBLICATIONS, JUNE 30, 1919, TO JUNE 30, 1920.

TRADE AND INDUSTRIAL EDUCATION.

**Foreman Training Courses.** Bulletin No. 36, Trade and Industrial Series No. 7 (issued in two parts). Part 1: I. Foreman Training and the Vocational Education Act. II. Suggestive Schedules for 82 Foreman Meetings. III. The Need for Foreman Training and Some Past Difficulties. IV. Planning and Initiation of Foreman Training Courses. V. Conducting Foreman Training Courses. Part 2: Suggestive Instruction Material.

Part 1 presents a brief history of a study of foreman training conducted by the Federal Board in cooperation with an industrial plant, and also contains information designed to aid individuals in initiating, planning, and operating foreman training courses of the character outlined, together with suggestive schedules for 82 meetings distributed between 11 units. This part of the bulletin would not be of value as instruction material. It is rather a record of an experiment in the field of training minor executives. Part 2 contains ample suggestive instruction material which can, if desired, be placed directly in the hands of men attending foreman training courses, as well as serve as a basis for further development of instruction material.

**General Mining,** Bulletin No. 38, Trade and Industrial Series No. 8.

Intended to meet the need of systematic and practical training for the million or more men engaged in mines and quarries of the United States. It takes up the need for common school and vocational mining education, an analysis of mining occupations, and routes for promotion, discusses various kinds of educational work carried on among mine employees in the United States, outlines mining courses, and treats of the teacher problem. Tables showing required qualifications for mining positions, fatality rates, etc., are included.

**Coal-mine Gases.** Bulletin No. 39, Trade and Industrial Series No. 9.

Presents in the form of concise lessons and in language easily understood the elementary facts regarding mine gases—such knowledge as may mean life instead of death to the miner himself and to possibly hundreds of his fellow workers.

**Coal-mine Timbering.** Bulletin No. 40, Trade and Industrial Series No. 10.

Prepared for use in coal-mine trade-extension classes. The subject matter has been collected largely from actual experience and is illustrated with many drawings. There are 15 lessons, grouped under the following six headings: Importance of timbering in coal mines; miners' timbering at the face; timbermen's timbering in drifts, slopes, headings, etc.; shaft timbering; the use of concrete in mines; steel timbering in mines. It is expected that the suggestions given will be of material service to instructors, while both text and illustrations will promote discussions between him and members of the class.

**Coal-mine Ventilation.** Bulletin No. 41, Trade and Industrial Series No. 11.

Presents, in the form of 11 lessons, simple statements and discussions of the theory, technical principles, and methods used in coal-mine ventilation. The subject is treated plainly so as to meet the needs of the men actually employed in the mines. The bulletin will largely be used in connection with trade-extension classes organized in coal-mining communities. There are numerous illustrations.



**Safety Lamps. Bulletin No. 42, Trade and Industrial Series No. 12.**

Prepared to meet the demand for a simple elementary treatise on safety lamps for use in the trade-extension classes organized in coal-mining communities. The different types of safety lamps, their construction, the assembling of their parts, proper methods for testing, and instructions for their use are treated in the form of lessons. The bulletin is illustrated.

**Outlines of Instruction in Related Subjects for the Machinist's Trade, including General Trade Subjects for Certain Other Occupations. Bulletin No. 52, Trade and Industrial Series No. 18.**

Presented as an advance edition to meet many requests for aid in the organization of part-time railway apprentice schools and in determining the related subjects content for trade instruction as set up in the various State plans. Includes analysis of the machinist's trade and corresponding treatment of the trade mathematics, trade drawing, and trade science for strictly technical related subjects of the machinist's trade. These analyses, in chart form, show at a glance the objectives to be sought and the auxiliary and technical information to be given in the various type jobs or checking levels. Similar treatment in chart form is given to general trade mathematics, drawing, and science, usable for groups made up from the machinist's and closely allied trades. The bulletin as a whole is directed to instructors and instructor-trainers specifically as an aid in determining for an industrial occupation the methods of instruction. Direct application of the study is made in the final section of the bulletin to railway part-time apprentice schools as authorized by the United States Railroad Administration, a four years' course being outlined.

### **HOME ECONOMICS EDUCATION.**

**Survey of the Needs in the Field of Vocational Home Economics Education. Bulletin No. 37, Home Economics Series No. 4.**

Because of the rapid growth of vocational education, those interested in home economics have felt the need of a survey which would give them an understanding of the conditions which at present prevail in the field, and which, by pointing out the needs, would suggest the direction in which future developments should trend. Bulletin 37 answers these demands, as it discusses the vocation of home making, the functions of the home, the educational advantages now offered by the home and the school, the numbers which will be affected by home-making training, and the necessity and opportunities for further development.

### **AGRICULTURAL EDUCATION.**

**Lessons in Plant Production for Southern Schools. Bulletin No. 53, Agricultural Series No. 6.**

Prepared for the use of teachers by E. H. Shinn, of the United States Department of Agriculture, under the direction of the Federal Board cooperating with the Department of Agriculture. There are 174 lessons adapted to the seasonal, agricultural, and school conditions of the States in the southern region, and intended to supply information and suggestions concerning the nature and conduct of a one-year vocational course in plant production. Sources of information, illustrative material, class exercises, practical exercises, project study outlines, etc., make up the general outline of each lesson.

## EMPLOYMENT MANAGEMENT.

**Employment Management: Its Rise and Scope.** Bulletin No. 50, Employment Management Series No. 1.

Describes the movements which have culminated in employment management, the functions and qualifications of the employment manager, his relations to the foreman and to the higher executive staff; outlines the organization of an employment department, and gives titles of an "employment manager's 3-foot bookshelf."

**The Selection and Placement of Employees.** Bulletin No. 49, Employment Management Series, No. 2.

Indicates the practices that have been found effective in the selection and progression of employees. Much space is devoted to a discussion of rating scales and to methods of rating individuals, such as psychological tests and trade tests, as employment managers generally are keenly interested in the recent developments of such tests. The bulletin was prepared by Philip J. Reilly, head of the personnel division of the Retail Research Association of New York and lieutenant colonel, United States Army, in charge of personnel classification of enlisted men in camps under the direction of The Adjutant General.

**Job Specifications.** Bulletin No. 45, Employment Management Series No. 3.

This is a study of the specific requirements of the job itself—the descriptive material resulting from job analysis which when put in definite form for the purpose of employment may be called the "job specifications." Employment managers have tended to place emphasis upon the determination of the qualifications of the man to fill the job, rather than upon the requirements of the job itself. The bulletin contains abundant material illustrating practical forms for specifications, the development and use of different job specifications, their application in office work, department stores, etc.

**Employment Management and Industrial Training.** Bulletin No. 48, Employment Management Series No. 4.

Designed to indicate the economic and social losses resulting from the fact that less than one-third of the employees of manufacturing industries in the United States have had a grammar-school education, not to speak of the much smaller proportion who have had any effective vocational training; to point out the more important difficulties to be overcome in preventing these losses, and to suggest practical methods by which industries and educational institutions may cooperate in a program for industrial training. Although many of the methods suggested may be readily adapted to transportation, mining, and other occupations, as well as to the small shop, the discussion of detailed plans has been limited for the most part to those applicable to large-scale factory production. Although it is essential that private manufacturing establishments avail themselves of every possible assistance from public and private educational institutions, limitations of space in this bulletin make it necessary to emphasize here the kinds of training which can be accomplished within the plant.

**The Wage-setting Process.** Bulletin No. 44, Employment Management Series No. 5.

Aims to promote justice in wage setting, by measuring and disposing of as many variables as possible, and making the problem of valuing a unit of labor as simple and practical as possible. Topics discussed are wages and the distributive process, wage level, the wage in relation to the task, the wage scale, and payment methods.

**The Turnover of Labor. Bulletin No. 46, Employment Management Series No. 6.**

Discusses the nature, cost, reasons, and meaning of labor turnover, methods of determining the real causes of turnover, the basic factors in computing turnover, the recording of turnover, the methods for reducing turnover as employed by certain firms, etc.

**Industrial Accidents and Their Prevention. Bulletin No. 47, Employment Management Series No. 7.**

Treats of the organization for safety, support of the management, the central safety committee, workmen's safety committees, the safety engineer, the new employee, bulletin boards and safety rule books, and many phases of equipment for safety, including lighting, plant sanitation, first-aid, the design and construction of safeguards, safe clothing, and eye protection. The collection and tabulating of accident data, the use of accident statistics, etc., are other features discussed. The ground is taken that accident prevention is more a work of education than of technical engineering.

**The Labor Audit: A Method of Industrial Investigation. Bulletin No. 43, Employment Management Series No. 8.**

Designed to set up a method of investigation of the facts and forces affecting the relation between employees and the management of industrial organizations. Suggests a labor audit checking list as a guide for the investigator in covering the subjects upon which information is desired. The content of this list is set up in 19 major topics with consideration to the physical, social, economic, and legal conditions. The labor audit is considered from the points of view of its uses to the general management, to the personnel manager, to the workers, and to the community.

**Bibliography of Employment Management. Bulletin No. 51, Employment Management Series No. 9.**

A brief, practical collection of references on subjects with which the employment manager has to do, or which are near neighbors to his duties and so within his range of interest. The references are grouped under eight general headings, as follows: The labor problem and employment management, Selection of personnel, Turnover of labor, Training, The work schedule, Remuneration and stimulation, Maintenance of the working force, and Government of the shop. 119 pp.

**COMMERCIAL EDUCATION.**

**Survey of Junior Commercial Occupations. Bulletin No. 54, Commercial Series No. 4.**

The mistake of transplanting the usual high school bookkeeping and shorthand courses into the continuation school is being made in many cities. To point the way for the development of a better type of business training for such schools a survey of junior commercial occupations was made in a large number of cities. This bulletin contains job analyses for 26 such occupations, a statement concerning established promotional lines for each position, and a continuation school course of study for each occupation.

## PART II.

### SUMMARY OF PROGRESS BY STATES.

The following report of progress has been compiled from State reports and from the reports of Federal agents. The personnel of the State boards of education and their staffs are given as for the year 1919-20. The report must of necessity be reduced to very brief statements indicating the progress of vocational education within the States.

#### ALABAMA.

Members of State board: Spright Dowell, chairman, State superintendent of education; Thomas E. Kilby, governor; A. H. Carmichael, lawyer; R. H. McCaslin, minister; A. L. Tyler, capitalist; Mrs. T. G. Bush, housewife; Dr. D. T. McCall, physician; L. B. Musgrove, capitalist.

Executive officer: Spright Dowell.

State director of vocational education: J. B. Hobdy.

State supervisor of agriculture: S. L. Chesnutt.

State supervisor of trades and industries: L. J. Sindell.

State supervisor of home economics: Miss Ivol Spafford.

#### PROVISIONS FOR COOPERATION.

During the spring of 1919 the legislature accepted the provisions of the Smith-Hughes law and made an appropriation matching Federal funds. During the adjourned session of the legislature, September, 1919, the newly adopted State code carried a provision for the transfer of authority in vocational matters from the State board for vocational education to the State board of education, a newly organized body, with full authority in all educational matters.

The above-named State board was appointed by the governor, two members of which were to serve for three years, two for six years, and two for nine years, the governor and State superintendent of education being ex officio members of the board.

On September 1, 1919, State supervisors in the three branches of the work were appointed, and the director qualified under the agricultural branch, giving two-thirds of his time to supervision of agricultural education. The supervisory force has devoted its entire time to the upbuilding of all departments, each supervisor giving full time to the department under his direction. As a result the work in each department has been placed on a more effective basis.

## AGRICULTURAL EDUCATION.

The State supervisor of agriculture was appointed to devote two-thirds of his time to the supervision of agricultural education, and the work in vocational agriculture in the State has been placed on a more effective basis. During the year vocational agriculture was taught in 29 schools for whites, with an enrollment of 517, and in 8 Negro schools, with an enrollment of 188, making a total of 700. The total number of schools for the year preceding was 25—18 schools for whites and 7 for negroes. The 207 vocational pupils in 1918-19 in white schools made from directed or supervised practice in agriculture \$11,812.11, which is a return of 43 cents on every dollar expended for salaries of teachers of vocational agriculture, which was \$34,041.44. The 57 pupils in colored vocational schools made from directed or supervised practice in agriculture for the same year \$1,699.55. Several new forms for office records and reports have been developed during the year. These forms have added materially to the efficiency of the State administrative work. Two regional conferences of two days each were held for the agricultural teachers and a summer school, July 18 to August 16, was held at the teacher-training institution.

Itinerant teacher training was inaugurated during the year by using the professor of agricultural education at the Alabama Polytechnic Institute two days each week for half the year. A similar arrangement was made for using a professor at the colored teacher-training institution for itinerant work among the colored schools. There were enrolled 23 students in the senior year of teacher training and 40 students in the junior course at the Alabama Polytechnic Institute.

The State board has not been able to meet all requests for aid in the establishment of departments of vocational agriculture, due to the fact that the supply of trained men is so limited. The board is pursuing the policy of recognizing one school for vocational work in each county before recognition is given to a second school in the same county. In this way it is hoped to distribute the work uniformly over the State.

## HOME ECONOMICS EDUCATION.

A State supervisor of home economics education was employed on full time in 1919-20.

In 1918 only 1 school in Alabama came up to the home-economics standard required for Federal aid. This was a negro school, with 14 pupils and 1 teacher. In 1919, 2 white and 1 negro schools were approved, with a total of 49 pupils and 8 teachers. In 1920, 9 schools (4 white and 5 negro, with a total enrollment of 245—118 whites and 127 negroes) were subsidized from Federal funds.

In Tallassee a home economics evening class was organized for young women employed in the cotton mills. At first the class met once a week on the study of foods, clothing, and expenditure of income, but later, on request of a number of the class, meetings were held twice a week.

The Federal funds for home economics education in Alabama are so limited (\$1,751.77 for 1919-20) and the demand for vocational home economics education in the schools so great, that the last legislature made an appropriation of \$10,000 to establish vocational departments for home economics education in all high schools maintaining vocational departments for agricultural education.

The training of white teachers has been carried on at the Alabama College for Women (formerly known as the Alabama Girls' Technical Institute), where a four-years' course is now maintained, with a well-equipped practice cottage where the girls are in residence for 12 weeks. Facilities for supervised teaching are furnished by the schools of the county.

The negro teachers of the State are trained at Tuskegee Normal and Industrial Institute, where practice teaching is conducted in the preparatory department of the institute and the Children's Home, and supervised home management in a practice cottage, where the girls reside for six weeks.

#### TRADE AND INDUSTRIAL EDUCATION.

For the first time since the inauguration of vocational education Alabama has had a full-time State supervisor for industrial education. The city of Birmingham has also provided a full-time local director of vocational education. There has been approximately 180 per cent increase in the number of industrial courses this year over the previous year. Twelve cities in 15 different centers have had evening instruction. Seven cities with 13 centers have given part-time courses, and 2 cities in 3 different centers have provided unit trade instruction. The part-time work has consisted of trade extension types as well as those of general continuation. The evening instruction has been distributed uniformly over the State and has representation in several of the leading industries, prominent among which are the iron and steel works of the Birmingham district and textile mills throughout the State. The University of Alabama has conducted extension teacher-training courses at Birmingham and Sylacauga and residence courses for related-subjects teachers at the institution. Tuskegee Institute provided a full-time instructor trainer during the year and maintained a residence course at the institution and an extension course in Birmingham. The staff of the State board is making a special study for the training of girls and women in connection with the knitting mills of the State. There

were 20 evening trade-extension courses, 13 part-time organizations, and 4 unit trade courses in operation during the current year.

#### ARIZONA.

Members of State board: Thomas E. Campbell, governor; C. O. Case, State superintendent of public instruction; R. B. von Kleinsmid, university president; A. J. Matthews, president, normal school; J. O. Creager, president, normal school; C. F. Philbrook, city superintendent; H. E. Matthews, high-school principal; Miss Elsie Toles, county superintendent.

Executive officer: C. O. Case, State superintendent of public instruction, Phoenix.

State director of vocational education, R. H. H. Blome.

State supervisor of trade and industrial education: J. T. Ryan.

State supervisor of agricultural education: C. E. Bowles.

State supervisor of home economics: Beulah Coon.

#### AGRICULTURAL EDUCATION.

The fiscal year 1919-20 marked noticeable development in several phases of agricultural education in the State. The State provided one full-time supervisor of agricultural education who worked from the office of the director of vocational education. The work of the supervisor of agriculture has been as follows:

1. Sixty-three visits were made to schools offering courses in vocational agriculture or those planning to add such courses.

2. Two conferences of a State-wide character and four group conferences were held.

3. A university course to supplement the teachers' technical information was given.

4. To improve the teaching methods of teachers in service a series of monthly news letters was issued.

5. Complete office records showing the work in progress at each school were kept.

6. The monthly reports received from the teachers were studied and analyzed and many personal letters were written by the supervisor to the teachers concerning them.

The number of communities reached with vocational agricultural instruction during the year increased 128 per cent, or from 7 to 16. The number of students enrolled increased during the year 81 per cent, or from 129 to 232. The 66 vocational pupils who completed directed or supervised practice in agriculture during the year 1918-19 made \$7,128. No reports or records of community services rendered by teachers of vocational agriculture were preserved prior to September 1, 1919. However, during this year the State records

show that the community activities carried on by the agricultural teachers included work among both adults and juniors. Evening classes, short courses, leadership in organizing cooperative associations, and other forms of assistance were given to adults.

Teacher training proper in agricultural education was not begun until January 1, 1920. Since that time one man has given his full time to resident teacher training in the preparation of teachers of vocational agriculture. Two courses were offered: (1) Materials and methods of high-school agriculture, and (2) an agricultural education seminar. Four seniors and graduate students completed the first course. Although no itinerant teacher training, as such, was attempted from the university, the designated teacher-training institution, the supervisor did an appreciable amount of this work. Eleven teachers of vocational agriculture were in attendance at the summer session, which was held at Flagstaff for six weeks.

The present possibilities for vocational agricultural education in Arizona are by no means exhausted. Probably as many as eight schools in which the work should be given will not have teachers next year. Development of the agricultural districts of the State has hardly been started. With an adequate supply of qualified teachers of vocational agriculture, the outlook in the development of a highly efficient small system of vocational agricultural education is very encouraging.

#### HOME ECONOMICS EDUCATION.

The State supervisor of home economics gave full time to the work. Special progress was made in reaching the overage girl, often Mexican, through classes in the elementary and part-time schools. Two conferences were held with the teachers of vocational home economics, one at the meeting of the State teachers' association at Tucson and the other at a teachers' institute at Phoenix, with good results.

All-day vocational schools in the State numbered 23, an increase of 14 over the previous year. Eleven of these were departments in high schools and 12 in elementary schools. One hundred and eighty-four students were enrolled in the high-school classes and 293 in the elementary classes, making a total of 477 vocational students. Twenty-five teachers were employed in these classes.

Part-time instruction was well launched with six part-time classes, having an enrollment of 401 students and 6 teachers.

There were 21 evening centers with 33 classes, enrolling 531 students and employing 33 teachers, an increase of 21 classes and 368 students over last year.

The training of teachers for home economics was conducted at the University of Arizona, where 22 students were enrolled in the course.



During the past year the university has added one new teacher, who is to spend half her time in residence, conducting the work in special methods and practice teaching, and the other half in the State doing itinerant teacher-training work. This teacher has also been conducting a 10 weeks' special course for teachers in the summer school at Flagstaff.

**TRADE AND INDUSTRIAL EDUCATION.**

Evening schools have been established in 9 cities, with a total of 15 classes, on a short-unit basis. This is an increase of 5 over last year. The enactment of the part-time law last year came too late to be effective in the establishment of as much part-time work as might have been expected. Two cities—Tucson and Bisbee—attempted some work in general continuation classes. Coordinators were employed in both cities with satisfactory results. The development in day trade schools shows a substantial increase over the number established last year.

A very definite development is noted in instructor training. The State recognizes the need for itinerant instructor training, in order to make it possible to enroll in this work those who have proven their ability as journeyman workmen but who are unable to attend residence courses.

**ARKANSAS.**

Members of State board: J. L. Bond, State superintendent of public instruction; Sidney Pickens, teacher; J. C. Futrall, teacher; J. W. Kuykendall, business man; B. W. Torreyson, teacher; Jack Bernhardt, lawyer; D. A. Bradham, lawyer; L. P. Anderson, teacher.

Executive officer: J. L. Bond, State superintendent of public instruction, Little Rock.

State director of vocational education: A. B. Hill.

State supervisor of agriculture: E. B. Matthew.

State supervisor of home economics: Miss Stella Palmer.

State supervisor of trades and industries: H. C. Givens.

**AGRICULTURAL EDUCATION.**

The supervision was carried on by a State supervisor of agriculture, assisted by a supervisor for Negro schools and two itinerant instructors, who combined supervision with instruction, one working in the white schools and the other in the colored schools. It is the intention of the supervisory staff to visit each school at least every three months. For the three quarters ending April 1, the supervisory staff had made 157 official visits to vocational agricultural departments or schools. National, regional, State, and community conferences were attended to the number of 17. Thirty-three bulletins were

issued within the year, and a magazine devoted to vocational education was published monthly in cooperation with the supervisors for industrial and home-economics education. In addition to these, various articles have been furnished to educational news publications dealing with agricultural education. In the supervisor's office may be found an official report of each visit made, statistics made on the number and location of schools, enrollment, course of study, class schedule, qualifications of teachers, list of equipment, record of supervised or directed practice in agriculture, and other data sufficient to afford information on the quality of work done in each department or school.

Thirty-three white schools, an increase of approximately 153 per cent over last year, were approved for Federal aid and enrolled 797 pupils in vocational work. The 79 pupils who completed their practical work made from directed or supervised practice in agriculture \$6,375.10, which was a return of 41 cents on every dollar expended for salaries of teachers of vocational agriculture, which was \$15,397.46. There were held during the year three evening schools, with an enrollment of 78, and one part-time class, with an enrollment of 10. Twelve colored schools, an increase of approximately 180 per cent over last year, were approved for Federal aid and enrolled 251 pupils in vocational work. The 67 colored pupils who completed their practical work made from directed or supervised practice in agriculture \$6,342.36. Each teacher of vocational agriculture includes in his program of duties a certain amount of community service, which includes community surveys, organization of cooperative associations, demonstrations in pruning, spraying, tubercular testing, cow testing, soil testing, and fertilizer demonstrations.

A resident teacher-trainer was employed by the State university and entered upon his duties January 1, 1920. Prior to this date the teacher training was taken care of in the summer session or by itinerant instruction. Six students enrolled in the teacher-training course at the university and six at Pine Bluff. An itinerant teacher is employed for part-time work with the colored teachers in service. He visits the schools, makes surveys, assists the teachers in making out their programs, and gives them a systematic course of instruction in methods. A summer session of two weeks for colored teachers was held this year for the first time. A six weeks' summer session for the training of vocational teachers was held at the university.

The work in vocational agricultural education in conformity with the provisions of the Federal vocational education act began in 1918 with 11 schools. These were increased to 18 in 1919, and to 45 in 1920. The reception of the work by the citizens of the State has been most cordial and the expansion is limited only by funds and the lack of competent instructors.

## HOME ECONOMICS EDUCATION.

In 1918-19 and 1919-20 a member of the home economics training staff of the University of Arkansas was loaned on part time to the State department for supervision of home economics. This plan will be continued in 1920-21 and an assistant provided to aid in both the teacher-training and supervision.

In 1918-19 one good all-day department was organized and one evening school started at Little Rock, but the latter was discontinued in the middle of the winter because of shortage of gas and the influenza epidemic.

In 1919-20 there were four all-day schools, with an enrollment of 87.

The home economics evening classes in Little Rock were most successful, the enrollment reaching 734. Short units in millinery, plain sewing, and shirt-waist making were offered. The night the classes started so many women were present that extra classes had to be organized, and even then large numbers had to be turned away for lack of space and teaching force. The average attendance was almost 90 per cent. In Dermott, with a population of 1,662, evening classes were organized in millinery.

Teacher training for white teachers is conducted in the University of Arkansas, Fayetteville, and for Negro teachers at the Branch Normal, Pine Bluff.

## TRADE AND INDUSTRIAL EDUCATION.

Little Rock has continued its evening work with additions, has also added part-time classes, and has extended its unit trade courses. Hot Springs has conducted a trade class in printing, and the Branch Normal College for Negroes inaugurated a unit-trade course in auto mechanics. A feature of the part-time work is that the program is made up wholly of the trade extension and trade preparatory types, there being no general continuation part-time work in Arkansas thus far. The State has had during the year a half-time supervisor of industrial education. The University of Arkansas has maintained extension courses throughout the year at Little Rock, Hot Springs, and Fort Smith, and a residence course during the summer session at the university. For the colored race residence courses in the Branch Normal College have been conducted for related and shop teachers. The State board also conducts itinerant teacher training for teachers in service, as a part of its regular program of State supervision. As a result of a study relative to the needs in vocational training for girls and women, there have been established a unit-trade course in dressmaking for Negro girls, a part-time course in dressmaking, a part-time course in millinery, and an organiza-

tion of evening work in millinery. The city of Little Rock has provided a full-time director for vocational education.

### CALIFORNIA.

Members of State board: E. P. Clarke, publisher; Mrs. O. Shepard Barnum, housewife; George W. Stone, bank examiner; Mrs. Elizabeth B. Phillips, housewife; Mrs. Agnes Ray, housewife; Stanley B. Wilson, publisher; Will C. Wood, educator.

Executive officer: E. R. Snyder, commissioner of industrial and vocational education, Sacramento.

Supervisor of agricultural education: J. B. Lillard.

Supervisor of trade and industrial education: J. C. Beswick.

Supervisor of teacher training, home economics: Maude I. Murchie.

General director of teacher training, agriculture: F. L. Griffin.

Supervisors of teacher training, trades and industries: C. L. Jacobs and George W. Galbraith.

### PROVISIONS FOR COOPERATION.

The last legislature passed what is known as the part-time act, which has been placed by the State board of education in the hands of the department of vocational education. Doubtless a considerable portion of the part-time work must be done in agriculture, especially in the rural, thickly settled portions of agricultural sections in California.

### AGRICULTURAL EDUCATION.

The State board for vocational education has organized and developed the agricultural work in California with three points in mind:

1. Placing the vocational work over the State so as to have—

- (a) The largest possible geographical distribution.
- (b) The largest possible distribution to include the different phases of agricultural activity so diverse in the State.
- (c) Courses organized in exclusively rural locations as well as in a few cities.

2. At the same time that the foregoing factors have been kept in mind the State board has planned to organize the work in groups where conditions are more or less alike and to hold conferences of teachers of these groups at one time or another during the year.

To organize vocational work in the schools that were fairly large, for the following reasons:

- (a) A greater attendance could be secured.
- (b) Better salaries could be paid; and
- (c) The hope has been entertained that these schools would ultimately go it alone and give the State board an opportunity to expend its energies on the smaller institutions.

The State board has had the full time of a State supervisor of agriculture. He has published a monthly news letter for the agricultural teachers, and has made contributions to rural farm papers, to the farm magazines published in California, to the California Blue Bulletin, published by the State board of education, and to educational journals. The State supervisor makes a quarterly report to the commissioner of education and receives from the agricultural teachers in the field a monthly report. These teachers have had not only the assistance of the State supervisor but considerable assistance from the teacher-training department of the university.

Thirty-five schools, an increase of approximately 100 per cent over last year, were approved for Federal aid, and enrolled 676 pupils in vocational work.

The teacher-training work is conducted by the University of California for the State board for vocational education. The supervisor of this work is chief of the division of agricultural education of the university and is a member of the staff of the College of Agriculture and of the department of vocational education. An assistant supervisor, who is in direct charge of the work at the university farm at Davis, is a member of the staff of the department of vocational education, but subordinate to the chief of the division of agricultural education of the university. There were 15 students taking the teacher-training work in the senior year. A six weeks' summer session was held for teachers in service and included courses in methods, farm mathematics, farm English, and special courses.

The agricultural education situation in California is encouraging. The extension department of the University of California and the State board for vocational education have had satisfactory cooperation. Each of these educational forces has boosted the work of the other.

#### HOME ECONOMICS EDUCATION.

The State supervisor of home economics gave full time to supervision and teacher training. Because of the need of teachers for part-time schools, to be organized for the first time under the compulsory part-time act this fall, much of the supervisor's time was spent in conducting classes in teacher training for leaders who will in turn train teachers for the compulsory part-time schools.

Of the 11 all-day vocational schools of home economics reimbursed from Federal funds, 9 were departments in high schools and 2 in elementary schools. There were 184 students enrolled and 9 teachers employed in the high-school departments, and 44 students, with 2 teachers, in the elementary departments. There were 163 part-time classes, with an enrollment of 5,950 girls, or more than double that of the previous year. No evening schools in California are reimbursed from Federal funds.

The training of teachers of home economics is carried on under the direction of the State supervisor, with centers located in five normal schools. The course, two years in length, is designed to train experienced home makers for teaching. The applicants must be women high school graduates who have had at least four years of home-making experience after their eighteenth year. Sixty-two women were enrolled in these teacher-training courses.

#### TRADE AND INDUSTRIAL EDUCATION.

The California State plan does not provide Federal subsidy for evening schools or classes. This type of school has been promoted in the past through the use of State and local funds. The standard of work in the evening schools in many cases compares favorably with the standard set up for Federal aid. Sixteen cities reported evening classes in 22 centers, conducting 21 short unit courses with a total of 181 classes. California is one of several States which enacted a part-time law a year ago. Its first application was that of requiring the attendance upon day schools of all those up to 16 years of age, beginning in September, 1920. To the ages of 16 and 17 attendance will be required for a minimum of 144 hours per year in the case of those not already attending school or excused on proper authority. One year later the provision applies to those between 17 and 18 years of age. It is without doubt a misfortune that the law does not reach those under 16. The latter, if employed, are required to attend an evening school. Four cities are reported as having part-time classes in four centers, employing four coordinators, with an enrollment of 710 pupils. It is estimated that there will be 50,000 children in school on a part-time basis next year.

In the development of vocational education California has placed its greatest emphasis on day schools. These schools are organized as departments in the usual technical or manual-training high schools.

Ten cities are reported with 19 centers, giving 85 different unit trade courses.

Instructor training in California has advanced very rapidly both in quality and quantity during the past year. A comprehensive program was inaugurated for training continuation school teachers. Two centers were established, one at Los Angeles and one at Oakland, with a satisfactory enrollment at both centers. The enrollment included both men and women. The majority of those taking the training were shop teachers who obtained their practice teaching in evening classes. A part of each group was made up of teachers whose certification was dependent upon the completion of the work.

#### COLORADO.

Members of State board: O. H. Shoup, governor; A. A. Edwards, irrigation and insurance; J. S. Calkins, farmer; H. D. Parker,

farmer; Mrs. Agnes L. Riddle, farmer; E. M. Ammons, insurance and live stock; John C. Bell, lawyer; W. I. Gifford, miner; J. B. Ryan, farmer; C. A. Lory, college president.

Executive officer: A. A. Edwards.

State Director of Vocational Education: C. G. Sargent.

State supervisor of Vocational Agriculture: L. F. Garey.

State Supervisor of Vocational Home Economics: Mable V. Campbell.

State Supervisor of Trade and Industry: H. A. Tiemann.

#### AGRICULTURAL EDUCATION.

The State supervisor of agriculture has been on duty since July 1, 1919, and consequently had nothing to do with the organization of the work or reports prior to that time. His work has consisted of visits to schools, outlining suggestive courses, helping to secure qualified teachers, teacher-training in service, supervision in teacher training in agriculture on the campus of the State Agricultural College, besides getting out publications from the State office that relate to agriculture. The supervisor, with one exception, has been able to visit all schools receiving Federal aid, at least three times during the year. One sectional conference was held for agricultural teachers, and a number of others at general meetings, for the purpose of organizing to promote agricultural education in the State. These meetings were held at the Colorado Teachers' Association, at the State judging contest, and at the Denver stock show. A monthly publication known as the Vocational Messenger is edited by the supervisor of agricultural education and published by the State board. In addition to preparing a project record book, the State supervisor has prepared project outlines, course outlines, and references and suggestive material for the promotion of the work in the high schools. The teachers make a quarterly report to the State supervisor on projects, subject matter, and professional improvement.

Seventeen schools, an increase of approximately 183 per cent over last year, were approved for Federal aid, and enrolled 399 pupils in vocational work. Owing to the lack of State supervision of vocational agricultural instruction until July, 1919, there is no record for directed or supervised practical work for 1918-19. The preliminary report on directed or supervised practice in agriculture for this year, however, indicates substantial development along this line, as it pertains to practical work in wheat, corn, hogs, sheep, dairying, potatoes, alfalfa, etc. The total scope for some of these pieces of practical work includes wheat 1,080 acres, corn 572 acres, 124 head of hogs, and 2,050 head of poultry. The community service which is being ren-

dered in some of the schools receiving Federal aid is very gratifying. In several instances these schools have been the cause of changing the type of live stock in the community from scrub to pure bred. A few of the many testimonies in favor of agricultural instruction which superintendents have made to the State supervisor follows: One superintendent states that this work has been worth \$100,000 to the farmers in his community, because it has proved that the soy bean is a valuable crop to grow in his community. Another stated that it has been the cause of keeping in school over 100 boys and girls who would otherwise not be in high school at all, and that the agricultural department activities were now the real interest centers of the entire school.

All of the teacher-training work in agriculture, except what is being done with teachers in service, is being done by the State agricultural college. A man has been employed to spend all his time in the training of prospective teachers of vocational agriculture. There were enrolled for the year 12 seniors and 15 juniors in the teacher-training course. A six weeks' summer session for teachers in service was given at the college.

The outlook for the development of vocational agricultural education in the State is very good. there being a keen desire in nearly all of the high schools to introduce this work, but lack of funds for reimbursement is the chief obstacle against its adoption at the present time. In spite of this some of the schools are going ahead on their own accord and introducing their own vocational courses.

#### HOME ECONOMICS EDUCATION.

This year, for the first time, Colorado has had a State supervisor of home economics giving full time to promotional work, supervision, and itinerant teacher-training work. She held one group conference, at which about six vocational teachers were present, and a summer conference of six days at the State college, at which 20 teachers were present.

The all-day schools and classes numbered 10, an increase of 6 classes over the preceding year. There were 156 students enrolled in the classes.

Home-project work was started in seven of the all-day schools, one school continuing the work through the summer under the direction of a 12-months' teacher.

Part-time and evening work was started. Four part-time classes, with an enrollment of 203 pupils, and two evening centers, with 9 classes enrolling 308 students and employing 9 teachers, were reimbursed.

At the State agricultural college, the institution designated to train teachers of vocational home economics, 114 women were enrolled in the vocational courses.



## TRADE AND INDUSTRIAL EDUCATION.

Most of the development during the year has been in evening schools and classes. Excellent part-time classes have been organized and carried on at the Opportunity School in Denver. Evening schools and classes for mining occupations were successfully promoted at five Colorado camps in the Trinidad district, namely, Morley, Sopsis, Primero, Segundo, and Frederick. The organization of these classes resulted from promotional work instituted during the present year. Evening classes at the sugar factories and at five Colorado camps in the vicinity of Boulder have been promoted by the extension department of the State university.

Some very satisfactory work in instructor training has been carried on during the year, principally in the city of Denver. Three groups of men from various trades, including railroad shopmen, received training in these classes.

## CONNECTICUT.

Members of State board: Marcus H. Holcomb, governor; C. B. Wilson, lieutenant governor; Frederick S. Jones, dean of university; William A. Shanklin, college president; Charles Ames, teacher; Walter D. Hood, teacher; Charles L. Talcott, manufacturer; Charles L. Torrey, lawyer; Julian W. Curtiss, merchant; Henry A. Tirrell, teacher; Frederick M. Adler, manufacturer.

Executive officer: Charles D. Hine, secretary, State board of education.

State director of vocational education: Frederick J. Trinder.

State supervisor of agricultural education: Worthington C. Kennedy.

## PROVISIONS FOR COOPERATION.

The Connecticut General Assembly meets on Wednesday after the first Monday in January in odd years. There has been no session of the legislature during the past year, and no legislation has been enacted which would affect vocational agricultural education.

## AGRICULTURAL EDUCATION.

Until September 1, 1919, the State board borrowed their supervisor of agriculture from the teacher-training institution, but after that date the board employed a full-time man, whose work has had to do chiefly with visits to schools, visits to home projects of students as a part of his inspection duties, conferences with individual teachers and with the teachers as a group, and the dissemination of information regarding his work through discussion with school committees, lectures, and publications. He has visited the schools approved for Federal aid approximately once a month. Beginning

March, 1920, he held regular monthly conferences with his teachers. At these conferences special discussions, such as "seasonal plans for instruction," were held. The conferences were held in some cases at the office of the supervisor and at other times in the agricultural departments of the different schools.

During the fall of 1919 a bulletin outlining the State plan for the administration of vocational education was prepared. During the winter the financial report of the projects carried and completed during the previous year was analyzed in a bulletin, "The Home Project in Connecticut." Reports are received at the supervisor's office regularly from each teacher, giving the details of instruction as given during the reporting period and outlining the practical work, and also giving the time spent in the different branches of work by the pupils.

Three schools were approved for Federal aid and enrolled 46 pupils in vocational work. The average earning per student from directed or supervised practice in agriculture for 1918-19 was \$331.95. There was held during the year one part-time class of vocational agriculture with an enrollment of ten. During the past year in all cases special efforts have been made to connect the work of the department of agriculture with the agriculture of the community. The New Milford department, in cooperation with the county farm bureau, prepared and carried out a very successful corn show. All of the first prizes were won by the students in the agricultural department of the high school. As a result of this show an association for the selling of seed corn has been organized, and considerable interest has been developed among the farmer patrons of the school.

The Connecticut Agricultural College continued to train teachers, and enrolled 11 seniors and 8 juniors in the special teacher-training courses.

Connecticut is rated as an industrial State. Those who choose farming as a career do so because of a dislike for confining, indoor employment or the appeal of the relative independence of farm life. The development of a system of training for a life in agriculture must therefore be slow. It is expected that five or six new agricultural departments will be organized during the next fiscal year.

#### HOME ECONOMICS EDUCATION.

No Federal funds have been used for home-economics classes in Connecticut, and no supervision provided.

At the State agricultural college, designated to train teachers of vocational home economics, the attendance, in spite of the handicap due to the loss of the home-economics building by fire, is increasing rapidly. Although there was but 1 student in the senior class, there were 15 enrolled in the junior year.

## TRADE AND INDUSTRIAL EDUCATION.

Connecticut has inaugurated a new plan of general continuation schools for rural communities. The aim of such schools is to make a commercial product which shall at the same time train boys in the trades and employ, as far as possible, the type of building and repair work which is of most service to the farmer, as, for example, the building and repair of wagons, wagon tongues and parts, the repair of mowing machines and other farm implements, work in concrete, tile work, etc. The first school has been established in Kent. No Federal money has been asked for.

The instructor-training course which was laid out two years ago is still in operation and no change has been made during the year. The proposition is now being considered of cutting this course from two years to one year, and probably the next State plan will contain this change. The centers the first year were Bridgeport and South Manchester, but during the present year the instructor training was shifted from South Manchester to Meriden.

## DELAWARE.

Members of State board: George B. Miller, business man; Pierre S. Dupont, business man; Harvey P. Hall, business man; A. Brainard Peet, farmer; Harvey F. Marvil, manufacturer.

Executive officer: A. R. Spaid, State commissioner of education, Dover.

State director for vocational education: R. W. Heim.

State supervisor for agricultural education: L. C. Armstrong.

State supervisor for home-economics education: S. Helen Bridge.

State supervisor for trade and industrial education: W. H. Bixby.

## PROVISIONS FOR COÖPERATION.

The Federal act was accepted by State statute approved April 2, 1917. The State board of education is designated as the State board for vocational education. The act of acceptance was incorporated as a part of the general school code by the legislature of 1919, when the entire educational program for the State was reorganized.

No work of a vocational character was carried on prior to 1917, when the Federal vocational law was passed.

The amount of State funds appropriated annually for the biennial period 1919-1921 is \$20,000. This amount matches the amount to be received from Federal funds. An annual appropriation of \$2,000 is also made for the administration and supervision of vocational education. In addition to these specific appropriations by the State legislature, \$32,000 has been given by the Service Citizens' Organization to supplement the State and Federal funds for vocational education for the biennial period 1919-1921.

## AGRICULTURAL EDUCATION.

A full-time State supervisor of agriculture is employed by the State board. The supervisory duties included, among other things, improvement of teachers in service and 120 visits to schools. In December a corn-judging contest for the State was held; uniform project record books were prepared and distributed to vocational pupils; outlines on fertilizers, courses of study, lesson units, project outlines, and instructions were compiled and sent to each agricultural teacher. Several monthly conferences for improvement and discussion of problems of teachers were held, in addition to a special one week's conference for teachers in service held at the agricultural college. Reports of all conferences and inspections were made weekly for permanent office files, copies of which were forwarded to the State director located at Newark. Other data, such as qualifications of teachers, lists of equipment, enrollments of departments, project data, etc., were tabulated and kept on file in the State office.

Twenty-three schools, an increase of approximately 360 per cent over last year, were approved for Federal aid and enrolled 272 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture for 1918-19 was \$2,145.90.

All teacher-training work in agriculture was carried on at the Delaware College, located in Newark. The director of vocational education was also head of the department of agricultural education in the institution. During the year the following teacher-training courses were offered: History of vocational education, with an enrollment of 12 students; teaching vocational agriculture, and observation and practice teaching, with 2 students enrolled.

Delaware is peculiarly circumstanced in its adaptation of vocational agricultural education in that the major part of the State has no other industry than agriculture, with the exception of several comparatively small enterprises. The general attitude toward this kind of education is steadily reversing from one of skepticism to one of approval and hearty cooperation. The whole development of vocational departments of agriculture is very largely a process of internal development rather than an extension. It is therefore the intention of those responsible for the work to develop vocational departments of agriculture to the maximum of efficiency.

## HOME ECONOMICS EDUCATION.

Because of the size of the State, the supervisor, who gave practically full time to the work, was able to visit each teacher of home economics at least once in six weeks and followed up these visits by practical and helpful letters. Practically all the vocational teachers were present and took an active part in the monthly conferences for professional improvement.

The 18 all-day classes reimbursed were departments in high schools, an increase of 13 over the previous year, with an enrollment of 331 pupils.

The Delaware College for Women has 26 students enrolled in the vocational course for teacher training. The freshman class numbered 18, as compared with 4 the previous year. The college remodeled a good-sized dwelling near the campus, which adequately meets the need for a practice house.

#### TRADE AND INDUSTRIAL EDUCATION.

A supervisor is employed on the basis of three-fourths time to supervision and one-fourth time to teacher training, with headquarters in Wilmington.

With work under way in 17 evening-school classes, with an enrollment of 414, 2 part-time apprentice classes, with an enrollment of 161, and 1 cooperative part-time class, with an enrollment of 33, the State is beginning to make satisfactory progress in her trade and industrial program.

Extensive investigations and surveys were made during the year for the expansion of the work. Only two centers outside of Wilmington have taken advantage of Federal funds thus far.

A 25-weeks' course in instructor training, two nights a week, was conducted by the supervisor in Wilmington. This class had an enrollment of 11, all of whom have been employed as instructors for the coming year. In addition to the regular teacher-training course a series of professional-improvement conferences were held over a period of 10 weeks. Outside speakers assisted the supervisor in carrying out this program.

#### FLORIDA.

Members of State board: Sidney J. Catts, governor; H. Clay Crawford, secretary of State; J. C. Luning, State treasurer; Van C. Swearingen, attorney general; W. N. Sheats, State superintendent.

Executive officer: William N. Sheats, State superintendent of public instruction, Tallahassee.

State supervisor for agricultural education: E. A. Haynie.

State supervisor for industrial education: Thomas H. Quigley.

State supervisor for home-economics education: Edith N. Thomas.

#### AGRICULTURAL EDUCATION.

The present State supervisor of agricultural education took charge of the work in August, 1919. He is located at the University of Florida rather than the State office, for greater convenience in planning work for men in service and for students in training. During the year he made 51 visits to schools, made a complete set of

office records and reports for supervisory and administrative purposes, prepared a monthly news-letter for agricultural teachers, and, in cooperation with the teacher-training department, issued project outlines on hogs, poultry, corn, tomatoes, beans, potatoes, and peanuts. A laboratory manual on soils and plant production also was prepared by the professor of agricultural education. The supervisor called upon the professor of agricultural education in the colored institution to do itinerant teacher training among the colored schools. This itinerant teacher served the colored teachers in the field by making model outlines of courses of study and projects. Laboratory guides and other material were also sent to the teachers in service from the institution.

Twelve white schools, an increase of approximately 20 per cent over last year, were approved for Federal aid and enrolled 211 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture for 1918-19 was \$3,595.68, a return of 32 cents on every dollar expended for salaries of teachers of vocational agriculture, which was \$11,137.50.

Four colored schools were approved for Federal aid and enrolled 96 pupils in vocational work. Owing to a lack of supervision until the present year very little was done in connection with the directed or supervised practice in agriculture. However, this year showed an enrollment of 99 pupils in practical garden work, covering such items as corn, cucumbers, peanuts, potatoes, tomatoes, etc. All teachers in both white and colored schools extended their activities to the community. Wherever they could give assistance they were encouraged to do so.

The teacher-training work is beginning to find its place among the other courses offered at the University of Florida. The increasing number of applicants for the teacher-training courses at the close of the year was all that was desired. Four students were enrolled in the senior and five students in the junior year of the teacher-training course at the university. Practice teaching is being taken care of in a local high school and is working out rather satisfactorily. A four weeks' summer course was held at the university for teachers in service.

Teacher-training work for colored schools was conducted at the Agricultural and Mechanical College for Negroes. Two students were enrolled in the practice-teaching course and nine in the methods in teaching agriculture.

Agricultural education in the secondary schools of Florida made a decided growth both in popular favor and in the number of people served. The requests for the inauguration of vocational agriculture in the schools of the State are too great to be met by the amount of money for the subsidizing of this work. The general education

forces of the State cooperated splendidly with the vocational agriculture teachers where the work was established. The Florida Educational Association at its annual meeting passed resolutions commending the vocational work, and that the association lend its efforts in further promoting the work throughout the State. The scarcity of specially trained teachers for the work has been a handicap. This handicap, however, is being removed by the increasing interest on the part of the agricultural students at the university in taking the teacher-training courses. The amount of funds budgeted to subsidize the schools of the present will allow an increase out of future appropriations of from two to three schools each year. The outlook is good for the future development of vocational work in the State.

#### HOME ECONOMICS EDUCATION.

In 1919-20 a State supervisor of home economics education was employed on full time.

Five all-day home-economics departments were approved, with an enrollment of 92 pupils. Some very successful evening classes for colored women were conducted in Jacksonville in the subjects of cooking and serving. These classes were constantly full to the limit, with always a waiting list.

Teacher training in home economics for white teachers is conducted in the Florida State College for Women, Tallahassee, and for negroes in the Agricultural and Mechanical College, Tallahassee. Intensive short courses in methods for the improvement of teachers in service were carried on at the State College for Women during the summer by the State supervisor of home economics.

#### TRADE AND INDUSTRIAL EDUCATION.

The State has continued its provision for a half-time supervisor of industrial education. The remaining half of this agent's time is devoted to industrial teacher training. The Florida State plan makes no provision for the all-day unit trade school. The present year, however, has shown a good increase in the number of evening and part-time classes. Thus far the part-time work has been along the lines of general continuation instruction and in retail selling. These classes have been conducted for sales people, office clerks, errand boys, and box makers. The evening instruction, which has constituted the larger part of the Florida industrial education program, has been in connection with shipbuilding, the building trades, and auto repair. The cities of Tampa, West Palm Beach, Miami, and Jacksonville have added evening trade-extension schools, giving variously from 3 to 33 unit courses. In part-time instruction the cities of Tampa, Key West, West Palm Beach, and Pensacola have participated. This expansion represents a new work, as no

part-time schools were reported the previous year. The total number of industrial education courses in the State is 61, as against 17 for the previous year. All of the courses which have been conducted in connection with industries employing women have been open to pupils of both sexes. Eight centers have participated in evening instruction and four in part-time instruction. The University of Florida and the Florida Agricultural and Mechanical College for Negroes have each given teacher training. That at the university has been along the lines of extension courses and improvement of teachers in service. The Agricultural and Mechanical College has done residence work exclusively.

#### GEORGIA.

Members of State board: D. C. Barrow, chancellor, University of Georgia; M. L. Brittain, State superintendent of schools; Dudley M. Hughes, planter; B. H. Hardy, editor; Sam Tate, industrial capitalist; J. Randolph Anderson, lawyer; Ross Copeland, lawyer.

Executive officer: M. L. Brittain, State superintendent of schools.

State director for vocational education: M. L. Brittain.

State supervisor for agricultural education: Robert D. Maltby;

L. M. Sheffer, assistant supervisor.

State supervisor for trade and industrial education: J. F. Cannon;

Miss Katharine Dozier, assistant supervisor.

State supervisor for home economics: Miss Mary E. Creswell;

Miss Epsie Campbell, assistant supervisor.

General inspector: J. S. Stewart.

#### PROVISIONS FOR COOPERATION.

The Federal act was accepted by State statute enacted during the 1917 session of the State legislature. The 1918 and 1919 sessions of the legislature amended the act of acceptance by providing additional State funds. The 1920 general assembly added the law to cooperate with the Federal board in training workmen injured in industry. The State act creates a State board to be known as the State board for vocational education, consisting of seven members made up as follows: The chancellor of the university, the State school superintendent, three members from the State at large, one representative of labor, two members from the trustees of the district agricultural and mechanical schools. The 1920 session of the legislature appropriated funds to the amount of one-half of those available under the Federal act. The State board for vocational education may use a portion of the State funds for administration and supervision. The legislature has authorized the vocational board to grant certificates. Legal provision was made also for part-time and evening schools.



## — AGRICULTURAL EDUCATION.

The State provides for two full-time supervisors of agriculture, who were located at the teacher-training institution. The State office also had the assistance from time to time of the teacher-training staff in the preparation of bulletins, holding of conferences, improvement of teachers in service, summer courses, etc. Fifty-four schools were visited up to April 1 by the State supervisor of agriculture, while his assistant visited 60 schools and attended 15 board meetings. Two State conferences of teachers and three regional conferences were held. Two bulletins, "Georgia State plan for vocational education" and "The administration of the Smith-Hughes Vocational Act in Georgia," were prepared and published. A monthly news bulletin, entitled "Teaching agriculture in secondary schools," was issued. Three new report blanks, an application for Federal aid, and directions for making reports and for using project outlines were prepared.

Thirty-three white schools, including 11 special agricultural schools, an increase of approximately 59 per cent over last year, were approved for Federal aid and enrolled 1,075 pupils in vocational work. The total income of white pupils from directed or supervised practice in agriculture for 1918-19 was \$23,603.70, a return of 53 cents on every dollar expended for salaries of teachers of vocational agriculture, which was \$41,106.34. There were held during the year one evening school, with an enrollment of 6, and two part-time classes, with an enrollment of 50.

Six colored schools, an increase of approximately 50 per cent over last year, were approved for Federal aid and enrolled 120 pupils in vocational work. The total income of colored pupils from directed or supervised practice in agriculture for 1918-19 was \$8,296.42.

The work in teacher training at the Georgia State College of Agriculture is so organized that both resident and itinerant teacher training were carried on by the same staff. There were three general lines of work for the improvement of teachers in service: (1) The summer-school work for five weeks; (2) special graduate work through summer school; and (3) work with the individual teacher on the job. A practice school was provided for 6 miles from the college. This school was equipped for teaching secondary agriculture. Twelve seniors and 19 juniors were enrolled in the teacher-training work.

Teacher-training work in agriculture was also carried on at the Albany Industrial and Agricultural School. The work was organized so that both resident and itinerant teacher training were carried on by the same staff. This staff consisted of one full-time teacher trainer and one devoting half of his time to the colored work. Three students were enrolled in the teacher-training courses.

The vocational work in Georgia is now well organized and is meeting with the hearty approval and indorsement of the school people of the State.

#### HOME ECONOMICS EDUCATION.

In 1919-20, a full-time supervisor for field work was loaned by the State Agricultural College at Athens. In setting up a State program and preparing literature for use in the schools, she was assisted by the head of the home economics teacher-training department of the college.

In 1919-20 there were 8 all-day home economics departments in white schools, with an enrollment of 210; and 2 in colored schools, with an enrollment of 148. There were also 8 evening centers for white women and 2 for colored, enrolling, respectively, 195 and 48 students. Fully 20 centers for evening or part-time classes are promised for 1920-21. The women's colleges in the State are giving full credit for vocational home economics, and club women in two towns have put up funds for evening work. Four evening and four part-time classes are in mill towns.

Teacher training in home economics for white teachers is conducted in the State Agricultural College, Athens, where a new building has recently been erected for this work, equipped with an apartment for supervised home management and space for the social life as well as instruction of the students. Teacher training in home economics for Negroes is conducted in the Industrial Training School, Albany, and the Normal School, Savannah.

#### TRADE AND INDUSTRIAL EDUCATION.

The three types of schools, part-time, day, and evening, have been in operation in Georgia during the past year. The largest evening program has been conducted in the city of Atlanta, in a number of different occupations. Part-time organization has been given quite an impetus during the year through the organization of general continuation work in connection with the cotton mills. Two centers have had part-time trade extension classes. Consideration has been given to the Negro race in all three types of schools. The State has had a half-time supervisor of industrial education and has increased this supervision for the ensuing year to full time. The State has also provided a part-time supervisor, whose work is devoted to trade and industrial education for girls and women. Eleven centers in 8 different cities have offered evening trade-extension work. Twenty-seven centers in 13 cities have had programs of part-time instruction, and day unit courses have been in operation in 4 cities. There has been an increase of 97 per cent in all types of instruction over the previous year. The Georgia School of Technology

has conducted residence teacher-training courses for both shop and related-subjects teachers. The Georgia Industrial College has also organized residence courses for both types of teachers.

#### IDAHO.

Members of State board: Ramsey M. Walker, banker; J. A. Lippincott, merchant; Mrs. J. G. H. Graveley, housewife; Evan Evans, retired banker; Irvin E. Rockwell, engineer; Ethel E. Redfield, State superintendent of public instruction, ex officio.

Executive officer: Enoch A. Bryan, State commissioner of education.

State director for vocational education: Melvin S. Lewis.

State supervisor for agricultural education: George E. Denman.

State supervisor for home economics education: Kate S. North.

State supervisor for trade and industrial education: Melvin S. Lewis.

#### PROVISIONS FOR COOPERATION.

The governor accepted the act October 31, 1917. The formal acceptance by the legislature was by State statute approved March 14, 1919. The State board of education is designated as the State board for vocational education. The State statute pledges an annual appropriation of not less than the sum to which the State is entitled under the Federal act. The appropriation for the biennial period beginning January 1, 1919, is \$38,419.77. The expense of administration and supervision may be borne from the State fund.

#### AGRICULTURAL EDUCATION.

The professor of agricultural education at the University of Idaho devoted one-fourth of his time to the duties of supervisor for agricultural education. This provided inadequately for supervision of the work undertaken, although the State director shared to some extent the responsibility for supervision of the agricultural work. The appointment of a full-time supervisor for the coming year, with headquarters at the State department of public instruction, is therefore a decided step in advance. Fifty-seven visits were made to schools, making an average of 3 visits to each of the 19 schools; 4 district conferences were held; a 50-page bulletin, dealing with the organization of vocational agriculture and methods of teaching it, was completed and published; a set of mimeographed directions for organizing and conducting project work was issued for distribution to all vocational pupils of the State; and a series of circular letters dealing with matters of current interest relating to work of the State was sent at somewhat irregular intervals to the agricultural teachers. Formal reports were made to the State director upon each supervisory visit made during the year. These reports covered such

matters as enrollment in the schools and vocational classes, organization and equipment of the vocational departments, the teachers' schedule, and the general efficiency of the work being done.

Seventeen schools, an increase of approximately 143 per cent over last year, were approved for Federal aid and enrolled 491 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-19 was \$9,206.54.

The demand from many quarters for agricultural graduates has been so great and the inducements so attractive in other lines of work that relatively few students in the college of agriculture of the State university have been inclined to make definite preparation for teaching. Thus no men have graduated up to date from the teacher-training course at the State university. However, with the increasing attractiveness of the position of agricultural teacher, under the influence of Federal and State funds, and with a disposition on the part of the State board and its officers to require more thorough preparation on the part of vocational teachers, it is probable that more attention on the part of students will be given in the future to definite preparation for this work. Itinerant-teacher training carried on during the year was only such as was incidental to State supervision. A six weeks' summer session was held at the close of the university year.

As discussed at some length in the State supervisor's annual report one year ago, there is a splendid opportunity for the development of vocational agricultural education within the State of Idaho. Agriculture is decidedly the most important primary industry of the State—possibly more important than all others combined. The agricultural population of the State is, as a whole, intelligent, enterprising, and progressive. The university extension work, the farm bureau movement, and the activities of all other legitimate enterprises for the promotion of agriculture met generally with a ready and favorable response on the part of the farming population. This favorable attitude extended also to the teaching of vocational agriculture in the high schools of the State, and very substantial progress was made in such teaching in the two and one-half years since Federal aid became operative in the State.

#### HOME ECONOMICS EDUCATION.

This year there was a full-time supervisor of home economics in Idaho. Conferences were held at five teachers' institutes, and home-economics work in all the high schools of the State has been upgraded by new courses of study and by the services of the supervisor.

There were 5 all-day vocational schools, each a department in a high school, enrolling 98 students, a gain of 3 schools and 43 students over the previous year.

Evening work was started in 2 centers, with 3 classes and an enrollment of 50 women. There were no part-time classes.

At the State university 48 students were enrolled in the teacher-training course. This institution has an especially good opportunity for practice teaching in the high schools of Moscow, but is in need of facilities for carrying on laboratory work in household management.

#### TRADE AND INDUSTRIAL EDUCATION.

In trade and industrial education the progress during the year has been marked. This year shows 15 evening classes, with an enrollment of 427 pupils, contrasted with 1 school with 10 pupils last year. Part-time trade schools number 8, with an enrollment of 145, as against 3 schools and 52 pupils last year. Four all-day trade schools were conducted, the enrollment being 50; there were none last year. The forthcoming year will see a material extension of evening, part-time, and all-day trade work. Of the latter, five schools will be added. A skilled investigator from the vocational department is studying the lumber industry in cooperation with the operators, with a view to the introduction of training for woods and mill employees, and training will be established for workers in the railroad shops. These forms of vocational training, together with the work now being carried on for miners, sugar-factory employees, employees of the building industries, and the auto and tractor mechanics establishments, will furnish contacts with the principal lines of industrial occupation in the State.

Teacher training for trade and industrial education is conducted at the Idaho Technical Institute on a resident basis, and training is also given by an itinerant teacher trainer employed by the State board.

#### ILLINOIS.

Members of State board: Francis W. Shepardson, chairman, director of registration and education; Francis G. Blair, State superintendent of public instruction; Charles Adkins, director of agriculture; Barney Cohen, director of labor; William H. Boys, director of trade and commerce.

Executive officer: Francis G. Blair, State superintendent of public instruction, Springfield.

State supervisor of industrial education: E. A. Wreidt; J. F. Kolb and J. E. Fufts, assistant supervisors.

State supervisor of agricultural education: Carl Colvin; J. E. Hill, assistant supervisor.

State supervisor of home economics education: Cora I. Davis; Elizabeth Beyer, assistant supervisor.

## AGRICULTURAL EDUCATION.

The organization of the department consisted of one State supervisor and one assistant supervisor with offices at Springfield. Both the State supervisor and assistant supervisor spent a large part of the time with the teachers in the field.

No regular publication was sent out from the office. A series of letters and notes to the vocational teachers were sent out by the State supervisor, and monthly reports were sent to him by all teachers. There were 1,299 boys and 27 girls enrolled in the 79 high schools approved for reimbursement from State and Federal funds under the plan of the State board for vocational education. Each student in the vocational classes carried on home-project work in agriculture. The home work consisted of individual projects, such as the growing of 10 acres of corn; and farm managerial work in cooperation with the parents was also a feature of the home practice. One-half of the salary apportioned to vocational agriculture in the high schools was paid from State and Federal funds.

The teacher-training classes were carried on in the University of Illinois and in two of the normal schools. Two instructors gave full time to the teacher-training classes in the University of Illinois. The agricultural departments in four high schools, near the University, were used as typical vocational departments for the purpose of giving practice in teaching to the students in the teacher-training classes. An advisory staff, consisting of nine professors of the College of Agriculture, gave some time to the teacher-training classes.

The interest in vocational agriculture in the State is increasing rapidly and the number of schools for the next year will be very much larger than the number approved during the past fiscal year.

## HOME ECONOMICS EDUCATION.

In 1919-20 a supervisor of home economics education was employed on full time. In 1920-21 she will continue on full time and be given the services of an assistant.

In 1918-19 there were 20 all-day home economics departments and 9 home economics evening-school centers. In 1919-20 there were 61 all-day departments, 25 of which were reimbursed from Federal funds. There were 20 evening centers, only 1 of which was reimbursed from Federal funds. Special State appropriations made possible a large number of vocational schools in home economics that could not have been supported from the limited Federal funds.

In many instances the work in home nursing and care and feeding of children was handled by a registered nurse, who was also the school nurse, the instruction given being of a highly practical type.

In the evening classes special classes were organized for the making of children's garments and men's shirts, and for simple home tailor-

ing, in which men's suits and overcoats were made over for small boys. In each instance the work was handled by either a trained teacher or a practical worker who was a specialist in the particular line.

In one city a teacher was employed on full time to give instruction to foreign women. The classes were held in the homes of different women and included lessons in buying, thrift, housekeeping, the feeding and care of children, home nursing, and practical cookery.

Training of teachers for home economics schools and departments is conducted in the University of Illinois, Urbana, and the State Normal University, Normal. Both of these institutions have excellent facilities for practice teaching and are provided with practice houses for supervised home management.

#### TRADE AND INDUSTRIAL EDUCATION.

This year the staff in industrial education consisted of a supervisor and one assistant supervisor, each serving on a full-time basis. For next year an additional assistant supervisor will be employed.

Evening trade extension classes were conducted in 23 cities as compared with 4 cities last year. Vigorous promotional efforts resulted in the establishing of evening classes in coal mining in 16 cities. It is hoped to materially increase the number of evening classes in coal mining and other subjects during the coming year.

Part-time classes for apprentices in railroad repair shops were established in 1 city late this year, with an enrollment of 89 apprentices. Effort will be made to establish more of such classes during the coming year.

Three cities took advantage of the optional-mandatory law on part-time schools and conducted general continuation classes this year, with a total enrollment of 7,792 pupils. As a result of extensive promotional work 8 additional cities have voted to establish such schools next year. Efforts will be continued to induce more cities to take advantage of the optional-mandatory law.

In September, 1921, the mandatory law on part-time schools goes into effect for the ages 14-16. Plans are being formulated for conducting teacher-training courses in various parts of the State next year, with the object of preparing the school people of the State for the compulsory continuation schools to be established in September, 1921.

Teacher-training courses were offered this year in 4 centers, with a total enrollment of 285.

#### INDIANA.

Members of State board: L. N. Hines, State superintendent of public instruction; W. L. Bryan, president, State University; W. E. Stone, president, Purdue University; W. W. Parsons, president,

State normal schools; E. U. Graff, superintendent, Indianapolis public schools; L. P. Benezet, superintendent, Evansville public schools; R. W. Himelick, superintendent, Fort Wayne public schools; George R. Grose, president, DePauw University; A. M. Hall, manufacturer; C. O. Williams, county superintendent; Mrs. E. E. Olcott, professor of primary education; Harry L. Fidler, railroad engineer; Clifford Funderburg, county superintendent.

Executive officer: L. N. Hines, State superintendent of public instruction.

State director of vocational education: J. G. Collicott.

State supervisor of agriculture: Z. M. Smith.

State supervisor of home economics: Bertha Latta.

State supervisor of trade and industry: H. M. Appleman.

#### AGRICULTURAL EDUCATION.

The State supervisor of agriculture, who devoted his entire time to supervision, had the assistance of three men, who were engaged in junior extension work. During the year they made 100 visits to vocational schools, held 15 conferences with teachers, including State and district, arranged a course of study for vocational departments the completion of which admits vocational pupils to Purdue University, arranged for a summer term at Purdue for persons preparing to teach vocational subjects, enlarged the teacher-training department to include three practice-teaching centers, and prepared a report on supervised project work in Indiana.

Fifty-two schools, an increase of approximately 53 per cent over last year, were approved for Federal aid and enrolled 1,120 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-19 was \$89,195. There were held during the year 19 part-time schools, including short courses, with an enrollment of 973.

The teacher-training work was continued at Purdue University. Twenty-two seniors and 17 juniors were enrolled in the teacher-training courses for vocational agriculture. Three centers have been used for observation and practice teaching. District and State conferences were held for improvement of teachers in service and a nine weeks' summer session was held, with an enrollment of 42 students, who took work in poultry, soils, horticulture, animal husbandry, and special methods.

The progress of vocational agricultural education in Indiana has been satisfactory, especially in the direction of teacher-training work.

#### HOME ECONOMICS EDUCATION.

A State vocational law has operated in Indiana since 1913, so that vocational education in home economics was started in the State



before the provisions of the Federal vocational act were accepted. A State supervisor for home economics has been employed on full time since October 15, 1916.

In 1919-20 10 all-day home economics departments, with an enrollment of 239, were reimbursed from Federal funds. Twenty-eight evening centers were opened, with an enrollment of 4,815. In the vocational work in home economics home projects were required and ten 12-months' teachers employed.

The following State institutions were approved for the training of teachers of home economics: Indiana University, Bloomington; Purdue University, Lafayette; and the State Normal School, Terre Haute. Only the last two were reimbursed from Federal funds in 1919-20. In each of these institutions practice houses have been opened for supervised home management, while supervised teaching is carried on in the local public schools.

#### TRADE AND INDUSTRIAL EDUCATION.

During the year 1919-20 greater progress was made in the State program of vocational education than in any other year since the passage of the State vocational law in 1913.

The evening schools maintained their enrollment of the year before, with a much higher average attendance, showing a steadiness of purpose among the students which was very gratifying. There was a general tendency to emphasize the short-unit courses, with excellent results.

In the all-day vocational schools the need for practical projects was emphasized. Many schools succeeded in establishing such working relations with local industries that shop projects were secured and the products afterwards turned over to the manufacturer. This kept shop standards of workmanship before the students and served to vitalize the school work. Boys were inclined to strive for higher standards when they realized that their work was to be used in an industrial plant.

Progress in the part-time vocational training program was especially marked during the year 1919-20. The following cities required the school attendance of their employed boys and girls between the ages of 14 and 16, for four clock hours per week: Anderson, Columbus, Crawfordsville, Elkhart, Evansville, Fort Wayne, Gary, Hammond, Huntington, Kokomo, Lawrenceburg, Logansport, Madison, Richmond, South Bend, Terre Haute, and Vincennes.

Special district conferences for the promotion of vocational education were conducted by the State vocational director and members of the State vocational staff. These conferences had the effect of advertising the work of the leading cities, so that they served as

standards toward which the other schools could strive. Much interest and some healthy rivalry was thus developed.

Teacher-training work was carried on in each of the three State educational institutions, namely, Purdue University, Indiana University, and the State Normal School, throughout the year. During the summer session special programs were carried out by each of these institutions. Special courses in vocational guidance and history of vocational education attracted a number of teachers and tradesmen. Courses were also offered dealing especially with the part-time problem, as follows: (a) The organization and administration of part-time classes; (b) civics for part-time classes; and (c) mathematics for part-time classes. These courses were offered by educational workers selected from the State forces who had had practical experience in their respective fields. Following the summer school, the subject matter of the courses was put in mimeograph form for use and criticism of the teachers. It is hoped to make this the first step in a more complete part-time course of study.

District center teacher-training instruction was carried on in Anderson, Evansville, Fort Wayne, Richmond, and South Bend. Groups of vocational teachers and tradesmen were registered. The general plan was to encourage each member of the group to bring in his own specific problems for study and discussion.

#### IOV/A.

Members of State board (all ex officio and the same as last year): P. E. McClenahan, State superintendent of public instruction, chairman; D. D. Murphy, president, State board of education; A. L. Urick, State commissioner of labor.

Membership of nine on the State advisory committee is full by reappointment of members whose terms expired at the end of the fiscal year.

Local advisory committees, as required by State law in cities of 5,000 or more having part-time work under the continuation school law and vocational work, and in others doing any form of vocational work for reimbursement, have been appointed and in most cases have been used in a helpful way by local school authorities.

The advisory board system of the State seems to bring the work nearer to the people in general and gives opportunity to get the viewpoint of persons interested in the different phases of economic, social, and civic life as an aid in shaping the program of vocational adjustments in public education. The advisory board system so far has been helpful and no serious objections have yet arisen.

#### PROVISIONS FOR COOPERATION.

For the past year the time of one person has been divided on a basis of one-fifth on general directorship and four-fifths on super-

vision of vocational agricultural work. Half of the time of another man was used as assistant supervisor in agriculture. The other half year of his time was spent on the campus of the Iowa State College at Ames, as assistant professor in the teacher training.

Full time of one man was given to supervision of trade and industrial education, including the part-time work established in 10 cities. Trade and industrial educational development is important in this State, and a glance at the financial report shows it has made desirable progress the past year.

A home-economics supervisor was employed for full time. The work has moved forward in a very satisfactory manner. State appropriations in the proportion of \$5 as against \$3 of Federal money was used to make a larger fund, which was offered on a dollar for a dollar basis against local money, and even so the fund was exhausted, with other localities requesting approval for reimbursement.

#### AGRICULTURAL EDUCATION.

The supervisory staff continued as for the previous year. Seventy-two visits were made to schools, 11 conferences were held with teachers, and 25 conferences were held with school authorities on vocational agriculture. Special attention was given during the year to the organization of short courses and evening work. Forty pages of mimeographed material on outlines of courses of study and suggestions were sent to teachers, together with two bulletins on State plans and directions.

Twenty-four schools, an increase of approximately 100 per cent over last year, were approved for Federal aid and enrolled 385 pupils in vocational work. Short courses were organized in 20 centers, with an attendance of 235. Three evening classes were also established, with an enrollment of 120.

Teacher-training work was continued at the Iowa State Agricultural College, with an enrollment of 10 in the senior year. The local high school and another about 4 miles from Ames served as schools in which observation and practice teaching was done. A six weeks' summer session was held, with an attendance of 15.

With the well-organized teacher-training work, stress being placed on short-course instruction, together with adequate supervision, the future success of vocational agricultural education in Iowa is assured.

#### HOME ECONOMICS EDUCATION.

In 1920 a full-time supervisor of home economics education was employed. Prior to that time the supervision had been under the director for vocational education. In 1918-19, 4 all-day classes in home economics were approved, but no part-time or evening classes.

In 1919-20, under the direction of a full-time supervisor, 11 all-day departments were approved, enrolling 277 students; 4 evening centers, enrolling 619 students; and 3 part-time extension classes, enrolling 164 students.

The State college was reimbursed for the training of teachers in home economics. The State university and State teachers' college have also been approved for the coming year. Two of these institutions maintain practice houses for supervised home management, and all of them have good facilities for practice teaching.

#### TRADE AND INDUSTRIAL EDUCATION.

In Iowa during the past year the principal development has been in the line of part-time work, and in this connection it is encouraging to note that 10 per cent of the pupils enrolled in part-time classes have been in those of the trade-extension type. Evening classes show a marked improvement both in the number of classes and the character of the work. Instructor training has also shown a marked improvement during the year.

#### KANSAS.

Members of State board: Lorraine E. Wooster, State superintendent of public instruction; E. H. Lindley, chancellor, State university; W. M. Jardine, president, State agricultural college; T. W. Butcher, president of State normal school, Emporia; W. A. Brandenburg, president of State normal school, Pittsburg; W. A. Lewis, president of State normal school, Hays; J. F. Barnhill, superintendent, city schools, Parsons; C. O. Smith, superintendent, city schools, Marysville; S. P. Rowland, county superintendent, Reno County, Hutchinson.

Executive officer: Lorraine E. Wooster, State superintendent of public instruction, Topeka.

State director for vocational education: C. V. Williams.

State supervisor for agricultural education: William R. Curry.

State supervisor and teacher-training agent for trades and industries: L. E. Nofsinger.

#### PROVISIONS FOR COOPERATION.

The Federal act was accepted by State statute approved March 12, 1917. The State board of education was designated as the State board for vocational education. The 1919 session of the legislature provided for the year 1919-20, \$52,541; for the year 1920-21, \$63,370. A portion of this fund may be used to defray the expenses of administration and supervision.

## AGRICULTURAL EDUCATION.

In addition to a full-time State supervisor of agriculture, the director of vocational education devoted half his time to this work until May 15, when he resigned. Eighty-four schools were visited and two conferences held. A monthly news letter was used to improve teachers in service and for general promotion.

Thirty-two schools, an increase of approximately 100 per cent over last year, were approved for Federal aid and enrolled 615 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture for 1918-19 was \$14,088.11.

The Kansas Agricultural College continued to train teachers and enrolled 5 men in the senior year and 4 in the junior year. A summer session of eight weeks was held during 1919, with an enrollment of 12.

The opportunity for the development of vocational work in agriculture is very promising in practically all sections of the State at the present time. The number of schools ready and willing to qualify for aid is double the number that can receive aid, owing to limited funds and also the scarcity of properly qualified teachers of agriculture. A definite system of supervision has been worked out, a State course of study in vocational agriculture has been developed, and the vocational agricultural departments are better organized for work at the close of this fiscal year than at any previous time.

## HOME ECONOMICS EDUCATION.

Supervision of home economics education in the State of Kansas has up to the present time been in charge of a member of the home economics faculty of the State agricultural college, loaned for that purpose. In 1920-21 a State supervisor of home economics education will be employed on full time.

In 1918-19 one all-day department for Negroes was reimbursed, and eight evening classes. In 1919-20 one all-day department for white pupils and two for Negroes were reimbursed, and four evening centers, with a total enrollment of 492.

The following institutions have been approved for the training of teachers in home economics: The State agricultural college at Manhattan, and the State university at Lawrence. In the former a practice college is maintained for supervised home-management instruction, with six weeks' residence per pupil. In the latter the home of the head of the teacher-training department is utilized for this purpose. Supervised teaching in both institutions is conducted in the local city schools.

## TRADE AND INDUSTRIAL EDUCATION.

In February a teacher-training agent and supervisor was appointed for the first time since the acceptance by Kansas of the national vocational act. Under his supervision the field for trade and industrial work is being surveyed, and considerable extension of work along trade and industrial lines has been accomplished during the past year. Thirty-two evening classes in 5 different industrial centers, with a total enrollment of 425 students and 31 teachers, have been aided. One part-time class in salesmanship, with enrollment of 10, and 7 all-day classes have received aid during this fiscal year. The all-day classes aided were at the Pittsburg Manual Training Normal School, Topeka Educational and Industrial Institute, and Western University at Quindaro.

Considerable attention has been given to organization of teacher-training courses and classes in foremanship training in Kansas City, Kans. A survey of the industrial activities in Leavenworth, Atchison, Holton, Parsons, Wichita, and Hutchinson is being made, anticipating the organization of some evening work in possibly all of these centers during the next fiscal year.

The State plan provides that the Pittsburg State Normal School shall be the institution for training instructors in trade and industrial subjects. No teacher-training classes have been organized in this institution. It is recognized that the most acceptable place in which to do teacher training is the shop itself in the industrial centers, where expert tradesmen can be gathered together in evening classes.

## KENTUCKY.

Members of State board: George Colvin, State superintendent of public instruction; Charles I. Dawson, attorney general; Frank L. McVey, president, State university; Thomas S. Tulley, manufacturer; J. W. Bradner, superintendent of schools.

Executive officer: George Colvin, superintendent of public instruction, Frankfort.

State director for vocational education: McHenry Rhoads.

Supervisor for agricultural education: George Ivan Barnes.

Supervisor for home economics education: Mary E. Sweeney.

Supervisor for trade and industrial education: A. N. May.

## PROVISIONS FOR COOPERATION.

In a letter dated August 31, 1917, the governor of Kentucky accepted the provisions of the Federal vocational act. The regular session of the State legislature in 1918 passed an act of acceptance which was approved March 6. The legislature created a State vocational board, which consists of the superintendent of public instruc-

tion, attorney general, secretary of state, president of the University of Kentucky, and two other men appointed by the governor; one a superintendent of schools, and the other a farmer or in some other business. In the act of acceptance the professor of secondary education, University of Kentucky, was made director of vocational education. For the year of 1920-21 the sum of \$24,987.72 was appropriated for the purpose of carrying on teacher-training work, which appropriation is annually thereafter to be made. The same legislature appropriated \$2,500 for inspection and supervision of vocational education. The State legislature in 1920 amended the act of acceptance by striking out the clause making the professor of secondary education, University of Kentucky, director, and placed the entire administration of vocational education with the State board.

#### AGRICULTURAL EDUCATION.

The State board employed a full-time supervisor of agriculture, who made 80 visits to schools, held 4 conferences of teachers, prepared outlines for the course of study in agriculture, and revised the system of keeping records for administrative and supervisory purposes.

Thirty-three schools, an increase of approximately 31 per cent over last year, were approved for Federal aid and enrolled 1,104 pupils in vocational work.

The teacher-training department at the University of Kentucky added one additional school for observation and supervised practice teaching purposes. Four students were enrolled in the teacher-training courses. A special effort was made during the year to interest students in the vocational teacher-training work.

#### HOME ECONOMICS EDUCATION.

A full-time State supervisor of home economics education is employed in Kentucky for the year 1920-21. Hitherto supervision has been in charge of a member of the faculty of the University of Kentucky, loaned for that purpose.

In 1919-20 ten departments for home economics in white schools, and two in negro schools, were approved for reimbursement. Six new departments have been approved for the year 1920-21.

The University of Kentucky, Lexington, is designated for the training of teachers in home economics for white schools, and the Kentucky Normal and Industrial Institute, Frankfort, for training of teachers of negro schools. Many new features were added to the teacher-training department of the University of Kentucky in 1919-20, notably a cooperative school with the Health Nursing Association, which gave students in dietetics an opportunity to know the needs in home life and practice. Practice housework was also carefully organized to give students a clear conception of home-making.

duties. Supervised teaching at the university will be conducted in the senior high schools of Lexington in 1920-21, the time of each student being 18 weeks, 4 lessons per week. In the Kentucky Normal and Industrial Institute supervised teaching is carried on in the elementary schools of the institute.

#### TRADE AND INDUSTRIAL EDUCATION.

The professor of trades and industrial education at the University of Kentucky gave part of his time to supervising of trades and industrial education. Provision has been made for a full-time supervisor for the future. Part-time courses in the following trades were offered last year: Carpentry, electrical engineering, printing and bookbinding, dressmaking, stenography, mechanical drawing, cabinet-making and salesmanship. The demand is growing for this type of work as well as for the evening schools. There are more than 40,000 coal miners in the State desiring short unit courses. The future indicates a greater development in trade and industrial education than in any other vocational field in the State.

#### LOUISIANA.

Members of the State board: E. L. Kidd, president, insurance, Ruston; Dr. John A. Haas, physician, banker, capitalist, Opelousas; Robert Martin, lawyer, St. Martinsville; Ralph S. Thornton, lawyer, Alexandria; John Legier, jr., banker, New Orleans; T. H. Harris, State superintendent of public instruction, secretary, Baton Rouge.

Executive officer: T. H. Harris, State superintendent of public instruction, Baton Rouge.

State supervisor of agriculture: P. L. Guilbeau, Baton Rouge.

State supervisor of trades and industries: J. E. Lombard, Baton Rouge.

Director of agricultural itinerant-teacher training: J. G. Lee, jr., Baton Rouge.

State supervisor of home economics: Cleora C. Helbing, Baton Rouge.

#### PROVISIONS FOR COOPERATION.

The State board of education is designated in the law as the State board for vocational education. By constitutional provision, an appropriation of \$50,000 a year is made to promote industrial education in the city of New Orleans. This appropriation will be expended in the support of the Delgado Trade School for Boys.

#### AGRICULTURAL EDUCATION.

The supervision was carried on by a full-time State supervisor of agriculture, a teacher trainer, who devoted one-fourth of his time to field work, and a part-time supervisor for colored schools. The State



supervisor made 60 visits to the various vocational departments in the State, carried on general promotion work, and held one general and three regional conferences. Courses of study, circular letters, and revised record and school blanks were sent to teachers during the year.

Twenty-one white schools, an increase of approximately 31 per cent over last year, were approved for Federal aid and enrolled 380 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture for 1918-19 was \$7,113.34, a return of 28 cents on every dollar expended for salaries of teachers of vocational agriculture, which was \$25,178.56. Six colored schools, an increase of approximately 50 per cent over last year, were approved for Federal aid and enrolled 161 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in these schools for the year 1918-19 was \$1,720.47.

There were 44 students enrolled in the teacher-training department at the university. Seventeen students have graduated from the department since it was organized two years ago. A six weeks' summer session was held at the university, with an enrollment of 45. Southern University maintained a department for the training of teachers of agriculture and enrolled 5 students.

#### HOME ECONOMICS EDUCATION.

A full-time supervisor of home economics has been employed in Louisiana for several years, and an assistant on full time will be added to the State home economics staff for 1920-21.

Two white and five Negro schools were subsidized from Federal funds for home economics education in 1919-20. In the white schools there was an enrollment of 117 students, and in the Negro schools of 216.

The training of white teachers for home economics education is conducted at the State university, Baton Rouge; that of Negro teachers at Southern University, Scotlandville.

#### TRADE AND INDUSTRIAL EDUCATION.

During the current year considerable progress has been made in bringing to completion the Delgado Trade School in the city of New Orleans. It is expected that the school will be ready for occupancy by January 1. The Nichols Trade School for Girls, in New Orleans, has continued its unit trade courses, and in cooperation with the City Normal School has conducted teacher-training courses for women's trades. On completion of the new trade school it is hoped that all local needs will be met, so far as trade training for boys and men is concerned. The vocational program of this school will consist not only of the day school for trade preparation, but of evening trade-

extension classes and part-time classes for those already employed. The State has provided a part-time supervisor of industrial education. Anticipating the needs for funds for the Delgado School, and with the hope that this school will meet the needs of the State as well as of the city of New Orleans, the Federal appropriation for industrial education has not been distributed throughout the State. The program inaugurated several years ago has, therefore, not been enlarged during the past year.

#### MAINE.

Members of State board: Augustus O. Thomas, State superintendent of public instruction; C. S. Stetson, farmer; George E. Macomber, insurance.

Executive officer: Augustus O. Thomas, State superintendent of public instruction.

State director of vocational education: Paul W. Monohon.

State supervisor of agricultural education: Herbert S. Hill.

Assistant State supervisor of agricultural education: Roy F. Thomas.

State supervisor of home economics education: Bernardine Cooney.

State supervisor of trade and industrial education: I. C. Perkins (three months).

#### PROVISIONS FOR COOPERATION.

The 1917 session of the legislature accepted the Federal act. The act of acceptance creates a State board for vocational education, which consists of the State superintendent of public instruction and two members appointed by the governor. A special appropriation of \$15,000 was made for the year 1919-20, and \$20,000 for the year 1920-21. This State appropriation may be used by the State board for instruction, equipment, supervision, and for the payment of the actual necessary expenses of the board. In addition to this special appropriation, the State made an appropriation of \$80,000 for the year 1919-20, and \$100,000 for the year 1920-21.

#### AGRICULTURAL EDUCATION.

The State supervisor of agriculture, who devoted 50 per cent of his time to teacher training, had an assistant during the year. The two visited each school approved for aid at least three times during the school year. Two general conferences were held, special efforts were put forth for the establishment of short courses, and a monthly news letter to teachers was issued regularly.

Fifteen schools, an increase of approximately 66 per cent over last year, were approved for Federal aid and enrolled 275 pupils in vocational work. The total income of pupils from directed or supervised

practice in agriculture in 1918-19 was \$18,115.61. Among the community activities of the agricultural teachers may be mentioned: Three 12-week short courses in agriculture, a 4-day program for farmers' week at Presque Isle, organization of a farmers' milk-testing club, and 3 evening classes of farmers.

So much of the actual farming interests of the State of Maine lie in territories not served by large high schools, which could profitably conduct two and four year agricultural courses, that it has become necessary to make some provision for meeting the desire of the smaller communities for agricultural courses. The State board for vocational education provided instructors who gave instruction in short courses to two cooperating communities, located within driving distance of each other. Six weeks were devoted to instruction in a different unit in each community, and at the end of the time stated the units of instruction were exchanged and the course continued for the same length of time. Evening classes for those who did not attend the day courses were provided. A teacher and 63 boys and 30 farmers were enrolled for the day and evening classes, respectively.

The teacher-training work was continued at the University of Maine. The man in charge of this work served as supervisor also, and his assistant devoted most of his time to improvement of teachers in service. Practice teaching was obtained by having those who were majoring in education spend six weeks in a vocational department of agriculture during the spring semester of the senior year. Two new courses in teacher training were offered. Seven students were enrolled in the senior and 10 in the junior teacher-training courses.

The situation in the State looks very encouraging. Different standards for schools receiving State aid only and those receiving Federal aid in addition were abolished. Now all schools must meet the requirements for Federal aid even though they are to receive State aid only. The new teachers giving vocational work next year will have received special training at the University of Maine. The directed or supervised practice in agriculture is becoming more varied and larger. Interest in vocational agriculture is being aroused to such an extent that it is difficult to establish as many schools as are called for.

#### HOME ECONOMICS EDUCATION.

The supervisor of home economics was loaned for half time from the normal school at Farmington.

There were three all-day vocational classes. These were departments in high schools, with 81 students enrolled. Seven evening school centers, with 13 classes, enrolled 354 women.

The State university is approved for the training of vocational home economics teachers. There were 67 students enrolled in the

vocational course. The university has remodeled a residence on the campus for a practice house. At present it is large enough to accommodate the entire senior class, which is divided into two groups, one of which cares for the house while the other carries on the practice teaching.

#### TRADE AND INDUSTRIAL EDUCATION.

*Teacher training and supervision.*—No extensive teacher training in trades and industries has been carried on, although a training center is named in the State plan. Some itinerant teacher training work has been done during the year and interest aroused for the establishment of a center in Bangor this coming year. The position of supervisor of trades and industries was vacant for nine months of the past year, so this phase of vocational work did not develop very rapidly.

*Extension of work.*—There are no trade schools located in the State and the high schools find it difficult to adapt their program to all-day vocational classes. However, 2 all-day classes with an enrollment of 44, and with 2 teachers employed, were approved. But 2 evening classes were approved for Federal aid. Thirteen teachers were employed and there was an enrollment of 250 students. Toward the end of the year considerable interest was awakened in evening schools and this phase of the work will be stressed. One part-time course, with an enrollment of 14, was conducted.

The preliminary work for the making of an educational survey of the pulp and paper industry was done the latter part of the year. The results of this survey may assist in the establishment of evening and part-time courses.

#### MARYLAND.

Members of State board: Henry M. Fitzhugh, physician; William T. Warburton, lawyer; Clayton Purnell, lawyer; Sterling Galt, publisher; J. M. T. Finney, surgeon; Thomas H. Chambers, farmer.

Executive officer: Albert S. Cook, State superintendent of schools.

State director for vocational education: L. A. Emerson.

State supervisor for trade and industrial education: L. A. Emerson.

State supervisor for agricultural education: H. F. Cotterman.

State supervisor for home economics education: Edna B. McNaughton.

#### PROVISIONS FOR COOPERATION.

After preliminary acceptance by the governor the Federal act was formally accepted by the legislature in 1918. The State board of education by this State act was designated as the official State

board for vocational education to cooperate with the Federal board. For purposes of administration and promotion of vocational education an annual appropriation of \$5,000 was made available.

#### AGRICULTURAL EDUCATION.

There was practically no change in the plans for supervision of agricultural education over that of the previous year.

Fourteen schools, an increase of approximately 180 per cent over last year, were approved for Federal aid and enrolled 200 pupils in vocational work. Owing to a lack of sufficient supervision of work in agriculture there is no report to be made on the results of directed or supervised practice in agriculture for the year 1918-19.

The man in charge of teacher-training work at the Maryland Agricultural College has been doing the supervisory work during the past three years. An additional man was employed for the teacher-training work, who devoted one-eighth of his time to office work in the department and the remaining seven-eighths of his time to the teaching of a demonstration class in vocational agriculture used for supervised teacher purposes. One new course was offered in teacher training, and of the five students graduated from the department of agricultural education this year but two were planning to teach vocational agriculture in Maryland. During the year the professor of agricultural education visited each of the 14 schools teaching vocational agriculture, for the purpose of inspection and improving teachers in service, and held two conferences of agricultural teachers. He also prepared for the State board several forms for keeping records on directed or supervised practice in agriculture.

The general development of agricultural education in the State has been handicapped to some extent by the fact that there has been no full-time supervisor of agricultural education. The growth in schools, however, has been encouraging, but it is agreed that closer supervision of the work is essential to definite results.

#### HOME ECONOMICS EDUCATION.

The supervision of home economics was conducted by a member of the staff of the State college, who worked under the direction of the State board for half of her time.

Seven departments in high schools, enrolling 317 students, were approved. This is an increase of 2 departments and 115 students over the previous year's report. Evening work was approved in 3 centers, with 8 classes, enrolling 206 women.

At the State college, designated for the training of teachers of home economics, there were 9 students enrolled in the vocational course. This institution has become coeducational too recently to have a senior

class. A large residence on the campus equipped for a practice house is serving as a dormitory until needed by upper classes for household management.

#### TRADE AND INDUSTRIAL EDUCATION.

Supervision of industrial education was done by a member of the regular State board staff on a full-time basis for this purpose. Most of the industrial work was done in the city of Baltimore. A part-time trade-extension class was operated on the alternate two weeks' basis in connection with the shipyard, the steel plants, and the high school at Sparrows Point. One teacher and one coordinator were used in this plan.

An evening school was also in operation at Havre de Grace. The Carroll Trade School, of Baltimore, conducted unit trade courses in printing, drafting, auto mechanics, and pattern making. Evening schools in Baltimore were in operation at five centers, with courses covering shipbuilding, the building and metal trades, auto mechanics, and trade-extension work for electricians. The day school program cost in salaries approximately \$10,600; that of the evening schools, \$5,584; and part-time instruction, \$2,496. Half of these amounts were paid from Federal funds.

Teacher-training work was done by the University of Maryland through the extension plan, with one center at Baltimore. This plan included both the preparation of new teachers from recruited skilled mechanics of the industrial plants and the improvement of teachers in service from the ranks of the day and evening industrial schools.

#### MASSACHUSETTS.

Members of State board: Sarah L. Arnold, dean of college; Ella L. Cabot, author; Frederick P. Fish, lawyer; Walter V. McDuffee, teacher; A. Lincoln Filene, merchant; Thomas H. Sullivan, lawyer.

Executive officer: Payson Smith, State commissioner of education, Boston.

State director of vocational education: Robert O. Small.

Agent for agricultural education: Rufus W. Stimson.

Agent for industrial education: Arthur S. Allen.

Agents for home economics education: Louisa I. Pryor and Caroline E. Nourse.

Agents for teacher training: William D. Parkinson, M. Norcross Stratton, Franklin E. Heald, Anna A. Kloss, Anna P. Hanrahan, Edna M. Sturtevant.

Agent for industrial, continuation, agricultural, and household arts schools. Carl E. Herrick.

## PROVISIONS FOR COOPERATION.

The following brief descriptive statement of work done in the State with special regard to the administration of the Smith-Hughes Act accompanies the financial and statistical reports of the Massachusetts Board for Vocational Education for the year 1919-20. In connection therewith certain detailed reports are appended:

## 1. LEGISLATION.

Chapter 311 of the general acts of 1919 is a compulsory continuation school act. It was passed late in the session of 1919, subject to acceptance by referendum vote at the November, 1919, election. It was favorably acted upon in every municipality save one in the Commonwealth.

## 2. ADVISORY BOARDS.

By reorganization of the board of education the department of education consists of a commissioner of education, with an advisory board of education. Since the department of education replaced the former board of education and takes over the functions of the vocational board, the advisory board of education becomes in effect an advisory board for vocational education.

## 3. THE REPORTS OF THE STAFF.

- (1) Last published report of the director of vocational education (Appendix M).
- (2) Annual report of the director on conditions in the State-aided industrial schools (Appendix B).
- (3) Household arts schools (Appendices C and D).
- (4) Agricultural schools and departments (Appendix A).
- (5) Teacher training (Appendices E-J).
- (6) Compulsory continuation schools (Appendix K).
- (7) Administration agent's department (Appendix L).

## 4. PUBLICATIONS.

- (1) Booklet No. 4: High-school vocational agricultural departments. (Revision of Booklet No. 1.)
- (2) Booklet No. 7: Vocational household arts departments in high schools. (Revision of Booklet No. 6.)
- (3) Booklet No. 8: Compulsory continuation schools. (Revision of Booklet No. 2.)
- (4) Booklet No. 9: Information regarding approval and qualifications of teachers in State-aided continuation, industrial, day home making, agricultural, and evening practical arts schools. (Revision of Circular Letter No. 47.)
- (5) Circular letters Nos. 49, 50, 51, and 52: Vocational teacher-training notes.
- (6) Plans (1919-20).
- (7) State-aided vocational education in Massachusetts. (1919.) (Not yet in print.)
- (8) Report (1918-19). (In manuscript form only.)

## AGRICULTURAL EDUCATION.

Industries which have been bidding for adults and which have almost stripped the farms in all sections of hired men have taken from some of the farms even the owners themselves. This bidding for help has extended to boys without special training or experience. They have left school and farm to work for wages greater than those paid men five years ago. A compensating factor for the apparent general depression of agriculture throughout the State as a result of the World War has been the development of evening or unit courses in agricultural instruction for the benefit of the suburban and village residents over 16 years of age who have access to land or live stock, which they desire to make contribute, or contribute more effectively, to their support. The State supervisor of agriculture revised and amplified the former booklet regarding vocational agricultural departments in high schools. He made 318 visits to schools. One joint conference with the teacher-training section was held. A "conference on wheels," observing equipment and work and holding discussions at schools and vocational departments, was carried out. A canvass of school authorities in 51 towns and cities in the interest of extending opportunities for vocational agricultural education was made.

Sixteen schools were approved for Federal aid and enrolled 417 pupils in vocational work. The total income of day pupils from directed or supervised practice in agriculture in 1918-19 was \$27,183.05. Six thousand and eleven other persons over 16 years of age received unit-course agricultural instruction and supervision and grew products valued at \$211,668.

The main new development of the year in the training of teachers of agriculture of Massachusetts was the installation of a professor of vocational agricultural teaching at the Massachusetts Agricultural College and apprentice teaching. Thirty-six students have been enrolled in the vocational courses. For new teachers and others who had entered the service during the previous year the following types of assistance were provided: Individual assistance by personal visits and correspondence, short unit courses at centers, annual professional improvement projects, summer conference in July, 1919, and small group conferences, staff letters, duplicated for general campaign, and lantern slides, reference lists, and bulletin distribution.

## HOME ECONOMICS EDUCATION.

The supervision of day and evening schools for girls and women is under the direction of an agent and an assistant who are employed for full time by the State board. During this past year a number of valuable studies were made to determine the advisability of establish-



ing vocational home economics courses in the high schools of the State. Up to the present time the vocational courses have been given in separate vocational schools. Although the work in these schools is excellent, the State department does not feel that enough girls are being reached to justify this plan exclusively.

There were eight separate or independent vocational schools, with an enrollment of 445 students and employing 60 teachers, all for 12 months. Nineteen evening-school centers, with 490 classes, enrolled 4,943 students and employed 220 teachers.

The training of vocational teachers of home economics is under the direct supervision of the State Department, represented by a special agent and her assistant. A training course, with a resident supervisor and a picked group of eight freshmen, was opened at the Framingham Normal School in September. This is a three-year course, but offers special provision for one year's training in case of mature persons of exceptional vocational experience. It emphasizes the project method of instruction and accordingly provides a large measure of actual occupational practice, both in the vocational house and in the trades. Students majoring in foods must secure a semester's experience during their senior year in a commercial lunch room. Students majoring in clothing must have the same length of time in the millinery and dressmaking trades.

Teacher-training courses for day-school teachers are offered at 3 other centers, with an approximate enrollment of 29 students. Teacher-training classes for evening teachers were held in 13 centers, with an approximate enrollment of 265. Professional-improvement classes were held at 2 centers, with an enrollment of 13. There was 1 class, with an enrollment of 11 students, for the training of teachers for continuation classes.

The home economics staff of the State department has done some excellent work in special studies, having prepared eight booklets and surveys on subjects pertaining to vocational work in home economics in Massachusetts.

#### TRADE AND INDUSTRIAL EDUCATION.

The especial new work is in connection with compulsory continuation schools.

Extension of part-time trade-extension work is continuously attempted. Southbridge undertook this work in September of last year by establishment of classes with the American Optical Co. and the Hamilton Woolen Co. The Hyde Park and Charlestown high schools (Boston) cooperative courses have been extended, improved, and accepted as State aided classes. Waltham has authorized establishment of classes with the Waltham Watch Co., but no direct work with the classes has been started because of the smallness of the group.

Teacher-training work in connection with training of foremen will receive such attention as is practicable during the forthcoming year:

#### MICHIGAN.

Members of State board: Thomas E. Johnson, State superintendent of public instruction; Marion L. Burton, president, university; Frank S. Kedzie, college president; Fred S. Jeffers, president, State board of education.

Executive officer: Thomas E. Johnson, State superintendent of public instruction.

State supervisor of agricultural education: E. E. Gallup.

State supervisor of industrial education: George E. Myers.

State supervisor of home economics education: Martha H. French.

State director of vocational education: Walter H. French.

#### AGRICULTURAL EDUCATION.

The State board continued its work with one supervisor of agriculture, who made 110 visits to vocational departments, held 3 conferences with teachers, and laid special emphasis during the year on making the scope of the directed or supervised practice in agriculture larger and keeping the boys an economic factor on home farms. A news letter was sent out from time to time to teachers and a bulletin was issued giving directions for the organization of departments of agriculture, courses of study, equipment, and helpful aids in teaching.

Fifty-seven schools, an increase of approximately 16 per cent over last year, were approved for Federal aid and enrolled 2,650 pupils in vocational work.

Teacher-training work was continued at the Michigan Agricultural College, where an additional center was added for observation and supervised practice teaching purposes. Forty-seven students were enrolled in teacher-training courses. A six-weeks' summer course for teachers in service was held, with an enrollment of 15.

#### HOME ECONOMICS EDUCATION.

Since 1917-18 State supervision of home economics in Michigan has been in charge of a member of the faculty of the State Normal College at Ypsilanti, who, in 1919-20, gave one-third of her time to this work. In 1918-19 six all-day home economics schools were approved, and four evening school centers. In 1919-20, 13 all-day departments for home economics were approved and 10 evening centers. In at least one of the all-day schools there is a practice cottage where the girls in the vocational department apply their instruction in household management.

Teacher training for home economics is conducted in two State institutions. One of these is the State agricultural college at East

Lansing, where a practice house is maintained for supervised household management, and where practice teaching is conducted in the public schools of East Lansing. The other institution is the State normal college at Ypsilanti. A practice house is also maintained here for supervised household management, and practice teaching is conducted in the training school of the college.

#### TRADE AND INDUSTRIAL EDUCATION.

At the time this report was prepared but little information had been received concerning the actual number of schools organized during the year. In some cities night classes are operated for 12 months with sessions from 6 to 10.30 each night of the week except Sunday. The enrollment throughout the year is unusually large. During the summer months the enrollment is less than in the winter, but the percentage of attendance is higher.

Instructor training has been conducted in evening extension courses at several points in the State outside of the city of Detroit. This work has required the services of three instructor trainers, two men and one woman.

#### MINNESOTA.

Members of State board: W. D. Willard, banker; Thomas E. Cashman, farmer; Mrs. R. D. Musser, home maker; Julius Boraas, college professor; J. W. Hunt, lawyer.

Executive officer: James M. McConnell, State superintendent of education, St. Paul.

State director of vocational education: E. M. Phillips.

State supervisor of vocational agriculture: B. M. Gile.

State supervisor of vocational home economics: Wylle B. McNeal.

State supervisor of trade and industrial education: G. A. McGarvey.

#### PROVISIONS FOR COOPERATION.

Minnesota had this year an amount equal to Federal funds for reimbursing school districts conducting vocational classes in agriculture, home economics, and trade and industries. As far as funds were available the districts were reimbursed for two-thirds the cost of instruction. The number of schools and classes has increased to the extent that the reimbursement to all-day classes has had to be prorated.

Minnesota will propose at the 1920-21 session of the legislature a compulsory part-time bill, and will ask for an appropriation to carry into effect the provisions of the bill. As a companion measure to the part-time bill, a biennial school census law is proposed to obtain the enumeration of all children of the State between the ages of 5 and 18 years, from which report records will be furnished to

local schools and to the State department of education. A bill to cover all forms of evening schools is also proposed.

#### AGRICULTURAL EDUCATION.

The State board continued the year with one supervisor of agriculture, who made 175 visits to vocational departments of agriculture, held 10 conferences with teachers, and laid special emphasis upon reaching as many boys as possible who were out of school on the farms of Minnesota. This work was carried on largely by what the supervisor calls his six-six plan—that is, by having the boys in 27 schools take the agricultural course on the six months' basis. Twenty of the 27 schools have nothing but six months' courses, while 7 of them last year were offering both nine and six months' courses. It seems clearly evident to the supervisor that the farm boy who is interested in securing a practical education in order to help him in his business of farming is, in most cases, unable to attend schools for more than six months. The supervisor prepared during the year project study books on dairying, animal husbandry, poultry, and horticulture; an outline on swine for evening schools, and also an outline of work for the seventh and eighth grades.

Forty schools, an increase of approximately 74 per cent over last year, were approved for Federal aid and enrolled 1,098 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-1919 was \$80,778. Six evening schools were held with an enrollment of 464.

The organization of teacher-training work at the university continued practically as it was for the previous year. Observation and supervised practice teaching was done in the University High School. Only 10 students were enrolled in the senior year for teacher-training work. A six weeks' course with an enrollment of 15 was held for teachers in service at the university.

#### HOME ECONOMICS EDUCATION.

A State supervisor of home economics was employed on full time for 1919-1920.

Eight all-day departments in home economics were approved, with an enrollment of 273 students, and one part-time school, with an enrollment of 11 students.

The University of Minnesota is approved for the training of teachers for home economics schools and classes. It has good facilities for supervised teaching in the school of agriculture and the university high school. Supervised home management is conducted in two practice houses, where each pupil has a residence of 12 weeks. The experiment of making practical the instruction in child welfare by having children in the practice houses was started in 1918-19 and

continued in 1919-20. This plan has met with much success and with approval from the public.

**TRADES AND INDUSTRIES.**

All-day trade classes have been established in five centers in the State, two of these being of the general industrial type. The total enrollment in the all-day trade schools is about 700. Courses in photography for girls have been developed in one of the centers and are proving a desirable field of training.

Besides the regular part-time continuation classes, cooperative commercial courses and retail selling classes have been established in the larger cities. The evening extension classes enrolled over 1,000. Several short courses covering three weeks of eight hours a day were conducted as part-time classes for those employed in sheet-metal plants. Teacher-training classes for trade and industrial students have been conducted by the University of Minnesota and by the State department of education. Itinerant teacher training has been conducted largely by the State department, and institutes have been held at four centers in the State.

Several investigations have been made looking into the possibilities for training in such industries as iron mining, railroad shops, rug factories, hotel and restaurant business, and the lumber industry. Assistance has been given individual institutions in starting training within the plant, in furnishing teachers, and in helping to analyze the job.

**MISSISSIPPI.**

Members of State board: W. F. Bond, State superintendent of education; J. F. Calhoun, State supervisor of rural schools; Bura Hilburn, State supervisor of Negro schools; H. M. Ivey, State inspector of high schools; W. H. Wood, teacher.

Executive officer: W. F. Bond, State superintendent of education, Jackson.

State director of vocational agricultural education: F. J. Hubbard.

State supervisor of vocational agriculture: D. L. Williams.

State supervisor of home economics education: Miss Guyton Teague.

State supervisor of trade and industrial education: M. D. Broadfoot.

Field agent for Negro agricultural education: P. S. Bowles.

**AGRICULTURAL EDUCATION.**

Practically the same supervisory force for agriculture continued as for the previous year, except that the head of the teacher-training work in the colored agricultural and mechanical college was em-

ployed by the State board for the summer months to devote his time to organizing new departments and supervising those departments already in operation in the colored schools of the State. The State supervisors of agriculture made 129 visits to agricultural departments and schools; held six sectional conferences and one annual conference for teachers of vocational agriculture; laid special emphasis upon the better organization of the agricultural teachers in county agricultural high schools; published a bulletin entitled "Vocational Agriculture in Mississippi;" and revised the monthly agricultural reports for teachers to the State board.

Thirty-three white schools, including 21 county agricultural schools, were approved for Federal aid and enrolled 1,580 pupils in vocational work. The total income of white pupils from directed or supervised practice in agriculture in 1918-19 was \$31,889.31, a return of 85 cents on every dollar expended for salaries of teachers of vocational agriculture, which was \$37,600.10.

Three colored schools were approved for Federal aid and enrolled 52 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture for 1918-19 was \$1,335.19.

Bulletin No. 16 of the State board contains a partial summary of the community service rendered by teachers of vocational agriculture during the year 1918-19.

The teacher-training institution for whites graduated 17 students this year. The teacher-training faculty made 28 visits to vocational departments and county agricultural schools and attended all district conferences. A six weeks' session was held at the Agricultural and Mechanical College for whites and enrolled 32 students, who took courses in agricultural education, including methods of teaching.

The colored teacher-training institution graduated 11 men and had enrolled 8 more in the junior class.

The outlook for the development of agricultural education in the State is bright.

#### HOME ECONOMICS EDUCATION.

A State supervisor of home economics education was employed on full time for 1919-20.

In 1919-20 one all-day department for white pupils was approved for Federal aid and three for Negroes, two of the latter being in elementary schools. There were three evening classes, with an enrollment of 28.

Federal funds are so limited in the State of Mississippi and the demand for the work so keenly felt that larger special appropriations were made by the last legislature to push this type of instruction, and it is expected that a large number of schools for vocational education in home economics will be organized in 1920-21.

The State college for women at Columbus, Miss., is approved for the training of teachers for white schools, and the agricultural and mechanical college at Alcorn for the training for Negro schools. An interesting experiment has been started at the college at Columbus, whereby special facilities are offered through farm-practice houses for the training of teachers to give instruction in home making in the rural schools. These houses are modern and have been erected on a farm of 340 acres belonging to the school.

#### TRADE AND INDUSTRIAL EDUCATION.

The State has a supervisor of industrial education on a half-time basis. The city of Meridian has provided a city supervisor. A moderate increase in the number of industrial classes has been shown each year. Only the evening and part-time types have been in operation in Mississippi. Meridian has organized four evening classes, one class in commercial subjects under the provisions of the general continuation ruling. McComb has continued its alternate week program in connection with the Illinois Central Railway. No day unit trade courses have yet been organized. The agricultural and mechanical college conducted during the year an extension center for the training of shop teachers. This was held at Meridian during the second semester of the scholastic year. A beginning was made in general continuation part-time work in connection with the textile mills at Tupelo, but the program was afterwards converted into evening-school instruction. Approval for Federal aid was given for evening classes in three centers and for part-time instruction in two cities.

#### MISSOURI.

Members of State board: Frederick D. Gardner, governor; Sam A. Baker, State superintendent of public schools; Frank W. McAllister, attorney general; John L. Sullivan, secretary of state.

Executive officer: Sam A. Baker, State superintendent of public schools, Jefferson City.

State director of vocational education: W. T. Carrington.

State supervisor of agricultural education: Paul W. Chapman.

State supervisor of trade and industrial education: A. G. Norris.

State supervisor of home economics education: Regina J. Friant.

#### PROVISIONS FOR COOPERATION.

Vocational education in Missouri is developing rapidly and it is meeting with general encouragement from the people, teachers, and both employers of labor and employees. The State board for vocational education through its executive officer, director, and supervisors has kept the problem of vocational education before the people

by means of personal contact, circular letters, bulletins, and monthly news letters.

#### AGRICULTURAL EDUCATION.

The State board employed the full time of a supervisor of agriculture, who made 87 visits to schools, held 6 group and 1 State conference, and prepared 2 bulletins, one on "animal production" and the other on "plant production." He also gave special attention to promotion work through the press and issued news letters and instructions to the teachers.

Forty-four schools, an increase of approximately 450 per cent over last year, were approved for Federal aid and enrolled 1,008 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture for the year 1918-19 was \$27,681. The chief features of the work among the pupils for the year were a State grain and live-stock judging contest participated in by teams from 30 schools, a large exhibit of products at the State fair, and the attendance of a judging team at the International Live Stock Exposition.

Teacher-training work continued at the State university practically as it was for the previous year. The enrollment in the senior year was 25, and the observation and supervised practice teaching was done in the university high school. Four and eight weeks' summer courses were held, with an attendance of 16 and 18, respectively. The work included special methods and technical courses in agriculture and shop practice.

#### HOME ECONOMICS EDUCATION.

In the State of Missouri in 1919-20, a supervisor for home economics education was employed on full time. In 1917-18 no Federal funds were used for home economics education in the schools. In 1918-19 there were 10 all-day departments of home economics in high schools and 7 evening centers. In 1919-20, 31 all-day departments for home economics, with an enrollment of 802, and 7 evening centers, with an enrollment of 867, were approved. There were also 36 general continuation schools reimbursed in which home economics was part of the program.

The State supervisor has aroused much interest in the subject of home economics education by emphasizing instruction in home management, home decoration, and family health, as well as clothing and food problems. The home project has had considerable attention, stimulating interest and bringing the home and school into more sympathetic relations.

The University of Missouri is approved for the training of teachers in home economics for white schools, and is equipped with two practice houses for supervised household management. A fine new



home economics building is being erected, provided with all facilities for training teachers in that subject.

#### TRADE AND INDUSTRIAL EDUCATION.

Kansas City employed 24 teachers and enrolled 439 students in its 3 all-day trade schools, and St. Joseph employed 3 teachers and enrolled 72 students in its all-day school. Students in these trade schools do school printing, build school shops, make furniture, and do all kinds of repair work for the school during summer months. St. Louis does practically all its trade work in evening schools. It employed 41 teachers for its 1,037 students in evening trade classes. Some evening trade work was done in Kansas City and Jefferson City also. The coming year some trade work will be done in Springfield and other railroad centers, and in Joplin and other mining centers.

#### CONTINUATION AND PART-TIME CLASSES.

Missouri's compulsory law went into effect September 1, 1919. English, mathematics, civics, hygiene, and drawing were taught to every class. Manual arts and sewing were taught in a majority of the schools. Printing, typewriting, auto-mechanics, electricity, nursing, manicuring, retail selling, and office practice were taught in Kansas City and St. Louis. It was soon discovered that a vocational adviser was necessary, and that pupils must be put to work on what seemed best for them. After a try-out many were changed to other work. The outlook for this work is very bright indeed. There will be a large increase in enrollment. The management and teaching efficiency will be better. Practically all the teachers attended summer terms of instruction held in both Kansas City and St. Louis.

#### MONTANA.

Members of State board: S. V. Stewart, governor; S. C. Ford, attorney general; May Trumper, State superintendent; C. H. Hall, lawyer; Leo H. Faust, newspaper; W. S. Hartman, lawyer; John Dietrich, superintendent of schools; J. Bruce Kremer, lawyer; Ward H. Nye, superintendent of schools; William S. Bole, newspaper; A. L. Stone, banker.

Executive officer: L. R. Foote, Helena.

State director of vocational education: L. R. Foote.

State supervisor of vocational agriculture: M. J. Abbey.

State supervisor of trade and industry: L. R. Foote.

State supervisor of home economics: Lucile Reynolds.

#### AGRICULTURAL EDUCATION.

The two departments of supervision and teacher training were organized under one head, with one man devoting half of his time to

supervision of vocational departments and half to teacher-training work at the agricultural and mechanical college. He visited 66 schools, held 4 conferences, gave special attention this year to improvement of teachers in service, prepared a monthly publication, entitled "Suggestions for Vocational Teachers of Agriculture," and prepared project-study outlines for teachers.

Nine schools were approved for Federal aid and enrolled 187 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-19 was \$3,052.66. The chief aim of the agricultural teachers in Montana is to make the school the center of the agricultural activities of the community.

Fourteen students in the senior year and 13 in the junior year were enrolled in the teacher-training courses at the Montana Agricultural College. The improvement of teachers in service, conducted from the teacher-training department, included the enrollment of 25 men, who were provided with a set of typewritten notes and a list of references. Lessons were assigned on notes and supplementary readings.

In Montana the vocational department is commonly the only organized agricultural unit in the community. As a consequence the extension work becomes an important phase of the vocational teacher's work. The fact that a large number of schools are asking for teachers, and that all schools will continue the work next year would indicate that the outlook is satisfactory.

#### HOME ECONOMICS EDUCATION.

The State supervisor was loaned by the State college and divided her time between extension work and State supervision, giving one-third to the latter.

There were four all-day vocational schools—departments in high schools—with a total enrollment of 157 students, a decrease of 16 from the previous year's enrollment.

The State university and the State agricultural college have been designated to train vocational teachers of home economics. The university has an enrollment of 15 students in the vocational course; while the State college has an enrollment of 14 students. At the State university the teacher-training work is just getting started. The Missoula High School offers an excellent opportunity for practice teaching, but the work has been handicapped because of lack of funds for proper supervision of the teaching. There is no practice house, but training in house management is given through special assignments in girls' dormitories and sorority houses. At the State college the work in practice teaching is done in the Bozeman High School. A furnished home was rented for a part of the school year to afford opportunity for household-management practice.

A most successful district conference was held in the spring at Billings. Because of the great distances within the State and difficulty of travel, more such district conferences should be held. This will be possible when more time is allowed the State supervisor for the vocational work.

**TRADE AND INDUSTRIAL EDUCATION.**

The principal development for the year has been in the organization of part-time work in cities of the first class. A great deal of this development has been in commercial subjects rather than in trade and industrial subjects. Free evening schools were established this year in Butte.

**NEBRASKA.**

Members of State board: Samuel R. McKelvie, governor; D. B. Cropsey, State treasurer; J. M. Matzen, State superintendent.

State director of vocational education: C. A. Fulmer.

State supervisor of agricultural education: C. W. Watson.

State supervisor of home economics: Alice M. Loomis.

State supervisor of trade and industrial education: L. A. Hartley.

**PROVISIONS FOR COOPERATION.**

The Federal act was accepted by the legislature in 1917. In 1919 the vocational education law included an appropriation for \$100,000 and a compulsory part-time plan. One section of the law requires the State board to approve all schools meeting the State and Federal requirements. Schools are reimbursed for three-fourths the salaries of the necessary vocational teachers. Under the provisions of the law, if there are not sufficient funds for complete reimbursement of schools, the amount available is prorated among the schools and any unpaid balances become a valid claim against the next appropriation for vocational education. The program for vocational education in Nebraska is therefore limited only by the supply of qualified teachers.

**AGRICULTURAL EDUCATION.**

The State board continued with 1 supervisor for the year, who visited 85 schools in connection with his work, held 1 State conference and 5 regional conferences. Mimeographed material was prepared for teachers, covering such matters as courses of study in vocational agriculture, home projects, and swine production and management; subject matter outline for high-school course in poultry husbandry. From time to time the State supervisor issued bulletins and a news letter which is called The Vocational Agriculturist.

Thirty-one schools, an increase of approximately 287 per cent over last year, were approved for Federal aid and enrolled 573 pupils in

vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-19 was \$5,678. In addition to the directed or supervised practice in agriculture with vocational pupils, the teachers have engaged in surveys of communities for prospective vocational students, project work for boys under 14 years of age, and planning school fairs and exhibits for the opening of the schools in the fall.

Two men were engaged in the teacher-training work at the State university and enrolled nine men in the senior and six men in the junior years. A beginning was made in the improvement of teachers in service. Twelve vocational departments were visited by members of the teacher-training staff for the purpose of observation and assistance. It is expected another man will be added to the teacher-training staff, and with additional assistance rather extensive itinerant teacher training will be undertaken during the next fiscal year. An eight weeks' summer session was held at the university with an enrollment of 50.

The outlook for development in the State is most promising. The number of day schools will be limited only by the number of qualified teachers that can be found.

#### HOME ECONOMICS EDUCATION.

In 1919-20 a State supervisor of home economics education was employed on full time in Nebraska.

In 1918-19 two all-day home economics departments were reimbursed from Federal funds. In 1919-20, 43 all-day departments were organized in the State, with an enrollment of 987 students; only 4 of these were reimbursed from Federal funds. The State has been able to push forward vocational education in home economics because of special appropriations made by the legislature in 1919 to supplement the limited Federal funds.

The University of Nebraska is designated as the institution for teacher training in home economics. A practice house has been maintained there for supervised household management. Practice teaching is conducted in the Lincoln city schools, Teachers College High School, and University Place High School. University Place, a suburb of Lincoln but a separate school corporation, has recently constructed a \$25,000 practice house and laboratories for home economics education, in which a teacher is employed for 11 months. A course in the training of nurses was established at Hastings, in which 15 probationary nurses were enrolled.

#### TRADE AND INDUSTRIAL EDUCATION.

The Nebraska law recognizes trade and industrial education as entitled to share in the available funds on the same basis as agriculture

and home economics education. Nebraska is an agricultural State and for that reason trade and industrial education is not carried on as extensively as in other lines. In one day trade school, courses in auto-mechanics, carpentry, and printing were carried on by the Omaha High School of Commerce, with an attendance of 194 boys.

During the year the following evening trade classes were taught:

Class.	Enrollment.	Number of teachers.
(a) For Havelock railroad-shop employees:		
Gas engine.....	23	1
Carpentry.....	8	1
Boiler making.....	24	1
Shop mathematics.....	25	1
Mechanical drawing.....	20	1
Electricity.....	12	1
(b) For Lincoln foremen:		
Cushman Motor Works.....	22	1
Yale and Hopewell shops.....	12	1
(c) For sugar-beet factories:		
Sugar technology (3).....	75	16
Trade mathematics (3).....	65	3
Trade English (2).....	38	2
(d) For Lincoln workmen:		
Contract estimating.....	25	1

(e) Teacher training: A course in shop teacher training was taught in the University of Nebraska Teachers College, with an enrollment of 24.

#### PART-TIME CLASSES.

(a) Part-time classes in mechanical drawing and related science taught in the Chicago & Northwestern roundhouse in Chadron with an enrollment of 2.

(b) General continuation part-time classes: The sessions in the Lincoln general continuation part-time school were held on school days from 8.30 to 12 and 1 to 4. Pupils received 10 hours' instruction per week (2 hours per day) at times most convenient to pupils and employers. The enrollment was 22 boys and 7 girls.

One result of the Nebraska general continuation part-time law has been to reduce the number of employment certificates granted to children between the ages of 14 and 16 years. The law requires districts in which at least 15 children between the ages of 14 and 16 hold employment certificates to maintain part-time classes. Omaha and Lincoln were the only districts that issued 15 or more labor permits. Both of these cities have excellent programs for the work this coming year.

(c) Part-time trade preparatory (vestibule type) course in nurse training in connection with the Mary Lanning Hospital, Hastings: Thirteen girls took the course which continued 10 weeks. Eight subjects were taught.

## NEVADA.

Members of State board: Emmet Boyle, governor; Walter E. Clark, president, State university; Walter J. Hunting, State superintendent of schools.

Executive officer: Walter J. Hunting, State superintendent of schools, Lincoln.

State director and supervisor of trade and industrial education: Ralph A. Jones.

State supervisor of trade and industrial education: Howard H. Bliss.

State supervisor of agricultural education: Homer Derr.

State supervisor of home economics education: Millicent L. Sears.

## AGRICULTURAL EDUCATION.

Vocational agricultural education has made very certain progress in Nevada during the past year. For the first time there has been a definite and conscious effort to carry into action the directed or supervised practice in agriculture. The promotion and supervision of vocational agriculture in the State has been done by the State director of vocational education. He has also been responsible for the resident and itinerant teacher training in agriculture. During the year he made 18 visits to the 5 schools receiving Federal aid, spending 31 full days with the teachers, and averaging  $1\frac{7}{10}$  days per visit and  $6\frac{2}{10}$  days per teacher. Circular letters to teachers and administrators are issued from time to time.

The University of Nevada offered during the fall semester a "special methods" course, in which six upper-class men enrolled.

As an illustration of some of the difficulties confronting the promotion of vocational agricultural instruction in Nevada, the location of some of the schools receiving Federal aid may be mentioned. For instance, in order to reach Bunkerville from the University of Nevada, where the State supervisor was located during the year, one must travel 1,000 miles by train and 40 miles by stage. The outlook, however, for vocational agricultural education in Nevada is very encouraging.

## HOME ECONOMICS EDUCATION.

The State supervisor gave about one-fourth of her time to supervision. More time is necessary if promotional work is to be carried forward in the State. The supervisor assisted at a five days' institute held at the university.

Reimbursement was made to three all-day schools, each a department in a high school. These had an enrollment of 35 students and employed 2 teachers. There was no part-time or evening school work in home economics.

The teacher training was done at the State university, where 4 students were enrolled in the vocational course, a decrease in the number in the department. This is a further demonstration of the need for more promotional work.

#### TRADE AND INDUSTRIAL EDUCATION.

Evening schools have been operated this year in five cities. Nevada's part-time law, passed by the legislature during the previous year, applies to but very few cities, owing to the limited number of youths under 18 that are employed. Classes are organized in three cities in three centers with an approximate enrollment of 82 pupils, 25 of whom were in trade extension and 57 in general continuation classes. One day-school class is reported. It is organized as a general industrial school.

#### NEW HAMPSHIRE.

Members of State board: John H. Bartlett, governor; Frank S. Streeter, lawyer; Wilfrid J. Lessard, lawyer; Thomas W. Fry, manufacturer; John C. Hutchins, merchant; Ralph D. Paine, author; Ernest W. Butterfield, commissioner of education.

Executive officer: Ernest W. Butterfield, commissioner of education, Concord.

State director of vocational education: George H. Whiteher.

State supervisor of agriculture: Waldo B. Cookingham.

#### AGRICULTURAL EDUCATION.

The State board provided a supervisor of agriculture, who devoted half his time to supervision of agriculture in the schools and half of his time to teacher training at the New Hampshire State College. He made 93 visits to schools, held 1 State conference in 1919, and prepared necessary report forms for use in office records and improvement of teachers in service.

Fourteen schools, an increase of approximately 16 per cent over last year, were approved for Federal aid and enrolled 184 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture for 1918-19 was \$5,070.13.

As indicated before, the State supervisor of agricultural education devoted one-half of his time to training of teachers. He taught a course entitled "Methods of Teaching Agriculture in High Schools," and supervised the practice teaching. The latter consisted of eight weeks of apprentice teaching in vocational departments of agriculture. The institution graduated three men from the teacher-training course, each having spent eight weeks as apprentice teachers.

Vocational agricultural instruction in the State is being looked upon with favor in the communities where this kind of education

has had a fair trial under competent instructors. The willingness of the schools to pay constantly increasing salaries is in many cases prevented only by their inability to secure experienced and trained men capable of earning such compensation.

#### HOME ECONOMICS EDUCATION.

New Hampshire did not provide for supervision of home economics, nor use Federal funds for vocational classes in home economics. The State college is approved for training vocational teachers of home economics. For nine weeks of the last semester of the senior year the students are assigned to high schools of the State for practice teaching. During this time the one in charge of teacher training spends her time in the field supervising student teaching.

#### TRADE AND INDUSTRIAL EDUCATION.

No evening-school instruction is offered in the State. The State offers a number of opportunities for the development of trade-extension classes in connection with manufacturing plants in industrial communities.

#### NEW JERSEY.

Members of State board: Melvin A. Rice, importer; John C. Van Dyke, professor of art; Percy H. Stewart, lawyer; Robert Lynn Cox, lawyer; D. Stewart Craven, manufacturer and farmer; Oscar W. Jeffery, lawyer; John P. Murray, lawyer; Thomas W. Synnott, manufacturer.

Executive officer: Calvin N. Kendall, commissioner of education, Trenton.

Assistant commissioner of education: Wesley A. O'Leary.

Supervisor of agricultural education: Harry O. Sampson.

Supervisor of trades and industries: John A. McCarthy.

Supervisor of home economics education: Iris Prouty O'Leary.

#### AGRICULTURAL EDUCATION.

During the year the State board employed the full time of one man to look after the work of supervision in the State and the training of teachers in service. He made 158 visits to schools having vocational agricultural departments, held 3 State conferences of teachers and 21 regional conferences, provided for an exhibit of vocational work in agriculture at Trenton during "agricultural week," arranged for an interscholastic judging contest by boys from vocational schools and high-school departments of agriculture, gave special stress during the year to the establishment of short courses in agriculture in connection with the high-school work, prepared articles from time to time on various phases of agricultural work in the State for the



educational bulletin published from the office of the commissioner of education, prepared promotional leaflets for the press of the State, and in place of a periodical news letter, as issued by many of the States, he sent to the teachers circular letters.

Fifteen schools, including 2 county units, having 18 centers, an increase of approximately 114 per cent over last year, were approved for Federal aid and enrolled 208 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture for 1918-19 was \$12,628. Twenty-four short courses were conducted, with an enrollment of 269. These short courses were taught by the same teachers as are the all-day schools and without additional compensation. The agricultural teachers in New Jersey aid, as their school work permits, in many community activities in their respective districts.

With the employment of a full-time man the teacher-training work in New Jersey has been satisfactory this year. Larger numbers of undergraduate students have become interested in the work. This in spite of the very unusual opportunities and rewards which are offered to well-trained men in industry and in business in that part of the country. The total number of students taking undergraduate teacher-training work, including content and professional courses, was 66. Two courses were offered at a six weeks' summer session held at the State agricultural college. In addition to the supervisory and summer school work, very definite provisions were made for improvement of teachers in service through the assistance of the teacher-training department.

There is a growing demand for more vocational departments of agriculture; the work has been appreciated wherever such a department has been established, and many inquiries have come to the State office from districts desiring agricultural classes. The short-course work has been especially successful this year, as in every region where a short course was given the farmers are calling for more work of this kind for the next year, and the teachers of vocational agriculture are enthusiastic about this work.

#### HOME ECONOMICS EDUCATION.

The State supervisor gave her time as needed to supervision, promotion of new work, and the training of teachers for part-time and evening classes. An assistant supervisor, employed for two-fifths of her time, had special direction of the improvement of teachers in service and itinerant teacher training. Professional improvement classes for teachers were held in six centers. A special group of 20 carefully selected women who have been home makers was trained at Newark for continuation school classes. Many of these had taken work previously in evening classes.

Nine independent all-day schools, with an enrollment of 477 students, were approved. This is an increase over the previous year of 3 schools and 87 students. The course offered is two years in length, with an opportunity for a third year of advanced work. There was one part-time school, with an enrollment of 315 pupils. Forty-nine evening-school centers, with 150 classes, enrolled 3,077 students, an increase of 41 centers and 482 students over last year.

The State agricultural college is designated for training vocational teachers of home economics. A four years' course is offered, but since this has been in operation but two years there were no junior or senior classes. Forty students were enrolled in the vocational course. Definite plans were worked out with the students for home projects to be carried on during this past summer and reported upon at the beginning of the fall term.

#### TRADE AND INDUSTRIAL EDUCATION.

The total expenditure on account of the salaries of approved teachers of evening trade and industrial classes was \$22,004.67. The total reimbursement amounts to \$10,000.

The total enrollment in evening trade and industrial classes approved for Federal aid was 2,780. The enrollment in State-aided classes not approved for Federal reimbursement was 3,048. The enrollment in evening classes receiving neither State nor Federal aid, including the Newark technical schools, was 1,274. The grand total enrollment for all evening industrial classes was 7,102.

#### DAY INDUSTRIAL CLASSES. AMOUNT OF BUDGET, \$11,516.50.

Classes meeting the Federal requirements were maintained by the following counties and districts: Atlantic City, Bayonne, Elizabeth, Franklin, Middlesex County, Newark, Orange, Essex County, Paterson.

The total expenditures for the salaries of approved teachers in day industrial classes in these districts were \$66,600.72. The total amount of Federal funds available for distribution to day schools is \$11,516.50.

The total enrollment in approved classes of day industrial schools was 1,067. The enrollment in classes not approved was 444. The total enrollment in other classes was 517. The grand total enrollment for all-day industrial classes was 2,028.

The following part-time schools and classes have been maintained during the year: Cooperative part-time classes in high school, Paterson; classes for chemists' assistants, Middlesex County vocational school; part-time classes in home economics, Essex County vocational school; general continuation classes, Van Realte Co., Paterson.

The total expenditures for the year on account of the salaries of approved teachers in these part-time schools and classes were \$3,007.83. Federal funds in the amount of \$1,503.91 can, therefore, be allotted to these classes. The total amount of the Federal appropriation for part-time classes was \$15,031.97. This leaves an unexpended balance on account of part-time classes of \$13,528.06.

The total enrollment in approved classes was 369. The enrollment in other classes approved for State aid but not for Federal aid was 40. The total enrollment in all classes was 409.

#### NEW MEXICO.

Members of State board: O. A. Larrazolo, governor; Jonathan H. Wagner, State superintendent of public instruction; Jose Sena, clerk, supreme court; Earl Douglass, county superintendent; Amado Chavez, lawyer; Mrs. Josie Lockard, teacher; Col. James W. Willson, president, military institute.

Executive officer: Jonathan H. Wagner, State superintendent of public instruction, Santa Fe.

State director of vocational education: Mrs. Ruth C. Miller.

State supervisor of home economics: Mrs. Ruth C. Miller.

State supervisor of trade and industries: A. B. Anderson.

State supervisor of agriculture: E. D. Smith.

#### PROVISIONS FOR COOPERATION.

At the present time the State appropriation for vocational education meets the Federal appropriation. The plan of the State department of education is to have a bill enacted into legislation at the January meeting of the legislature whereby there will be a permanent State appropriation sufficient to guarantee 50 per cent of the salary of every vocational teacher in the State.

#### AGRICULTURAL EDUCATION.

Agriculturally New Mexico has opportunities that abound in but few other States and no one need lack opportunity. Good judgment, however, is required and a good knowledge of the conditions that attend the type of agriculture that is undertaken. The types of agriculture vary from irrigated to dry farming and to range stock; from the intensive to the extensive methods; and from sandy soil to heavy, adobe types of croppage. The State board continued to employ a supervisor of agriculture, who visited 49 schools for the purpose of inspection and of giving advice and assistance in the organization of vocational departments of agriculture, held conferences with boards of education and school officials, and laid special emphasis on the relative importance of organizing the students of voca-

tional agriculture throughout the State into a State organization to promote cooperation. Mimeographed material was issued from time to time for disseminating information and aid to school officials and instructors. Blue prints of school-room equipment and arrangement, farm shop, and various shop and farm equipment problems have been prepared and furnished schools desiring to qualify, as well as to schools operating vocational classes.

Fourteen schools, an increase of approximately 250 per cent over last year, were approved for Federal aid and enrolled 216 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-19 was \$1,444.75.

Teacher-training work was continued at the State agricultural and mechanical college and enrolled three students in teacher-training work. Because the enrollment in the teacher-training classes of the agricultural and mechanical college was very small and probably will be for some time to come, and also because of the expressed desire of the graduates of the agricultural and mechanical college who are in high-school work and other lines of agricultural work in the State to qualify as teachers of vocational agriculture, the State board proposes to set up a plan of combined supervision and improvement of teachers in service—that is, the supervisor of vocational agriculture shall divide his time equally between supervision and itinerant teacher training and improvement of teachers in service. A survey of the State was made to locate any possible candidates who had sufficient credit in agriculture and who by taking this course would be able to qualify for positions of instructors in vocational agriculture.

The outlook for the development of vocational agricultural education is exceedingly bright. A larger number of boards of education in the State are manifesting a desire to install a department of vocational agriculture in their schools. Vocational agriculture is being backed by the State horse and cattlemen's association to the extent of furnishing funds to finance half of the expenses of a stock-judging team to the International Live Stock Exposition and by publishing its approval of the work.

#### HOME ECONOMICS EDUCATION.

The State director for vocational education is giving two-sevenths of her time to supervising the work of home economics in the State.

An increase of 7 in the number of all-day vocational schools over last year brought the number up to 12. Seven of these were departments in high schools, with an enrollment of 108 students, and 5 were grammar-school departments, with 140 students, making a total of 248 day students.

These day schools are all developing home projects and hiring 12-months teachers to supervise the work. An especially interesting

plan for reaching small communities is being worked out on the Dona Ana vocational circuit, where the specialist spends one full day a week at each of the five schools on the circuit—the half day being given over to vocational home economics. The specialist leaves an outline of work to be carried out by the regular teacher for the other four days. As the school attendance is largely made up of Spanish-Americans, the whole program is practically one of Americanization. There were two evening classes, with an enrollment of 26 students.

The State college trains teachers of vocational home economics, 16 students being enrolled in the teacher-training course. Two training courses were offered for preparation of teachers of evening schools, one at Santa Fe and the other at the normal university at Las Vegas.

#### TRADES AND INDUSTRIES.

1. *Evening classes.*—The principal line of development in trade and industrial education in the State is the evening classes in mining occupations and auto-mechanics. In one coal-mining camp there are 5 evening classes with a total enrollment of 40. The instructor in charge of this work in the camp acts as coordinator and also gives teacher-training work to the instructors of the evening classes. The evening class in auto-mechanics at Roswell continues to be very successful. Another auto company of Roswell attempted to conduct classes independently of all aid, but, after a short time, sent for the State supervisor to organize the work as Smith-Hughes courses. The total enrollment in evening classes this year was 80, more than double that of last year.

2. *Part-time classes.*—Plans are under way to establish part-time classes in the brick plant at Gallup. The passage of the compulsory school-attendance law resulted in full-time attendance rather than a demand for part-time classes. Consequently, no approved trade or industrial part-time trade-preparatory or trade-extension classes have been organized. However, enrollments are now being made for part-time classes in commercial education to begin with the opening of schools. One general continuation part-time class in home economics was established during the year.

3. *All-day schools or classes.*—There were two general industrial schools, one at Albuquerque and one at Carlsbad. The unit trade school in auto-mechanics at the State college was continued throughout the year with an enrollment of 80. There were two all-day schools last year.

4. *Teacher training.*—The State supervisor has given 50 per cent of his time training teachers on the job. He has prepared outlines and bulletins for the use of the instructors. No attempt has been made to undertake teacher training in the all-day schools for in-

struction in trades and industries. All of this work has been done by training the teachers in service. However, the State normal school at Silver City is establishing teacher-training courses for instruction in part-time general continuation classes.

#### NEW YORK.

Members of State board: Pliny T. Sexton, lawyer, chancellor of the university; Albert Vander Veer, surgeon; Chester S. Lord, editor; William Nottingham, lawyer; Adelbert Moot, lawyer; Charles B. Alexander, lawyer; Walter Guest Kellogg, lawyer; James Byrne, lawyer; Herbert L. Bridgman, editor; Thomas J. Mangan, lawyer; William J. Wallin, lawyer; William Bondy, lawyer.

Executive officer: Dr. John Finley, State commissioner of education, Albany.

Director, division of agricultural and industrial education: L. A. Wilson.

Specialist for industrial education and teacher training: R. H. Rodgers.

Specialist, part-time education: Oakley Furney.

Special supervision: M. J. Kane.

Special industrial supervision: Verne Bird and W. B. Kamprath.

Specialist, vocational education for girls: Eleanor D. Toaz and Marion S. Van Liew.

Special agent, teacher training: Mrs. Mamie Judy.

Specialists, agricultural education: C. E. Ladd and A. K. Getman; assistants, A. P. Williams and W. J. Weaver.

#### AGRICULTURAL EDUCATION.

In New York State the agricultural education program is organized under three heads: (1) Elementary agriculture as a part of the instruction of the seventh and eighth grades of the rural and elementary schools, (2) instruction in vocational agriculture in high-school departments, and (3) instruction in vocational agriculture in six State schools of agriculture. Definite cooperative relationships have been worked out between the teachers of vocational agriculture and the work in elementary agriculture. The supervisory staff for agriculture continued practically as it was for the previous year. There were 205 visits made to high-school departments of agriculture and nine visits to the State schools. A general conference of teachers of agriculture in high-school departments of agriculture was held. During the year three special types of work have been emphasized: (1) Preparation of a course of study and teaching plan for the work of each year in each department of agriculture, (2)

the improvement of the supervised practical work through the setting of suggested project standards and the formulation of definite methods for conducting project work, and (3) the improvement of the organization of subject matter in agriculture in terms of teaching units. Four publications have appeared during the year: (1) "High School Departments of Vocational Agriculture," (2) "The Home Project: What it is and How Conducted," (3) "The Agricultural Teachers' Bulletin," issued monthly, and (4) "The Vocational Teacher and the Study Problem."

Sixty-five schools, including five State schools of agriculture, an increase of approximately 18 per cent over last year, were approved for Federal aid and enrolled 1,392 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-19 was \$55,717. During the year five short courses were conducted in various centers of the State.

The teacher-training work at the New York State College of Agriculture continued practically as it was for the previous year. Two new courses were offered: (1) Rural secondary education, and (2) rural school administration. Forty-two students were enrolled in the upper classes of the teacher-training courses. Approximately 50 teachers have been served in personal visitation from the teacher-training department. In addition to this the department has cooperated in State conferences and in all the district conferences which have been held. A six weeks' summer session was held at the State agricultural college.

Next year emphasis will be placed upon a detailed study of the educational and agricultural conditions in local communities to the end that departments of vocational agriculture may be established in localities most favorably suited to the sound development of such instruction.

#### HOME ECONOMICS EDUCATION.

Two supervisors, one from the State college for teachers and one from the State agricultural college, were loaned for part-time supervision.

No Federal funds have yet been used for day, part-time, or evening classes in home economics.

Three schools have been designated to train teachers of vocational home economics—namely, the State agricultural college, the State college for teachers, and the State normal school at Buffalo. At the agricultural college 76 students were enrolled in the vocational course; at the State college for teachers, 95 students; and at the Buffalo State Normal School, 51 students—a total of 222 students in New York State being trained for vocational teachers of home economics. Since the course at the normal school was changing from

two to four years in length, there was no senior class. All three of these institutions are stressing vocational experience, requiring a definite amount of home management one summer, and commercial or trade experience a second summer during the course.

A two years' course (60 lessons per year) for the training of teachers of evening schools is offered by the extension department of the Buffalo State Normal School. Courses for training of teachers of part-time classes have been held at nine centers.

#### TRADE AND INDUSTRIAL EDUCATION.

Instructor training courses for part-time teachers were carried on at the Oswego and Buffalo Normal Schools. Training courses for shop teachers and related-subjects teachers have been established in Buffalo, Rochester, Syracuse, Utica, Elmira, Albany, Binghamton, and New York City. Surveys were conducted during the year in Depew, Utica, Niagara Falls, Lockport, Medina, and Amsterdam. Special attention has been given by the State office to the problem of women in industry. There has not been a large number of additions to the schools approved in previous years, but there has been a decided improvement in the character of the instruction. The ratio of evening classes to part-time and all-day classes is quite satisfactory. An increase in the number of evening classes over part-time classes is indicated in the report. The new compulsory part-time law will effect a very decided increase in part-time classes during the coming year. Notable progress has been made in teacher training in the State of New York. Courses of study have been revised and the scope of the work enlarged and additional classes added.

Special attention has been given to the training of part-time teachers with a rather unique plan which trains one man to handle all of the work of a class, both shop and related, and which also trains two men to handle the work of one class, one giving shop instruction and the other related and general work. This plan makes it possible for the State to determine by actual observation which method of teaching part-time classes will produce the better results.

#### NORTH CAROLINA.

Members of State board: Dr. E. C. Brooks, executive officer. Miss Mary Arrington, B. W. Kilgore, and T. B. Fuller.

State director: T. E. Browne.

State supervisor of agricultural education: Roy H. Thomas; Roy A. Olney, assistant State supervisor.

State supervisor of home economics education: Miss Edith M. Thomas.

State supervisor of trade and industrial education: George W. Coggin; H. H. Willis, assistant State supervisor.



**GENERAL CONDITIONS.**

The work of the State board has been carried on under the act of the general assembly, creating a State board and appropriating a fund to match Federal funds. The citizens of the State are becoming better informed of the purposes and activities of the board through the efforts of the executive staff and the improvement in sentiment supporting vocational education is quite evident. The demand for the several phases of work conducted by the board exceeds the supply of qualified teachers.

**AGRICULTURAL EDUCATION.**

The State supervisor during the year organized 10 new departments of vocational agriculture, made a total of 123 visits to schools for the purpose of inspection, helping the teachers in the organization of their courses and assisting them in placing the directed or supervised practice in agriculture on a more efficient basis, prepared standards for certificating vocational agricultural teachers, held a two-day conference at the State college, and conducted a six weeks' summer session for the improvement of teachers in service. Arrangements have been made so that all rural high-school buildings erected in the future will have adequate rooms for agriculture. This has been incorporated in the State building plan. Eighty-five agricultural students, representing 12 schools, took part in the judging contest held at the annual meeting of the North Carolina Live Stock Association. Never before in the history of the State had so many boys come together for this purpose. A team composed of vocational agricultural boys represented the State at the International Live Stock Exposition. This team won eighth place in the team judging contest, and a North Carolina boy won first place in judging beef cattle. Among the publications issued during the year the following may be mentioned: A project record book, farm shop bulletin, several type project study outlines, and the North Carolina Agricultural Education Monthly, a four-page magazine devoted to the interest of vocational agricultural education in the State. A similar publication was issued for teachers of vocational agriculture for Negro schools. A number of articles on various phases of the agricultural work have been written for educational journals and newspapers.

Thirty-one white schools, an increase of approximately 40 per cent over last year, were approved for Federal aid and enrolled 514 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-19 was \$33,395.45, a return of \$1.41 on every dollar expended for salaries of teachers of vocational agriculture, which was \$23,577.54.

Eleven colored schools, an increase of approximately 8 per cent over last year, were approved for Federal aid and enrolled 220 pu-

pils in vocational work. The total income of colored pupils from directed or supervised practice in agriculture in 1918-19 was \$959.29, or an average income per pupil for crops of \$72.19, and an average income per acre of crops of \$78.49.

One of the outstanding features of the work done by the schools has been the community service activities. Over 800 individual farmers were given advice and assistance. One hundred and twenty-two meetings were held, with a total attendance of 16,767 persons. Eighteen of the schools held community fairs during the fall of 1919.

Teacher-training work at the State College continued practically as for the previous year. The enrollment for the year was 19 men. Considerable progress was made in the development of supervised teaching.

#### HOME ECONOMICS EDUCATION.

A State supervisor of home economics education was employed on full time in 1919-20. In 1920-21 an assistant will be provided, to have in charge evening-school work. In 1918-19 three vocational schools for home economics were approved; in 1919-20, 23 such schools, with an enrollment of 814 girls, were organized, all but one of which were reimbursed from State funds only because of the limited Federal funds for this purpose. There were 18 evening classes, with a total enrollment of 302 students, approved for Federal aid in 5 centers, 2 of which were for Negro women. The prospects for enlarging the number of evening classes for 1920-21 are very promising.

The facilities in the Greensboro College for Women, approved for the training of teachers of home economics for white schools, have been increased by the addition of several well-qualified women to the teacher-training faculty, additions to laboratories and equipment, and the utilization of the home economics department of the Greensboro High School for supervised teaching and observation. Very successful summer-school courses were conducted at the college for teachers in service, and special classes for the training of evening home economics teachers.

At the Slater Normal and Industrial School, the institution for training Negro home economics teachers, the home economics department has been moved into new, well-equipped laboratories, the course reorganized, and a woman on full time put at the head of the department, with an assistant on part time.

#### TRADE AND INDUSTRIAL EDUCATION.

The past year marked the beginning of supervision of trade and industrial education in the hands of a special agent upon a full-time basis. Previous to this time the State director has been handling the work. It is evident that the growth during the year has justified this addition to the staff. The State has not attempted any unit trade

courses and last year has seen its first attempt in a part-time field. The work as yet is almost exclusively of the evening trade-extension type. Exceptions to this, however, are a part-time vestibule class in multiplex operation, and a general continuation part-time class in a knitting mill. There are plans on foot for putting into operation some unit trade courses for the ensuing year. The number of approved classes in all types of schools was 73, as against only 5 of the previous year. These courses were in operation in 31 centers of 22 different cities. The State college of agriculture and engineering inaugurated its teacher-training work during the year. No residence courses for related work were given, emphasis being placed exclusively on the improvement of teachers in service. The supervisor and the teacher trainer in this State have worked in very close co-operation. In general, the plan has been for the supervisor to interest the local communities in putting on the work, help the plants to select qualified foremen or other skilled workers as instructors, and furnish outlines for the beginning of the course. The supervisor would then be followed up by the teacher trainer, whose duties consist in meeting with these designated instructors and giving them assistance in planning and organizing their material into teaching form. In this way the instructor trainer has dealt with both shop and related subjects teachers on an itinerant basis.

#### NORTH DAKOTA.

Members of State board: Minnie J. Nielson, State superintendent of public instruction; John M. Hagen, commissioner of agriculture and labor; George A. Toten, Robert T. Muir, P. M. Casey, and Charles Liessman.

Executive officer: Chauncey E. Cavett, director of vocational education, Lisbon.

#### PROVISIONS FOR COOPERATION.

Legislation affecting vocational education was passed by the legislature in December, 1919. Federal funds were matched dollar for dollar, and additional State funds of \$5,000 annual appropriation were given for direction and supervision of the work.

#### AGRICULTURAL EDUCATION.

The State director for vocational education has also acted in the capacity of supervisor of agriculture. He made eight visits to schools, held one State conference and nine special conferences with local districts. Directed or supervised practice in agriculture has been given special attention, a plan has been developed for local teacher-training study centers, and interest has been aroused in short courses and dull-season courses in agriculture.

Eight schools were approved for Federal aid and enrolled 227 pupils in vocational work. The total income of pupils from directed or supervised practical work in agriculture in 1918-19 was \$2,815.01.

Interest has been aroused among the teachers and plans have been made to do efficient work along teacher-training lines in the future at the agricultural college. Six students were enrolled in the teacher-training courses at the college and a session of six weeks was held during the summer of 1919.

By letters, personal conferences, and public meetings great interest has been established throughout the State in vocational agricultural education.

#### HOME ECONOMICS EDUCATION.

A State supervisor of home economics education was employed by the State board for vocational education on part time in 1919-20.

In 1918-19 nine departments for vocational education in home economics were organized in high schools. In 1919-20 nine day departments, with an enrollment of 270 students, were organized and two evening centers were opened. One 12-months' teacher was employed for the year 1919-20, and although home projects were not required, they were emphasized in the work.

The State agricultural college at Fargo was reimbursed for the training of teachers in home economics. Facilities for practice teaching are provided there by classes of freshmen deficient in home economics, and also in the Crittenton Home.

#### TRADE AND INDUSTRIAL EDUCATION.

A small amount of evening instruction was given by the public schools of Fargo and some dull-season instruction for carpenters and builders at the agricultural and mechanical college. Full-time classes were tentatively approved at Wahpeton and Ellendale under the plan for general industrial schools.

#### OHIO.

Members of State board: Alfred Vivian, dean, college of agriculture; R. J. Condon, superintendent of schools; Mrs. Kent W. Hughes, at home; S. J. McCune, merchant; W. S. Edmund, superintendent of schools; A. C. Eldredge, assistant superintendent of schools; Vernon M. Riegel, State superintendent of public instruction.

Executive officer: Vernon M. Riegel, State superintendent of public instruction, Columbus.

State director for vocational education: None.

State director for agricultural and home economics education:  
Alfred Vivian

State supervisor for agricultural education: W. F. Stewart.

State supervisor for trade and industrial education: E. L. Heusch.

State supervisor for home economics: Mrs. Maude G. Adams.

#### PROVISIONS FOR COOPERATION.

The Federal act was accepted by State statute approved March 30, 1917. This act was amended by the 1919 session, providing in the amendment a complete definition of the powers and duties of the State board. The act of acceptance created a State board of education to be the State board for vocational education. This State board consists of the superintendent of public instruction, with six members to be appointed by the governor. Approved vocational schools are entitled to receive from the State treasury an amount equal to the amounts of Federal money to which they may be entitled. Expenses for administration are borne from State funds; for supervision, from State and Federal moneys in the teacher-training fund.

#### AGRICULTURAL EDUCATION.

Agricultural education in Ohio has made progress during the year, as is evidenced in the increased number of departments and the enrollment in these departments.

Sixty-two schools, an increase of approximately 44 per cent over last year, were approved for Federal aid and enrolled 1,221 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-19 was \$99,099.59. It may be said that the quality of the work performed in the departments has averaged much better and has been conducted more thoroughly than previously. The supervisory staff has continued practically as it was for the year previous. For the benefit of the teachers, conferences were held as follows: Two State conferences in connection with the meetings of the State teachers' association, 10 district conferences, and personal visits by members of the supervisory staff with their attendant suggestions and assistance. Three bulletins have been prepared and published during the year, and a project record book is now being printed.

Teacher-training activities have been conducted in connection with five training schools where courses in observation teaching and supervised teaching have been carried out. In the department of agricultural education, Ohio State University, a course in the methods of teaching vocational agriculture has been offered each semester and during the summer session. An enrollment of 59 students has been attained during the year. The services of a utility instructor have been given a trial this year, as a result of which 12 teachers have been relieved for one week each for the benefits of observation or supervised teaching in a training school.

Fourteen winter short courses or part-time schools have been conducted by as many different teachers. The enrollment has varied from 6 to 151 in each school.

#### HOME ECONOMICS EDUCATION.

Since June, 1918, one supervisor has given full time to the work and a second one part time to supervision and part to teacher-training work at Ohio State University. Since June, 1919, one person has devoted full time to the work of improvement of teachers in service.

During 1919-20, 27 all-day schools have been in operation. Five of these have been used by the teacher-training institutions for purposes of practice teaching. In one of these the practice house, established two years ago, is providing an interesting and valuable means of teaching home making. Twenty-two of the all-day schools will be reimbursed by Federal aid. In these schools 640 pupils were enrolled and 25 teachers employed. Twenty-seven 12-months' teachers were employed, and home projects required as part of the work.

Over a hundred schools in the State have applied for Federal-State aid, but as funds this year have not been sufficient to more than take care of necessary increase in salaries of teachers, no new day schools have been taken on for 1920-21. It is gratifying to find that most of the schools disappointed in the matter of receiving aid are making a brave effort to bring their home economics work as far as possible up to Smith-Hughes standards. The State supervisors are anxious to help them in every way to do so, by giving them the privilege of sending their teachers to the conferences and furnishing courses, study outlines, and various printed helps put out from time to time.

Evening school work has been carried on in 12 cities, with a total enrollment of 409 in 26 classes. One part-time school was established and will be continued.

Teacher-training work has been carried on at three centers: Ohio State University, Columbus; Miami University, Oxford; and the University of Cincinnati, Cincinnati. The total number of teachers graduated from the vocational home economics training this year was 26. At present the number of qualified graduates is not sufficient to satisfy the needs of the State.

#### TRADE AND INDUSTRIAL EDUCATION.

During the fiscal year 1919-20 Ohio has made considerable progress in developing and organizing trade and industrial classes. The chief industries of the State include iron and steel industries, machine and foundry establishments, automobile manufacturing, rubber manufacturing, shipbuilding, garment making, and jewelry manufactur-

ing. These plants are widely scattered over the entire State and employ large numbers of mechanics.

To meet the needs of such a wide range of industries Ohio has developed a well-defined program of part-time-trade extension, cooperative, and evening trade extension classes.

During the fiscal year 1919-20 there has been organized a program consisting of 20 part-time trade extension centers, with 35 schools; 4 general continuation centers, with 6 schools; 2 all-day centers, with 5 schools; 30 evening-class centers, with approximately 250 classes.

The part-time trade extension classes enrolled approximately 1,200 students; the general continuation schools, 1,000 students; the all-day schools, 150 students; and the evening classes, approximately 6,700 students.

In Ohio there is no additional fund for the developing of vocational training excepting the money which matched the Federal dollar by the State and local dollar. In view of this limitation the industrial work in Ohio is held within the limits of the income from Federal, State, and local moneys. Further increase of all types of vocational training for the ensuing year is limited to the increase in Federal and State moneys over the past fiscal year's allotment.

During the coming fiscal year newly organized classes will be developed in part-time instruction for railroad-shop apprentices, evening classes for those employed in coal-mining operations, evening classes in pottery industries, evening classes for further training of women in needle industrial plants, and for alteration workers in department stores.

There has been quite an extensive development during the year in instructor-training courses. Three institutions—the University of Cincinnati, Ohio State University, and Cleveland School of Education—have directed this type of teacher training. Out of these three institutions extension centers were established in various towns and cities in their vicinity. Four such extension centers were taken care of by the University of Cincinnati, training instructors in addition to the Cincinnati center itself; three were taken care of by Ohio State University; seven centers were organized and classes conducted by the Cleveland School of Education in addition to Cleveland classes. The work followed closely the requirements of the Ohio plan for the training of shop and related-subjects teachers, to the extent of 128 hours' instruction. Such subjects as trade English, mathematics, science, drawing, practice teaching, trade analysis and theory, and administration of vocational education were given.

In addition to this type of teacher training, many classes were conducted in foremanship training in connection with the large industrial plants in Cleveland and Cincinnati. An enrollment of

approximately 600 received the instruction in shop and related-subjects classes and an approximate enrollment of 500 men received the foreman-training instruction.

The coming year will show quite an enlarged program in teacher-training and foreman-training work in Ohio.

#### OKLAHOMA.

Members of State board: F. W. Cantwell, college president; John Whitehurst, agriculture; R. H. Wilson, State superintendent; Stratton D. Brooks, president of university; Cora F. Smith, secretary of board.

Executive officer: Cora F. Smith, secretary, Oklahoma City.

State director of vocational education: Charles W. Briles.

State supervisor of agriculture: F. W. Bridges.

State supervisor of home economics: Mabel Potter.

#### AGRICULTURAL EDUCATION.

The provisions for supervising agriculture continued as they were for the previous year. The State supervisor made 56 visits to schools, held 5 conferences, and issued a monthly news letter.

Thirty schools, an increase of approximately 172 per cent over last year, were approved for Federal aid and enrolled 473 pupils in vocational work.

A department of agricultural education was organized at the agricultural and mechanical college. Two full courses were offered, one in agricultural education and the other in practice teaching. Thirteen students were enrolled in this work. A three-weeks' summer session was also held and enrolled 35 pupils.

The outlook for development in vocational agricultural education in Oklahoma is very hopeful, and with the present organization a consistent policy in the promotion and development of new schools may be expected.

#### HOME ECONOMICS EDUCATION.

A State supervisor of home economics education on full time has been employed by the State board of Oklahoma for the past two years.

In 1919-20, 11 all-day home economics departments were approved, with an enrollment of 219; and 1 part-time school, with an enrollment of 10 girls. In one of the all-day home economics departments a 12-months' teacher was employed.

The following institutions have been designated for the training of teachers of home economics: The State Agricultural College, Stillwater; the State University, Norman; and the State College for Women, Chickasha. In the State University and State College for



Women supervised teaching is conducted in the subcollegiate grades of the institution, and in the State Agricultural College at the training school and in local public schools.

#### TRADE AND INDUSTRIAL EDUCATION.

Evening classes were organized in Tulsa. Full-time day classes were established at Stillwater, Okmulgee, and at the Oklahoma Military Academy. The State possesses some unusual opportunities for developing industrial training courses in the gas and oil industries. Occupations involved in the production and refining of oil should be thoroughly studied with reference to their possibilities for vocational education. The possibilities in the lead and zinc fields in the Miami district are relatively undeveloped. A conference with a very brief survey of this field carried on during the year indicated that the management of these industries may be relied upon to cooperate in initiating a vocational program.

#### OREGON.

Members of State board: Ben W. Olcott, governor; Sam A. Kozer, secretary of State; J. A. Churchill, State superintendent; Mrs. George McMath, housewife; David M. Dunns, business man; E. J. Stack, labor; F. B. Ingells, farmer; Otto R. Hartwig, labor.

Executive officer: J. A. Churchill, State superintendent of public instruction, Salem.

Director and supervisor of trade and industries: Newton Van Dalem.

Acting director: Frank H. Shepherd.

State supervisors of vocational agriculture: H. P. Barrows and E. E. Elliott.

State supervisor of home economics: Bertha S. David.

#### AGRICULTURAL EDUCATION.

At the beginning of the operation of the Federal vocational education act secondary agricultural education in Oregon was at a decidedly low ebb. Only a few high schools were making any pretense to maintain departments in agriculture, and in many schools where previously installed it had been abandoned through declining interest or inability to secure competent instructors. On this account the organization of the work for vocational agricultural education came at an opportune time. The provision for supervision of agriculture has continued as for the previous year. Twenty-six visits were made to schools, one conference held, and a monthly news letter issued to teachers of agriculture.

Five schools were approved for Federal aid and enrolled 175 pupils in vocational work. The outlook for development along the lines of

part-time and evening classes is encouraging, as the State's experience during the year has shown.

Teacher-training work continued as for the previous year. The supervised practice teaching was done in the Corvallis city schools. Eighteen students were enrolled in the teacher-training courses. A summer session of six weeks was held for teachers in service.

#### HOME ECONOMICS EDUCATION.

The State supervisor was loaned from the State agricultural college for one-third of her time, the remaining two-thirds being given to teacher-training work at the State college. For the coming year it is planned that she spend all her time in the field, either in supervision or in the teacher-training follow-up work.

There were two all-day vocational schools, with an enrollment of 158 students—an increase of one school and 90 students over the previous year. These were both departments in high schools. The State requirement that its all-day vocational schools be equipped with practice cottages seems to be working well in the two reimbursed schools, but has kept other schools from qualifying. There were no part-time classes in home economics, but in four general continuation classes home economics appeared on the program. One evening-school center was reimbursed.

The State agricultural college has been designated as the teacher-training institution. There were 93 students enrolled in the vocational teacher-training class.

#### TRADE AND INDUSTRIAL EDUCATION.

Evening schools have been operated in 3 cities in 3 different centers with 18 short unit courses. Oregon's part-time law applies only to pupils who have not graduated from the eighth grade and permits attendance at evening schools in place of part-time day schools. Seven cities established some form of part-time classes in 8 different centers, with 1 coordinator and a total of over 200 pupils. Four cities in 5 different centers have maintained 9 different short unit trade courses in day schools. Instructor-training made a decided forward step during the year. The State offers exceptional opportunities for promoting vocational education in lumbering, ship-building, fishing industries, and to a reasonable extent in manufacturing establishments. Some of the largest pulp and paper mills in the West are found in the State of Oregon.

#### PENNSYLVANIA.

Members of State board: John P. Garber, superintendent city schools, Philadelphia; Marcus Aaron, business; Robert C. Shaw, county school superintendent; E. S. Templeton, lawyer; Thomas E. Finegan, State superintendent of schools, ex-officio.

Acting director of vocational education: L. H. Dennis.

Supervisors of agricultural education: H. C. Fetterolf and J. K. Bowman.

Supervisor of home economics education: Lu M. Hartman.

Director of industrial education: M. B. King.

Supervisors of industrial education: W. P. Loomis and W. E. Hackett.

Supervisor of continuation schools: M. Claire Snyder.

Supervisor of household arts: Mrs. Anna G. Green.

#### AGRICULTURAL EDUCATION.

The rural districts are beginning to appreciate and realize the value of teaching vocational agriculture in the public schools. As a consequence the State board has had more requests for schools than it could grant because of the scarcity of properly qualified men to teach agriculture. The supply of teachers, therefore, is the limiting factor in the establishment of more vocational-departments of agriculture and rural community vocational schools. During the year a bureau of vocational education was organized with a division of agricultural education. The major portion of the supervisor's time has been devoted to the inspection of established schools. Two hundred and seventy-six visits were made to schools during the year. An annual conference of supervisors of agriculture was held at the State college, 8 group conferences of teachers were held, and special emphasis was placed upon the working up and establishing of new vocational work, including especially the county school work.

Forty schools, including county vocational schools, an increase of approximately 17 per cent over last year, were approved for Federal aid and enrolled 1,081 pupils in vocational work. Farmers' night schools were held in many of the vocational schools throughout the State. The average length of these schools was six weeks, and most of them operated one night a week. Each school conducted at least one community day. Most of these were held in the fall, and in connection with the agricultural exhibits contests were conducted.

The problem of teacher training in agriculture in Pennsylvania, under the provisions of the Federal vocational education act, has been placed in the department of rural life in the school of agriculture of the Pennsylvania State College. Two new courses were offered: (1) Rural education, (2) rural education seminar. Twenty-two students enrolled in the resident teacher-training courses. The responsibility for itinerant teacher training has been placed in the department of rural life at the State college. A six weeks' summer session, with an enrollment of 278 students, and a special two weeks' course were

offered to the agricultural teachers of the State. At the latter all the teachers of agriculture in rural community vocational schools and departments of agriculture in high schools were in attendance.

#### HOME ECONOMICS EDUCATION.

Two full-time supervisors have charge of the home economics work in Pennsylvania—one in cities of 25,000 population and over and the other in cities under 25,000.

There were 75 all-day schools and classes, of which 28 were independent schools, with an enrollment of 1,000 students; 45 were departments in high schools, with an enrollment of 1,397 students; and 2 were departments in elementary schools, with an enrollment of 44 students. The total enrollment was 2,441. There were 128 teachers of day vocational schools, 3 of whom were employed for 12 months. A number of the independent schools are doing especially good work in rural districts.

There were 26 evening centers, with 90 classes, enrolling 1,451 students and employing 54 teachers.

At the State agricultural college, designated to train vocational teachers of home economics, 49 students were enrolled in the vocational course. A plan of apprentice teaching was inaugurated this past year, by which at the opening of the second semester the seniors were sent to carefully selected vocational schools of the State for six weeks of practice teaching. During their absence the teacher in charge of practice teaching in the college spent her time in the field, supervising their work. No special training for teachers of part-time and evening schools was given, but plans are being made for such training the coming year.

Besides several sectional conferences, the annual conference of vocational teachers was held at the State college during the latter part of July, 1920.

#### TRADE AND INDUSTRIAL EDUCATION.

New classes were established during the year in part-time continuation schools and classes in commercial subjects. The State is now contemplating setting up, for boys looking toward the mining industry, two all-day general industrial schools for occupations carried on above ground, and a two-year part-time cooperative school of the same character. It is planned that these schools will be followed by a five-year evening-school program, in which "instructions in the below-ground mining occupations" will be carried on in connection with a five-year apprenticeship system.

But little change has taken place during the year in instructor training.

Pennsylvania reports 93 cities having general continuation schools, with a total of 149 centers. Nineteen cities having evening classes, in a total of 44 centers. Twenty-one cities are reported having day schools. The report indicates a need for development in the centers giving evening-school instruction.

#### RHODE ISLAND.

Members of State board: R. L. Beeckman, governor; Emery J. San Souci, lieutenant governor; George L. Baker,<sup>1</sup> banker; Joseph B. Bourgeois, priest; E. Charles Francis, banker; Frank Hill, banker; Frederick Rueckert, judge; Frank E. Thompson, educator.

Executive officer: Walter E. Ranger, commissioner of education, Providence.

State director of vocational education: Walter E. Ranger.

Deputy director of vocational education: Charles Carroll.

State supervisor of agriculture: William T. Spanton.

State supervisor of trade and industry: Irving C. Perkins.

State supervisor of home economics: Ethel A. Wright.

#### PROVISIONS FOR COOPERATION.

The total funds available for vocational education and teacher training in Rhode Island for this year increased from twelve thousand to fifteen thousand dollars.

#### AGRICULTURAL EDUCATION.

No courses in agriculture were offered in any of the elementary, grammar, or secondary schools of the State previous to the present school year. The State supervisor of agriculture, who devotes two fifths of his time to teacher training at the Rhode Island Agricultural College, made 30 visits to schools in the interest of vocational agricultural instruction. Individual conferences were held with school men and with one teacher of agriculture in the State. A system of office records was developed and blanks for administration and supervision were worked out.

One school was approved for Federal aid and enrolled 24 pupils in vocational work. During the year the directed or supervised practice in agriculture included poultry, potatoes, and gardening. An intensive course for adults was organized and conducted by the teacher of agriculture in connection with the one vocational department of agriculture.

The State supervisor of agricultural education is responsible to the State board for the more intimate supervision and direction of teacher training at the Rhode Island Agricultural College. In

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<sup>1</sup> Deceased.

teacher training the work was largely in the field of organization, although the progress made in the year was reasonably satisfactory, in view of the fact that it was very largely experimental and had no foundation and precedence. While consistent effort in the field of training new teachers was made and three men enrolled, the larger part of the work in this field was with teachers already in service.

The indications are that progress in promoting vocational agricultural instruction in Rhode Island will always be made slowly. However, it is believed that once such work is established it will become a permanent part of the State educational system. The number of schools maintaining agricultural departments will of necessity be small, because there are in all but 22 high schools in the State, and of this number there are not more than 6 that could be classed as rural.

#### HOME ECONOMICS EDUCATION.

The supervisor of home economics was loaned by the State agricultural college for one-half time. This time was spent in promotional work, as Rhode Island had no federally aided vocational schools. Help was given to nonvocational work, with the hope of ultimately introducing vocational courses in day, evening, and part-time schools.

In the teacher-training course, at the State college of agriculture 35 students were enrolled. Through an arrangement with the State normal school at Providence, the courses in education are taught by the normal school faculty, and the seniors in home economics do their practice teaching at the normal school.

#### TRADE AND INDUSTRIAL EDUCATION.

In trades and industries the outstanding features have been the reorganization of an all-day industrial school at Westerly to meet the requirements of law. The State gave its support and encouragement to the venture by adding to the reimbursement for salaries of teachers permitted under the Federal law an equal amount, thus relieving the town of all expenses for instruction in vocational subjects, the town paying for general instruction and providing equipment. No other day schools were assisted. Evening schools were continued and a new venture was made at Bristol in a class in ship drawing, attended by employees of the Herreshoff yards.

#### SOUTH CAROLINA.

Members of State board: R. A. Cooper, governor; J. E. Swearingen, State superintendent of education; J. N. Nathans, lawyer; W. J. McGarity, city superintendent; S. J. Derrick, college president; H. N. Snyder, college president; E. A. Montgomery, farmer;

W. L. Brooker, superintendent of schools; S. H. Edmunds, superintendent of schools.

Executive officer: J. E. Swearingen, State superintendent of education, Columbia.

State supervisor of industrial instruction: C. S. Doggett.

State supervisor of agricultural instruction: Verd Peterson.

State supervisor of home economics: Helen E. Osborne.

#### PROVISIONS FOR COOPERATION.

The legislature at its 1919-20 session passed a law authorizing a maximum of \$360 aid per school for salaries of teachers of agriculture and gave the State board of education the privilege of making regulations for carrying on this work.

#### AGRICULTURAL EDUCATION.

The State supervisor moved his office to the State department of education the 1st of September, 1919, in order to have more direct contact with the public-school activities of the State. He made 70 visits in all to approved schools, held a three-day conference for the teachers during the summer school at Clemson College, held two regional conferences, gave special attention to adult instruction, prepared student project notebooks on crops and animals, together with a bulletin explaining the methods used in cost accounting, prepared mimeographed materials on classrooms, apparatus, and methods of teaching agriculture, and in cooperation with the teacher-training institution prepared a bulletin, "The agricultural teacher's annual plan of work."

The same supervisory force for white schools attends to the supervision of work in colored schools, the supervisor making 16 visits to such schools during the year. One conference of agricultural teachers was held at the colored agricultural and mechanical college.

Thirty white schools, an increase of approximately 50 per cent over last year, were approved for Federal aid and enrolled 725 pupils in vocational work. The total income of white pupils from directed or supervised practice in agriculture in 1918-19 was \$41,742.58, a return of \$1.40 on every dollar expended for salaries of teachers of vocational agriculture, which was \$30,275.14.

Twelve colored schools, an increase of approximately 140 per cent over last year, were approved for Federal aid and enrolled 170 pupils in vocational work. The total income of colored pupils from directed or supervised practice in agriculture in 1918-19 was \$18,425.83.

The training of teachers at Clemson Agricultural College continued practically as it was for the previous year. Ten students were enrolled in the courses. Fifteen different teachers were visited by the teacher-training staff and dealt primarily with class-room prob-

lems and the organization of directed or supervised practice in agriculture. A summer session of six weeks for teachers in service was held at the teacher-training institution.

The school people of the State continued to show increasing interest in the teaching of vocational agriculture. Much of this interest arose out of the higher prices received for cotton, tobacco, and other farm products during the past year.

#### HOME ECONOMICS EDUCATION.

In 1919-20 a member of the home economics faculty of Winthrop College, Rock Hill, was loaned to the State board for vocational education for purposes of supervision. This plan will be continued in 1920-21, but with more time allowed for the field work.

One home economics department in a high school was approved for 1918-19, while in 1919-20 six all-day departments, with an enrollment of 126, and one evening school (colored), with an enrollment of 25, were approved for Federal aid.

Winthrop College at Rock Hill is approved for the training of teachers in home economics for white schools and the Normal and Industrial Institute at Orangeburg for Negro schools. Provision for supervised teaching in the former institution is found in its training school, and in the latter in the elementary and high school classes of the institute. Supervised house management is conducted in a practice cottage at Winthrop College, where each student in teacher training for home economics has a residence of six weeks.

#### TRADE AND INDUSTRIAL EDUCATION.

The State has for the past year increased its supervision from one-third time to one-half time basis. There has been an increase in the number of evening trade-extension classes. The work has in fact been limited to this type of school and almost exclusively to the textile industry. Out of 63 evening classes, 62 are in textiles, 1 evening class having been organized in connection with the automobile factory at Rock Hill. The importance of the textile industry in this State has offered ample opportunity for special industrial training for girls and women, but the response on the part of the latter in taking advantage of these opportunities has been very limited. The number of courses in operation is double that of the preceding year. A full-time instructor trainer has cooperated with the supervisor by doing follow-up work after the industrial classes were organized. The supervisor first made the local contacts with industrial plants, completed the arrangements for organization, and assisted in the selection of prospective teachers. The follow-up work of the instructor trainer consisted in giving instruction to these selected teachers in methods of procedure, trade analysis, and meth-



ods of teaching. The teacher-training work has been under the direction of Clemson College.

#### SOUTH DAKOTA.

Members of State board: Fred L. Shaw, State superintendent of public instruction; Robert L. Slagle, president of university; Willis E. Johnson, president of State college; J. W. Heston,<sup>1</sup> president of State normal school; Adella S. Beach, county superintendent; Grace Reed-Porter, principal of high school; H. W. Foght, president of State normal school.

Executive officer: Fred L. Shaw, State superintendent of public instruction, Pierre.

State supervisor of vocational agriculture: Fred E. Smith.

State supervisor of vocational home economics: Eva R. Dawes.

#### AGRICULTURAL EDUCATION.

The State board provided for one-third of the time of the high-school inspector to supervision of vocational agriculture. Eleven schools were approved for Federal aid and enrolled 213 pupils in vocational work.

The State agricultural and mechanical college continued to train teachers and enrolled during the year 13 prospective teachers of vocational agriculture.

#### HOME ECONOMICS EDUCATION.

In 1919-20 a State supervisor of home-economics education was employed on part time. In 1920-21 a State supervisor of home-economics education will be employed on full time.

In 1919-20 three all-day schools, with an enrollment of 207 girls, were reimbursed from Federal funds.

Teacher training for home economics is conducted in the University of South Dakota, Vermilion, and the South Dakota State College of Agriculture, Brookings. In one of these institutions a practice house and in the other a practice apartment are maintained for supervised home management. Supervised teaching in both institutions is conducted in part in the local public schools.

Special State appropriations for the promotion of home-economics education were made for 1919-20, and a number of home-economics day departments were maintained wholly from State funds because of the limited Federal funds available for this purpose.

#### TRADE AND INDUSTRIAL EDUCATION.

From the information on file when this report was written, no trade or industrial schools had been federally aided. The State possesses some very good opportunities in connection with the mining industry.

<sup>1</sup> Deceased.

## TENNESSEE.

Members of State board: P. L. Harned, chairman, postmaster; A. H. Roberts, governor; Albert Williams, State superintendent of public instruction; L. A. Ligon, lawyer; J. F. Fowlkes, farmer; F. R. Ogilvie, editor and county superintendent; W. D. Cooper, druggist; C. B. Ijams, superintendent of schools; T. W. Peace, lawyer; J. S. Ziegler, high school principal; C. C. Sherrod, school superintendent.

Executive officer and director: Albert Williams.

State supervisor for agricultural education: D. M. Clements.

State supervisor for home economics education: Louise G. Turner.

State supervisor for industrial education: Edward S. Maclin.

## PROVISIONS FOR COOPERATION.

The Federal act was accepted by the State statute approved March 31, 1917. A supplement to this act was passed by the 1919 session of the legislature, appropriating State funds to enable the State board to promote vocational education in cooperation with the Federal Government. The State board of education is designated by the act of acceptance as the State board for vocational education. An amount equal to the Federal vocational fund is deducted from the general school fund before distribution. This amount for the year 1920-21 is not to exceed \$81,045.07. A portion of this fund is available for supervision and administration.

## AGRICULTURAL EDUCATION.

The State supervisor visited each approved school at least once each quarter, held one annual and two regional conferences of agricultural teachers, prepared a bulletin entitled "Requirements Necessary in Order to Qualify for Smith-Hughes Work in Tennessee." A bulletin was prepared by the teacher-training department entitled "A Year in Agriculture-Horticulture."

The provision for supervisory work among white schools applies equally as well to the vocational work in colored schools:

Thirty-one white schools, an increase of approximately 39 per cent over last year, were approved for Federal aid and enrolled 681 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-19 was \$14,551.29, a return of \$1 on every dollar expended for salaries of teachers of vocational agriculture, which was \$14,596.92.

Twelve colored schools, an increase of approximately 25 per cent over last year, were approved for Federal aid and enrolled 317 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-19 was \$10,127.56.

The teacher-training work at the University of Tennessee continued practically as it was for the previous year with exception of an additional man for itinerant teacher training. Twenty men enrolled in the courses.

There was no change in the organization of the teacher-training work for colored schools over that for the previous year. Sixteen teachers in colored schools were served by an itinerant teacher trainer from the colored teacher-training institution.

The outlook for development in both white and colored schools is all that can be hoped for. Qualified teachers are difficult to secure.

The State board hopes to institute during the next fiscal year some part-time work.

#### HOME ECONOMICS EDUCATION.

A member of the faculty of the University of Tennessee was loaned on full time to supervise home economics education in 1919-20. In 1920-21 a State supervisor will be employed by the State board for vocational education on full time.

In 1918-19 no schools for home economics education were reimbursed from Federal funds. In 1919-20 three all-day departments and two evening classes for white pupils were reimbursed and five evening classes for Negroes. Two part-time classes, enrolling 67 white pupils, were also reimbursed. The total enrollment for white vocational schools in home economics education in 1919-20 was 210, and for Negroes 295. The demand for home economics education in this State so far exceeds the possibilities of Federal funds matched by State funds that a special State appropriation fund of approximately \$20,000 will be applied to the organization of such schools in 1920-21.

Teacher training in home economics education for white schools is organized in the State University, Knoxville, and for Negro schools in the Normal and Industrial Institute at Nashville.

#### TRADE AND INDUSTRIAL EDUCATION.

With a full-time supervisor of industrial education the State has been able to increase its total number of industrial courses to 53, as compared with 19 for the previous year. Tennessee's program as to types of schools has been quite varied, including day, evening, and several types of part-time instruction. The work has also been well distributed over the State, all of the larger cities having participated this year. Nashville has continued its evening classes in the building trades. Chattanooga, for the first time, has inaugurated trade-extension work in an evening school. Memphis has added to its unit trade classes and Knoxville has conducted part-time and evening instruction, both through the university and the city

public schools. Approval for Federal aid was given for 42 evening courses in 6 different cities. Five cities had approved part-time instruction and one city conducted unit trade courses for five occupations. A director of teacher training connected with the University of Tennessee has given one-fifth of his time to this phase of the work. The State is divided into four districts with a part-time instructor trainer responsible for each. These centers are at Chattanooga, Knoxville, Memphis, and Nashville.

#### TEXAS.

Members of State board: W. P. Hobby, governor; M. L. Wiginton, comptroller; C. D. Mims, secretary of State.

Executive officer: Annie Webb Blanton, Austin.

State director for vocational education: None.

State supervisors for agricultural education: J. D. Blackwell, C. L. Davis, and J. H. Hinds.

State supervisors for home economics education: Agnes Ellen Harris and Lillian Peek.

State supervisors for industrial education: N. S. Hunsdon and Dorothy M. Sells.

#### PROVISIONS FOR COOPERATION.

During the 1919 session of the legislature the act of acceptance was reenacted for the years 1919-20 and 1920-21. Appropriations to match Federal funds for 1920-21 are as follows: \$69,687.89 for the salaries of teachers, supervisors, or directors of agricultural subjects; \$26,133.06 for the salaries of trade, industrial, and home economics subjects; and \$49,362.16 for the training of teachers of vocational subjects. This makes a total of \$145,183.11 available for the promotion of vocational education during the year 1920-21. There is, however, a provision in the State act that only such amounts as may be necessary for the direction and supervision of the work may be used by the State board for vocational education. This limits the use of the above amounts. Special provision is also made for the use of \$25,000 State aid for salaries of teachers in rural schools and small towns. During the present year this amount was used almost entirely in aiding agriculture and home economics. In the large towns and cities the Federal funds are duplicated from the local school funds. The legislature in special session during 1919-20 made liberal appropriations to State institutions which will conduct teacher-training work in vocational education for the year 1920-21.

#### AGRICULTURAL EDUCATION.

During the past year three men devoted all of their time to supervision and improvement of teachers in service. Schools were visited

four times during the year at intervals of two months each. In addition to approximately 300 supervisory visits the following general work has been done: Schools applying for Federal aid for 1920-21 were inspected; three bulletins were prepared entitled "Laboratory exercises in animal production," "Laboratory exercises in plant production," and "A year's work in plant production"; promotion work in connection with the representation of 14 schools at the Southwestern Live Stock Show; and the contest held during the farmers' shop course at the Agricultural and Mechanical College.

Approximately 25 supervisory visits were made to colored schools by the same supervisory staff as that for the white schools. A two-day conference with teachers was held at the teacher-training institution.

Seventy white schools, an increase of approximately 143 per cent over last year, were approved for Federal aid and enrolled 842 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-19 was \$9,625.42, a return of 42 cents on every dollar expended for salaries of teachers of vocational agriculture, which was \$23,047.50.

Six colored schools, an increase of approximately 100 per cent over last year, were approved for Federal aid and enrolled 89 pupils in vocational work. The total income of pupils from directed or supervised practice in agriculture in 1918-19 was \$962.13.

The provision for teacher-training work at the agricultural and mechanical college continued practically as it was for the previous year with an enrollment of 35.

Definite teacher-training work was organized at the colored agricultural and mechanical college with an enrollment of 10 students. In addition to this the professor of agricultural education devoted considerable time to the improvement of teachers of vocational agriculture in colored schools. A summer session for teachers in service was held at both teacher-training institutions.

#### HOME ECONOMICS EDUCATION.

A State supervisor of home economics education and an assistant were employed on full time in the year 1919-20. The same policy will be followed in 1920-21.

In 1917-18 there were 3 departments in day schools and 2 evening schools for vocational education in home economics. In 1918-19 there were 8 departments in day schools and 1 evening school with 8 classes registering 150 pupils. In 1919-20 there were 29 day schools, with a registration of 574 students, and 3 evening schools of 10 classes, with registration of 297. The work in clothing in the public schools was made very interesting through the stimulus of a State clothing

contest for girls, in which a large number of schools in the State participated.

Teacher training for white teachers is conducted at the University of Texas, Austin, the State College of Industrial Arts, Denton, and the Southwest Texas State Normal School, San Marcos; for Negro teachers at the Prairie View Normal and Industrial College, Prairie View. The Negro teacher-training institution employed in 1919-20 a competent head for the training of teachers in home economics, and an arrangement was made by which she also supervised the work of the Negro schools in the State.

#### TRADE AND INDUSTRIAL EDUCATION.

The ample provision for supervision which the State has had during the year has resulted in the inauguration of a representative program and a good expansion in the work given over that of the preceding year. A full-time supervisor has been assisted by a full-time assistant supervisor for industrial work among the girls and women. All types of schools under the vocational act are provided for and have been put in operation in the State of Texas. The principal cities, Dallas, El Paso, Fort Worth, Houston, and San Antonio, have enlarged their programs over the previous year. The part-time work has been of a general continuation nature either in academic subjects or salesmanship. Evening schools have been distributed uniformly throughout the State. Part-time work was limited to Dallas, Fort Stockton, Houston, and Victoria. Thirty-six evening courses in 12 centers of 6 cities have had approval for Federal aid. Seven centers in 4 cities have had part-time instruction, and instruction in 11 unit trades was given in 7 different cities. The agricultural and mechanical college has conducted extension courses for teacher training at Houston and Dallas. The University of Texas has had extension courses in operation at Fort Worth for men, and at Houston and Fort Worth for women. The State board conducts teacher training for teachers in service through its supervisors. The total number of courses given during the year is represented by an increase of 104 per cent.

#### UTAH.

Members of State board: G. W. Child, State superintendent of public instruction; John A. Widtsoe, president of university; E. G. Peterson, president of agricultural college; Henry Barker, school principal; George A. Eaton, school principal; J. E. Magleby, farmer; Mrs. William Reid, housewife; J. C. Swenson, professor, Brigham Young University; D. C. Jensen, district superintendent of schools.

Executive officer: G. W. Child, State superintendent of public instruction, Salt Lake City.

State director of vocational education: Francis W. Kirkham.

State supervisor of vocational agriculture: I. B. Ball.

State supervisor of home economics: Jean Cox.

State supervisors of trades and industries: H. A. Tiemann and I. S. Noall.

#### AGRICULTURAL EDUCATION.

The State supervisor, in addition to visiting approved schools, held in cooperation with the teacher-training department five regional conferences. There was also a week's conference held at the State agricultural college and a State-wide educational campaign to promote public-school education in Utah, and to acquaint the public with the new educational laws of the State, including the vocational education act. The State supervisor prepared a monthly "Agricultural Student" for distribution to teachers and pupils, issued a vocational agricultural bulletin on "Summer Practical Work," and printed 1,000 copies of a 48-page bulletin on "Farm Mechanic Achievements in Utah High Schools, 1919-20." Special emphasis during the year was put upon the necessary mechanical skills to equip the boys for their types of farming. Six new shop buildings were erected by high schools for this purpose with doors wide enough to admit big farm wagons and autos. Six other schools have funds raised for similar purposes.

Twenty-six schools, an increase of approximately 14 per cent over last year, were approved for Federal aid and enrolled 766 pupils in vocational work. The total income from directed or supervised practice in agriculture in 1918-19 was \$45,306.06, an average income of \$149.03 per pupil.

Some schools that have applied for Federal aid seem not to desire supervision or to engage their instructors over the 12 months, because the boys largely ride the range and do not remain at home. Moreover, in some of the districts in high altitudes the industry is chiefly cattle and sheep raising, using the summer range in the mountains; hence, in the valleys hay is almost the only crop on a commercial scale. In these cases the boards of education do not seem inclined to pay for a man to supervise over the summer months. These schools may be discontinued, hence the number of schools subsidized may remain about stationary for some time.

The teacher-training work continued practically as it was for the previous year, enrolling 13 men in the course. The plan of work in itinerant-teacher training includes one-half the time of the State supervisor of agricultural education and one fourth the time of the teacher-trainer in agricultural education.

Increased Federal subsidy, according to State officials, is the greatest need at the present time. The State has exceeded the Federal

subsidy two and one-half times, yet the amount available for 26 high schools qualifying is not large enough to meet salary requirements.

#### HOME ECONOMICS EDUCATION.

The vocational work in this State is showing the effects of two years of full-time supervision. The cooperation with all school people of the State has been splendid. The supervisor held district conferences several times during the year and one State conference of two weeks. She also prepared a bulletin on home projects.

There were 32 all-day vocational schools, all departmental, enrolling 2,901 students, with 52½ teachers—an increase of two departments, 4½ teachers, and 1,705 students over the previous year's report. The enrollment of students has more than doubled. These schools are employing 33 twelve-months' teachers, who spend their summers supervising home project work. The latter work is elective, but 1,614 girls were being supervised during the summer of 1920.

There were 7 part-time classes, with an enrollment of 211 students. The part-time law has put most of the over-age girls back in school, as there are few industries for them to enter. There were 2 evening classes, with an enrollment of 65 students.

The agricultural college, in cooperation with the educational department of the State university, is training the vocational teachers of home economics. There were 35 vocational students enrolled in the teacher-training course.

Itinerant teacher training was carried on for three months by the person in charge of teacher-training work at the university. She was also able to do some itinerant teaching in the vocational classes.

#### TRADE AND INDUSTRIAL EDUCATION.

Trade and industrial evening schools have been established in a total of 13 different cities and 14 centers, with 22 short unit courses in a total of 25 classes. The part-time compulsory law passed by the legislature one year ago has been aggressively applied. All youth under the age of 18 employed or not in school have been required to attend a minimum of 144 hours per year. One city has an all-day school with six unit trade groups.

Foreman-training and itinerant teacher-training classes were organized and conducted in a number of different centers during the year. The foreman training was largely in connection with railroad shops and the building trades, while itinerant teacher training was carried on in connection with the sugar refineries.

#### VERMONT.

Members of State board: L. B. Johnson, publisher; F. H. Brooks, manufacturer; A. W. Hewitt, clergyman; M. C. Webber, lawyer; F. A. Howland, insurance.



Executive officer: M. B. Hillegas, commissioner of education, Montpelier.

State supervisor of vocational agriculture: H. H. Gibson.

#### AGRICULTURAL EDUCATION.

The State supervisor of agriculture resigned about the middle of the year, and the work of supervision was carried on by the man in charge of teacher training at the State university. The supervisor made about 50 visits to the schools, held two conferences during the year, and issued a monthly news letter in cooperation with the teacher-training department.

Two special schools of agriculture were approved for Federal aid and enrolled 160 pupils for vocational work.

The teacher-training work was continued practically as it was for the previous year, with an enrollment of six students. Some itinerant instruction was done.

#### HOME ECONOMICS EDUCATION.

The supervision of home economics work has been carried on by a member of the teacher-training institution loaned for two-thirds of her time. Her work has been largely promotional.

There was but one day vocational school, with an enrollment of 5 students. Five evening school centers, with 8 classes, enrolled 136 students. Vermont offers a real opportunity for evening-school work, because of the number of women employed in the mills.

The University of Vermont has been designated to train vocational teachers of home economics. There were 63 students enrolled in the course. So far training has been given only to those preparing for day vocational work. As evening classes develop, some provision should be made for the training of vocational teachers for these classes.

The supervisor was able to meet the home economics teachers of the State in conference at county teachers' meetings and at a two-days' conference at the university. She did considerable itinerant teacher training among teachers of general home economics in the high schools.

#### TRADE AND INDUSTRIAL EDUCATION.

Cooperative part-time classes were carried on in connection with industries in Springfield and St. Johnsbury. No instructor training was given during the year. A number of the manufacturing cities in the State offer exceptional opportunities for extending the benefits of trade and industrial training. The cooperative part-time schools mentioned above take the place of unit trade schools but do not satisfy the need for evening instruction.

VIRGINIA.

Members of State board: Westmoreland Davis, governor; Harris Hart, superintendent of public instruction; John R. Saunders, attorney general; Dr. James M. Page, college professor; Col. Henry C. Ford, college professor; Dr. J. E. Williams, college professor; B. E. Copenhaver, county superintendent; James N. Hillman, secretary.

Executive officer: Harris Hart, State superintendent of public instruction, Richmond.

State supervisor for agriculture: Thomas D. Eason.

State supervisor for trades and industries: Raymond V. Long.

State supervisor for home economics: Miss Edith Baer.

PROVISIONS FOR COOPERATION.

The last assembly made an appropriation of \$90,000 for the years 1920-21 and 1921-22 for aiding local communities in building and equipping departments of vocational agriculture.

AGRICULTURAL EDUCATION.

The same provisions for supervision of agriculture continued as for the previous year. Fifty-three visits were made to approved schools, in addition to visits to other schools for promotion purposes. One State conference and three regional conferences of teachers were held. At the session of the State Teachers' Association the agricultural teachers perfected a permanent organization and voted to meet each year at the time of the meeting of the State Teachers' Association. At the State fair the supervisor, with the assistance of the college of agriculture, held a stock-and-corn-judging contest for pupils in vocational classes. Fifteen schools were represented. Two bulletins were published, one entitled "Vocational Agriculture in the Secondary Schools of Virginia" and the other "The Home Project."

Forty-two white schools, an increase of approximately 74 per cent over last year, were approved for Federal aid and enrolled 704 in vocational work. The total income from directed or supervised practice in agriculture in 1918-19 was \$19,275.75, a return of 60 cents on every dollar expended for salaries of teachers of vocational agriculture, which was \$30,481.98.

Through the cooperation of the teacher-training department of the Virginia Normal and Industrial Institute several outlines and lists of equipment have been worked out for use in the colored schools.

Five colored schools were approved for Federal aid and enrolled 94 pupils in vocational work. The total income from directed or supervised practice in agriculture in 1918-19 was \$2,262.05.

Part-time instruction was offered in one of the white schools and evening instruction was offered in six. No special organization was set up for these classes, nor was a special appropriation made for this work. The work was done by the instructors in agriculture and without additional compensation.

Two additional men were added to the teacher-training staff at the Virginia Polytechnic Institute. One of these men devotes one-fourth of his time to teacher-training work and three-fourths of his time to work in the Blacksburg High School, which is used as a school for giving supervised practice teaching. The total enrollment in the agricultural education department was 60, with 8 graduating. About 22 visits were made to schools in the interest of improving teachers in service by the teacher-training staff. A five weeks' summer school was held for teachers in service, with an enrollment of 171.

The teacher training for colored schools is done at the Virginia Normal and Industrial Institute. The work was organized on the departmental basis and is in charge of a professor of agricultural education. The man in charge of this department did considerable itinerant instruction among the five colored schools receiving Federal aid.

More interest is being displayed and more money is being spent for education in agriculture than ever before. Evidences of this interest are found in the attitude of the general faculty of the college of agriculture toward the department of agricultural education at the college; increased enrollment in this department; increased enrollment in the college of agriculture, due to the influence of the instructors in vocational education at teachers' conferences; willingness of boards of education and boards of supervisors to grant larger amounts for building operations and traveling expenses of teachers of agriculture; greater emphasis on agriculture at the normal schools; and realization by most of the agricultural agencies of the State that farming conditions must be improved.

#### HOME ECONOMICS EDUCATION.

In 1918-19 a member of the faculty of William and Mary College supervised the home economics education in Virginia on part time. The same arrangement was continued in 1919-20. It is probable that for 1920-21 a supervisor will be employed either on full time or at least a larger proportion of time than heretofore.

In 1919-20 eight all-day departments (seven white and one Negro) and four evening centers were reimbursed from Federal funds. The enrollment in the evening classes was 683. Special State appropriations have made possible the organization of 16 additional vocational departments for home economics education, and approximately 14 more will be opened in 1920-21.

Three institutions are designated to train teachers—the State normal school, at Harrisonburg; and William and Mary College, at Williamsburg, for white teachers; and the Virginia Normal and Industrial Institute, at Petersburg, for Negro teachers. William and Mary College, recently organized on the coeducational basis, has given the first two years work of a four-year course. The other two institutions have been giving home economics instruction for several years. The Harrisonburg Normal School maintains a four-year course and has a well-equipped practice house, while good practice teaching is offered in the Harrisonburg city and near-by rural schools.

In the Armstrong High School, at Richmond, the largest number of the 370 Negro women enrolled in evening classes were found in the home-nursing courses, where practical experience was a prominent feature of the work. Cooperation with Richmond physicians enables the school to send its students out on actual cases under direction of a doctor. These periods of practical work were not counted as absences but as a part of the training course. At completion of a case the physician gives a certificate to the nurse. In this method of cooperating theory and practice the student had a splendid opportunity of testing her knowledge by practical application.

#### TRADE AND INDUSTRIAL EDUCATION.

Roanoke, Portsmouth, and Norfolk for the first time have responded to the privileges offered by the State board in the inauguration of programs of industrial education. The city of Richmond has continued its program of previous years with slight modifications. This city anticipates providing a full-time director for the ensuing year. A special feature of the part-time work is to be noted in the inauguration of apprenticeship courses by the Portsmouth city board in connection with the United States navy yard. Other types in the part-time field are general continuation courses in the cotton mills of Danville and courses in citizenship and retail selling at Richmond. The Bedford city high school has maintained a general industrial course centered around the building trades. Sixteen evening courses in four cities have been approved, and three cities with six centers have conducted part-time courses. Eight unit trade courses have been in operation in four cities. In all types of instruction there were a total of 30, as compared with 14 of the previous year. The school board of Richmond has been charged with the training of shop teachers and has had a full-time instructor trainer engaged in this work during the year. Virginia Polytechnic Institute, designated as the institution for training related-subjects teachers, has employed a full-time instructor preparatory to the organization of the work for the ensuing year. The Norfolk school board

has been charged by the State board with the training of such teachers as were needed for its local schools. The Virginia Normal and Industrial College has had similar courses in operation for the training of teachers of the Negro race.

#### WASHINGTON.

Members of State board: Josephine Corliss Preston, State superintendent of public instruction; Henry Suzallo, president of State university; E. C. Holland, president of State College; George H. Black, president of State normal school; William F. Geiger, city superintendent; H. M. Hart, high school superintendent; Georgian Donald, representing county superintendents of schools.

Executive officer: Josephine Corliss Preston, State superintendent of public instruction, Olympia.

State director of vocational education: W. G. Hummel.

State supervisor of agricultural education: H. M. Skidmore.

State supervisor of home economics education: Dorothy Shank.

State supervisor of trade and industrial education: George H. Jensen.

#### AGRICULTURAL EDUCATION.

The State board for vocational education and the Washington College, the teacher-training institution, employed jointly a State supervisor of agriculture up to September 15, 1919, when the State college employed a full-time teacher trainer, and the State board employed a full-time State supervisor. The latter's duties included, among other things, 89 visits to schools, 2 State conferences of teachers, and the perfecting of office records for supervisory purposes. A bulletin on the organization of high-school courses in agriculture was prepared by the director.

Nineteen schools, an increase of approximately 46 per cent over last year, were approved for Federal aid and enrolled 308 pupils in vocational work. The total income from directed or supervised practice in agriculture in 1918-19 was \$67,861.70. These figures are rather significant in that the total income from directed or supervised practice in agriculture is greater than the sum of the amounts spent in the State for agricultural education by the Federal Board, the local boards, and the State board combined. It is also more than five times as much as the State legislature appropriated for vocational education for the year. All this is in spite of the fact that stress is not laid upon financial gain but rather upon educational attainment.

The training of teachers in vocational agriculture in Washington has been conducted by the State college. A full-time professor of agricultural education has been put in charge, who gives all instruction in special methods and supervised practice teaching. The en-

rollment in this department was 34, in addition to a rather large enrollment in a special methods class given in the summer school. Practice teaching was provided in the city schools and in the elementary science department of the State college.

#### HOME ECONOMICS EDUCATION.

Up to April 1, the supervision of home economics was carried on by two persons—one loaned from the State university, and one from the State college. At that time a full-time supervisor was appointed.

The 7 all-day schools reimbursed—5 departments in high schools and 2 departments in junior high schools—show an increase of 5 schools over last year's report. The total enrollment was 220. Two part-time classes enrolled 36 students, while 1 evening center, with 3 classes, enrolled 32 students.

The State university and the State agricultural college have been designated to train vocational teachers of home economics. At the university there were 19 enrolled in the vocational course and at the State college 18. Plans are being made by the State college to train teachers for part-time and evening schools at a center in Spokane.

#### TRADE AND INDUSTRIAL EDUCATION.

During the past year the teacher trainer in industrial education has been giving approximately one-half of his time to assisting the State director in supervising the trade and industrial work. The teacher-training work being given two days a week—namely, Mondays and Wednesdays—has made it difficult for either of these phases of the work, teacher training or supervision, to be carried on unhampered. A different arrangement will be made for the coming year.

During the past year 4 cities organized 12 all-day trade or industrial classes, with an enrollment of 154 students, and 1 part-time trade-extension class for printers' apprentices, with 6 students, and 5 cities organized 18 evening trade and industrial classes, with an attendance of 430 students, and 7 part-time general continuation classes, with an attendance of 92 students, as compared with 11 evening classes, with an enrollment of 871 students (this number includes several special war training classes), 5 all-day classes, with an enrollment of 125 students, and two part-time classes, with an enrollment of 32 students, for the preceding year.

Teacher-training work in trades and industries has been carried on by the University of Washington in cooperation with the State board for vocational education. Courses in methods, trade analysis, and practice teaching have been given evenings throughout the year.

Courses in methods, trade analysis, and part-time work were given during the summer session. There has been a total enrollment

of 53 students during the past year, as compared with an enrollment of 48 for the previous year. The practice teaching work has been given in the high schools, where students have had charge of a portion of the regular trade and industrial work given in the evening.

#### WEST VIRGINIA.

Members of State board: M. P. Shawkey, State superintendent of schools; George S. Laidley, city superintendent; E. W. Ogleboy, farmer and manufacturer; W. C. Cook, county superintendent; L. W. Burns, city superintendent; H. M. Gove, business man; T. N. Syeafoose, lawyer.

Executive officer: J. F. Marsh, State director of vocational education, Charleston.

State supervisor of trade and industries: B. F. Leland.

State supervisor of agriculture: C. H. Winkler; assistants, R. C. Rouzer and H. B. Allen.

State supervisor of home economics: Rachel H. Colwell.

State supervisor of mining education: A. C. Callen.

#### AGRICULTURAL EDUCATION.

Provisions for supervising agricultural education in the State continued practically as it was for the previous year. The supervisor, with his assistants, made 64 visits to vocational departments and held one State and five group conferences with teachers. A vocational department of agriculture was organized in Morgantown high school as a center for practice teaching. Two bulletins have been published during the year, besides a monthly news letter.

Thirty-four schools, an increase of approximately 36 per cent over last year, were approved for Federal aid and enrolled 650 pupils in vocational work. The total income from directed or supervised practice in agriculture in 1918-19 was \$1,137.40.

The teacher-training department at the University of West Virginia enrolled 20 students. A six weeks' summer school was held, with an enrollment of 14.

#### HOME ECONOMICS EDUCATION.

In 1919-20 a member of the faculty of the University of West Virginia was loaned on part time to the State vocational board for supervision of work in home economics education. In 1920-21 this policy will be continued, but provision made for more time to be spent in the field.

In 1919-20 two all-day departments in home economics were approved and five evening centers, with a total enrollment of 207. Night classes for factory girls at Wheeling were very successful in reaching the individual girls.

The University of West Virginia, Morgantown, is designated for the training of teachers in home economics, and for 1920-21 West Virginia Institute has also been designated as a teacher-training institution for Negroes.

#### TRADE AND INDUSTRIAL EDUCATION.

Evening schools were approved this year in five cities of the State. No part-time work or full-time day trade schools were organized.

#### WISCONSIN.

Members of State board: E. W. Schultz, manufacturer; R. S. Cooper, manufacturer; E. J. Kearney, manufacturer; George F. Comings, farmer; Miles L. Hineman, farmer; F. W. Ploetz, farmer; J. H. McQuaid, employee; Oliver Ellsworth, employee; A. W. McTaggart, employee; C. P. Cary, State superintendent of public instruction, ex officio; Thomas F. Konop, member of State industrial commission, ex officio.

Executive officer: John Callahan, Madison.

State director of vocational education: John Callahan, Madison.

State supervisor of vocational agricultural education: G. W. Gehrand.

State supervisors of trade and industrial education: W. F. Faulkes, E. E. Gunn, jr., A. R. Graham.

State supervisor of vocational home economics education: Margaret Johnson.

#### PROVISIONS FOR COOPERATION.

The Federal act was accepted by State statute in 1917. The State board of vocational education was designated by the act of acceptance as the State board for vocational education. By legislation enacted prior to the Federal act State funds are available for the support of schools and classes entitled to receive Federal moneys. This appropriation, as fixed at the last session of the legislature, is \$255,000 per year. Of this amount \$30,000 is for office administration and supervision, \$185,000 for State aid to vocational schools, \$25,000 for part-time instruction in agriculture, and \$15,000 for university and other scholarships, as the State board may direct. Wisconsin has had a compulsory part-time school law since 1911. This act has been amended at various times by the State legislature. At present all children between 14 and 17 years of age not attending the regular schools are required to attend vocational schools for not less than eight hours per week for at least eight months a year. The statutes also provide for the compulsory attendance of indentured apprentices for the first two years of their apprenticeship. During the year 1919-20 the number of cities having vocational schools increased



from 32 to 43, and organizations are being perfected in a number of other cities which will bring the number up to 50 or more during the year 1920-21. Under a recent act of the legislature, between 40 and 50 boys and girls were encouraged to return to school full time by means of a scholarship fund. Seventeen persons were selected from the trades during the year and placed in training at Stout Institute, Menomonie, Wis. These people are being given a two-year course and will be placed in the vocational schools as teachers upon completion of their courses.

#### AGRICULTURAL EDUCATION.

The State board employed a full-time supervisor of agriculture, who made 103 visits to schools; held 2 State, 4 sectional, and 4 county conferences of teachers; and prepared circular letters and blank report forms for teachers.

During the year 6 county schools of agriculture and 20 high schools, with an enrollment of 726 pupils, were approved for Federal aid. Eleven other high schools applied for aid, but the limited funds available did not permit the recognition of additional schools. Successful part-time agricultural instruction was given in 4 of the county schools of agriculture.

Teacher-training work was done at the University of Wisconsin, with an enrollment of 16 students. The supervised practice teaching was done in the University High School.

#### HOME ECONOMICS EDUCATION.

A State supervisor of home economics, on full time, was employed in 1919-20. At the present time there are 34 part-time home economics schools, 36 evening centers, and 6 all-day schools. These schools were approved, but Federal funds were not used.

A few trade extension classes for nurses and housemaids have been organized. The evening school courses are planned on the short-unit basis, with the idea of reaching the needs of all women.

Appleton has very fine up-to-date rooms and equipment for girls' work in the new vocational school, and the Marshfield Vocational School has fine housing and new equipment with the Junior High School. The Madison Vocational School will move into very complete new quarters next year. The Milwaukee General Continuation School has completed the boys' unit of its wonderful new building, and when the girls' part is finished the school will be second to none.

The University of Wisconsin has been approved for the training of teachers of home economics. The practice teaching in the university is done in the Madison Vocational School and in the Madison and University High Schools. The students also have home-making experience in the practice house of the university.

## TRADE AND INDUSTRIAL EDUCATION.

The State of Wisconsin has had a system of industrial education in operation for a number of years, and employs three supervisors for trade and industrial work. The industries of the State are exceedingly varied. They include iron and steel, foundry and machine shop, leather-work products, sheet-metal work, paper manufacturing, woodworking and furniture, automobile, motorcycle, and gas-engine manufacture, and shipbuilding. Women's and girls' trades are largely represented in Milwaukee, especially in the knitting and hosiery mills. The industries of the State are chiefly located in cities of 25,000 to 50,000, although many towns of less than 25,000 are important manufacturing centers. In this respect southern Wisconsin resembles Ohio. Since the State has already a well-defined system of vocational training, the problem is not one so much concerned with promotion as with adequate supervision. During the present year 36 evening centers and part-time centers and 3 all-day schools were approved for Federal aid. It is to be noted that in 43 cities of the State supervisors for industrial education are employed. Stout Institute, at Menomonie, is designated to train instructors for trade and industrial subjects. In addition, some extension courses have been carried on. This training includes both shop and related subject instructors.

## WYOMING.

Members of State board: James Morgan, publisher; Mrs. Katherine Morton, State superintendent of public instruction; J. J. Early, city school superintendent; P. J. Quealy, mine owner; C. S. Parks, banker; Mrs. Charles Stone, housewife; Earl E. Hanway, publisher.

Executive officer: James R. Coxen, Laramie.

State director of vocational education: James R. Coxen.

State supervisor of trade and industrial education: James R. Coxen.

State supervisor of agricultural education: L. R. Davies.

State supervisor of home economics education: Miss Bess Chappell.

## AGRICULTURAL EDUCATION.

Some of the work carried on by the part-time State supervisor of agriculture included 28 visits to high schools in the State, of which 19 are credited to improvement of teachers in service and 9 to supervision; 1 general conference was held; and Vocational Education Bulletin No. 1, "Agricultural Education Under the Smith-Hughes Act," was prepared. Several report forms and blanks were prepared for supervisory purposes. Items concerning vocational agriculture were published in the Wyoming Bulletin of Education, issued monthly by the State department of education.

Five schools were approved for Federal aid and enrolled 107 pupils in vocational work. The total income from directed or supervised practice in agriculture in 1918-19 was \$4,382.26.

Two-thirds of the supervisor's time was devoted to teacher training at the State university. Seven teachers in the State received special assistance from the teacher-training department through individual conferences, correspondence work, and personal letters.

The outlook for development of vocational agricultural instruction in the schools is assuring. Ten requests for agricultural work are now filed, pending an increase in funds.

#### HOME ECONOMICS EDUCATION.

A member of the teacher-training staff of the State University was loaned for one-third of her time for supervision of home economics. This amount of time was not sufficient, because of the promotional work to be done and the distances to be covered. The whole vocational program of the State is handicapped because of lack of State funds.

There were 2 all-day vocational schools, both departments in high schools, with an enrollment of 54 students. The teachers of these schools were employed for 12 months. Four evening-school centers, with 9 classes and 16 teachers, enrolled 298 women.

The training of vocational teachers of home economics was done at the State University. There were 8 students enrolled in the vocational course.

#### TRADE AND INDUSTRIAL EDUCATION.

One general industrial school, started last year, was continued and one new all-day school was started. The latter was at Rock Springs, where a two-year course in mine-electrical work was introduced. The local need for mine electricians fully justifies the establishment of this course. The need for unit trade courses in other Wyoming towns is very limited, although there is a possibility of a course for oil-refinery chemists in the schools at Laramie and Casper.

Evening classes in mining work were planned for a number of the mining towns, but the miners' strike interfered until after the holidays. Even then a number of the classes were not started. The classes were successful in most places, although hampered by a lack of books and pamphlets for class use.

The training of teachers was done entirely by extension work, since there were no candidates for training at the University of Wyoming. The plant and equipment there is really inadequate for the training of shop teachers, and the need for such teachers will be very slight for a number of years. It is the plan of the State department of education to provide, after the current year, the extension teacher-training work from this office, thus relieving the university of this duty.

# PART III.

## STATISTICAL REPORT.

### TABULATIONS FROM STATE ANNUAL STATISTICAL AND FINANCIAL REPORTS TO THE FEDERAL BOARD FOR VOCATIONAL EDUCATION.

TABLE 1.—Number of vocational schools federally aided for years ended June 30, 1920, 1919, and 1918, and Federal reimbursement, 1920.

Type of school.	Number.					Percentage distribution.			Federal reimbursement, 1920.	
	1920	1919	1918	Increase 1920 over 1919.	Increase 1919 over 1918.	1920	1919	1918	Amount. <sup>1</sup>	Average per school.
	a	b	c	d	e	f	g	h	i	j
Total.....	3,155	2,039	1,741	1,116	298	100.0	100.0	100.0	\$1,750,060.42	\$551.69
Agricultural.....	1,375	863	609	512	254	43.6	42.3	34.9	899,896.31	647.19
Trade or industrial:										
Evening.....	435	325	300	110	23	13.8	15.9	17.2	106,036.44	243.76
Part time.....	124	83	( <sup>1</sup> )	41	.....	3.9	4.1	( <sup>1</sup> )	105,377.69	849.82
All day.....	199	167	168	32	+1	6.3	8.3	9.8	300,436.70	1,500.73
Home economics:										
Evening.....	193	127	123	66	4	6.1	6.2	7.1	25,595.93	132.62
Part time.....	45	27	( <sup>1</sup> )	18	.....	1.4	1.3	( <sup>1</sup> )	7,971.88	41.30
All day.....	462	309	200	153	109	14.6	15.1	11.4	124,819.90	270.17
Part-time continuation...	322	138	( <sup>1</sup> )	184	.....	10.2	6.7	( <sup>1</sup> )	189,035.48	589.86
Total, part time <sup>2</sup> .....	401	248	341	243	493	15.6	12.1	19.6	303,235.05	617.69

<sup>1</sup> Not separately reported for 1918.

<sup>2</sup> Includes all types of part-time schools shown separately for 1919 and 1920.

<sup>3</sup> Includes illegal overexpenditures.

<sup>4</sup> Decrease.

## ANNUAL REPORT FEDERAL BOARD FOR VOCATIONAL EDUCATION. 191

TABLE 2.—Vocational teachers in schools federally aided for the years ended June 30, 1920, 1919, and 1918.

Type of school.	Both sexes.			Male.			Female.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i
Number.									
Total.....	7,675	9,252	5,237	4,990	1,103	3,236	2,679	2,119	2,021
Agricultural.....	1,570	1,201	895	1,568	1,200	1,995	2	1	( <sup>1</sup> )
Trade or industrial:									
Evening.....	1,780	1,052	1,397	1,712	1,583	1,200	68	69	197
Part time.....	350	292	( <sup>2</sup> )	259	226	( <sup>2</sup> )	97	66	( <sup>2</sup> )
All day.....	1,040	1,058	1,052	883	859	762	163	199	290
Home economics:									
Evening.....	789	758	688	1	1	2	785	757	686
Part time.....	137	71	( <sup>2</sup> )	4	1	( <sup>2</sup> )	133	70	( <sup>2</sup> )
All day.....	714	694	398	11	24	10	703	580	388
Part-time continuation.....	1,286	616	( <sup>2</sup> )	558	209	( <sup>2</sup> )	728	407	( <sup>2</sup> )
Total, part time.....	1,779	979	827	821	436	367	958	543	199
Percentage distribution by type of school.									
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agricultural.....	20.4	12.2	17.0	31.5	29.3	27.7	0.1	.....	( <sup>1</sup> )
Trade or industrial:									
Evening.....	23.2	20.4	26.6	34.2	38.5	37.2	2.5	3.2	9.8
Part time.....	4.6	4.6	( <sup>2</sup> )	5.2	5.5	( <sup>2</sup> )	3.6	3.1	( <sup>2</sup> )
All day.....	13.6	16.9	19.9	17.7	20.9	23.5	6.1	9.2	11.3
Home economics:									
Evening.....	12.2	12.1	13.1	0.0	.....	0.1	29.3	35.3	33.9
Part time.....	1.8	1.3	( <sup>2</sup> )	0.0	.....	( <sup>2</sup> )	4.9	3.3	( <sup>2</sup> )
All day.....	9.3	9.6	7.6	0.2	0.6	0.3	26.2	27.0	19.2
Part-time continuation.....	16.7	6.6	( <sup>2</sup> )	11.2	5.1	( <sup>2</sup> )	27.2	18.9	( <sup>2</sup> )
Total, part time.....	23.2	15.3	15.7	16.4	10.6	11.3	35.8	25.3	22.8
Percentage distribution by sex.									
Total.....	100.0	100.0	100.0	65.2	91.7	61.6	34.8	34.3	38.4
Agricultural.....	100.0	100.0	100.0	99.9	99.9	100.0	0.1	0.0	( <sup>1</sup> )
Trade or industrial:									
Evening.....	100.0	100.0	100.0	96.2	95.2	95.9	3.8	4.8	11.1
Part time.....	100.0	100.0	( <sup>2</sup> )	72.8	77.4	( <sup>2</sup> )	27.3	22.6	( <sup>2</sup> )
All day.....	100.0	100.0	100.0	84.3	81.1	72.4	15.6	18.0	27.6
Home economics:									
Evening.....	100.0	100.0	100.0	0.0	.....	0.3	99.9	100.0	99.7
Part time.....	100.0	100.0	( <sup>2</sup> )	2.9	.....	( <sup>2</sup> )	97.1	100.0	( <sup>2</sup> )
All day.....	100.0	100.0	100.0	1.5	1.0	2.5	98.5	90.0	97.5
Part-time continuation.....	100.0	100.0	( <sup>2</sup> )	43.4	33.9	( <sup>2</sup> )	56.6	66.1	( <sup>2</sup> )
Total, part time.....	100.0	100.0	100.0	46.2	41.5	44.3	53.8	55.5	55.7
Increase									
	1920 over 1919.	1919 over 1918.	1920 over 1919.	1919 over 1918.	1920 over 1919.	1919 over 1918.			
Total.....	1,423	995	893	867	530	128			
Agricultural.....	309	300	368	305	1	1			
Trade or industrial:									
Evening.....	128	255	129	383	* 1	* 128			
Part time.....	64	232	33	226	31	66			
All day.....	* 12	6	24	97	* 36	* 91			
Home economics:									
Evening.....	28	70	.....	* 1	28	71			
Part time.....	66	71	3	1	63	70			
All day.....	110	208	* 13	14	123	192			
Part-time continuation.....	670	616	349	269	321	407			
Total, part time.....	800	162	385	69	115	38			

Agricultural teachers were not returned by sex in 1918. \* Not separately reported for 1918. <sup>1</sup> Decrease.

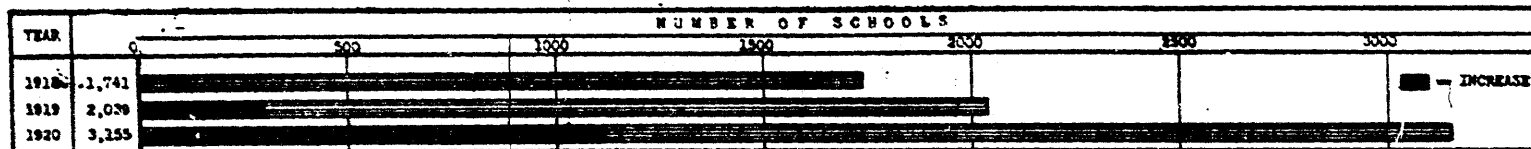


DIAGRAM I.—Schools federally aided: Years ended June 30, 1918, 1919, and 1920.

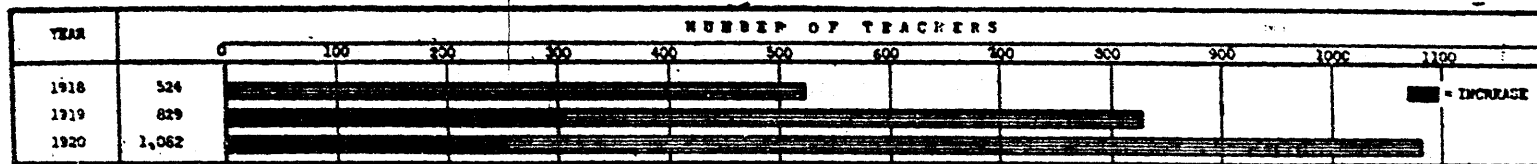


DIAGRAM II.—Teachers of teacher-training courses federally aided: Years ended June 30, 1918, 1919, and 1920.

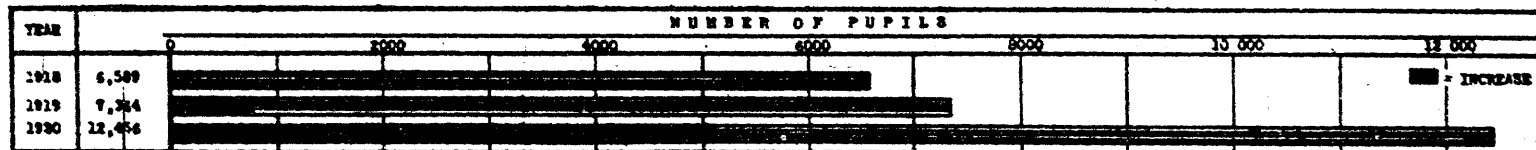


DIAGRAM III.—Enrollment in vocational teacher-training courses federally aided: Years ended June 30, 1918, 1919, and 1920.

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TABLE 3.—Vocational pupils in schools federally aided for the years ended June 30, 1920, 1919, and 1918.

Type of school.	Both sexes.			Male.			Female.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i
Number.									
Total.....	205,143	194,895	164,186	103,313	118,911	100,757	101,830	74,544	62,941
Agricultural.....	31,301	19,833	15,543	20,351	16,959	13,901	1,950	1,534	1,285
Trade or industrial:									
Evening.....	48,354	43,485	46,333	46,630	42,094	39,590	1,424	1,391	6,708
Part time.....	17,244	22,616	( <sup>3</sup> )	11,799	17,276	( <sup>3</sup> )	5,445	5,340	( <sup>4</sup> )
All day.....	21,224	18,664	18,563	17,444	15,111	14,642	33,780	3,533	3,883
Home economics:									
Evening.....	24,768	22,691	22,360	5	.....	4	24,763	22,691	22,356
Part time.....	7,733	4,278	( <sup>3</sup> )	.....	.....	( <sup>3</sup> )	7,733	4,278	( <sup>3</sup> )
All day.....	16,437	12,445	8,439	.....	147	25	16,437	12,298	8,308
Part-time continuation.....	98,082	50,793	( <sup>3</sup> )	57,784	27,324	( <sup>3</sup> )	40,298	23,459	( <sup>3</sup> )
Total, part time.....	123,059	77,677	53,005	69,583	44,600	32,605	53,476	33,077	20,400
Percentage distribution, by type of school.									
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agricultural.....	11.8	10.2	9.4	18.0	14.3	13.9	1.9	2.0	2.0
Trade or industrial:									
Evening.....	18.2	22.3	28.2	28.7	35.4	39.0	1.4	1.9	10.6
Part time.....	6.5	11.6	( <sup>3</sup> )	7.2	14.5	( <sup>3</sup> )	5.3	7.2	( <sup>3</sup> )
All day.....	8.0	9.6	11.3	10.6	12.7	14.6	3.7	4.8	6.2
Home economics:									
Evening.....	9.3	11.6	13.6	0.0	.....	0	24.3	30.4	35.5
Part time.....	2.9	2.2	( <sup>3</sup> )	0.0	.....	( <sup>3</sup> )	7.6	5.7	( <sup>3</sup> )
All day.....	6.2	6.4	5.1	0.0	0.1	0.0	16.1	16.5	13.2
Part-time continuation.....	37.0	26.1	( <sup>3</sup> )	35.4	23.0	( <sup>3</sup> )	39.6	31.5	( <sup>3</sup> )
Total, part time.....	46.4	39.9	32.3	42.6	37.5	32.4	52.5	44.4	32.5
Percentage distribution, by sex.									
Total.....	100.0	100.0	100.0	61.6	61.5	61.6	38.3	38.5	38.4
Agricultural.....	100.0	100.0	100.0	93.8	91.7	91.5	6.2	8.3	8.5
Trade or industrial:									
Evening.....	100.0	100.0	100.0	97.1	96.8	85.5	2.9	3.2	14.5
Part time.....	100.0	100.0	( <sup>3</sup> )	68.4	76.4	( <sup>3</sup> )	31.6	23.6	( <sup>3</sup> )
All day.....	100.0	100.0	100.0	82.2	81.0	79.0	17.8	19.0	21.0
Home economics:									
Evening.....	100.0	100.0	100.0	0.2	.....	0.0	99.8	99.0	99.9
Part time.....	100.0	100.0	( <sup>3</sup> )	0.0	.....	( <sup>3</sup> )	100.0	100.0	( <sup>3</sup> )
All day.....	100.0	100.0	100.0	0.0	1.2	0.3	100.0	98.8	99.7
Part-time continuation.....	100.0	100.0	( <sup>3</sup> )	59.0	53.8	( <sup>3</sup> )	41.0	46.2	( <sup>3</sup> )
Total, part time.....	100.00	100.00	100.00	56.6	57.4	61.5	43.4	42.6	38.5
Increase.									
Total.....	1920 over 1919.	1919 over 1918.	.....	1920 over 1919.	1919 over 1918.	.....	1920 over 1919.	1919 over 1918.	.....
Total.....	70,248	30,712	.....	44,042	18,164	.....	27,280	11,603	.....
Agricultural.....	11,368	4,480	.....	12,392	3,058	.....	416	248	.....
Trade or industrial:									
Evening.....	4,869	2,803	.....	4,836	2,514	.....	33	5,317	.....
Part time.....	5,372	.....	.....	5,477	.....	.....	105	.....	.....
All day.....	2,560	139	.....	2,333	460	.....	227	330	.....
Home economics:									
Evening.....	2,077	331	.....	5	44	.....	2,072	335	.....
Part time.....	3,455	.....	.....	.....	.....	.....	3,455	.....	.....
All day.....	3,992	4,112	.....	4,147	122	.....	4,139	3,990	.....
Part-time continuation.....	47,299	.....	.....	30,460	.....	.....	16,839	.....	.....
Total, part time.....	45,382	24,072	.....	24,983	11,995	.....	20,399	12,677	.....

<sup>1</sup> Includes 1,440 pupils in agricultural schools not classified by sex.<sup>2</sup> Includes 483 pupils not classified by sex—i. e., in agricultural schools, 266; in trade or industrial evening, 45; in trade or industrial all day, 68; and in home economics all day, 106.<sup>3</sup> Not separately reported for 1918.<sup>4</sup> Decrease.

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TABLE 4.—*Vocational teacher-training institutions, teachers, and pupils for years ended June 30, 1920, 1919, and 1918.*

Item.	Total of all types.	Agricultural.	Trade or industrial.	Home economics.	Not specified type.
	a	b	c	d	e
1920					
Number of institutions.....	1135	64	71	85	5
Number of teachers:					
Total.....	1,042	293	339	414	46
Male.....	657	279	320	42	16
Female.....	425	14	39	372	
Number of pupils:					
Total.....	12,456	2,348	6,112	3,652	344
Male.....	6,985	2,155	4,555	76	199
Female.....	5,471	193	1,557	3,576	145
1919					
Number of institutions.....	1141	60	68	78	11
Number of teachers:					
Total.....	829	222	219	366	22
Male.....	494	220	206	49	20
Female.....	335	2	13	318	2
Number of pupils:					
Total.....	7,364	1,334	2,774	3,096	153
Male.....	3,998	1,289	2,484	114	111
Female.....	3,366	45	290	2,951	47
1918					
Number of institutions.....	194	40	45	60	
Number of teachers <sup>1</sup> .....	524	110	95	263	50
Number of pupils <sup>1</sup> .....	6,589	1,534	1,101	3,319	635
Increase 1920 over 1919.					
Number of institutions.....	29	4	3	7	26
Number of teachers:					
Total.....	253	71	140	48	26
Male.....	163	59	114	26	24
Female.....	90	12	26	54	22
Number of pupils:					
Total.....	5,092	1,014	3,338	554	196
Male.....	2,987	866	2,071	238	88
Female.....	2,105	148	1,267	592	98
Increase 1919 over 1918.					
Number of institutions.....	50	20	23	18	11
Number of teachers <sup>1</sup> .....	205	108	124	103	225
Number of pupils <sup>1</sup> .....	775	200	1,673	221	447

<sup>1</sup> Different institutions, some of which conduct teacher-training work in two or more fields.

<sup>2</sup> Decrease.

<sup>3</sup> Not reported by sex for 1918.



TABLE 5.—*Number of schools and of teacher-training institutions applying for Federal reimbursement, approved and not approved by State boards, for years ended June 30, 1920, 1919, and 1918.*

Type of school or institution.	Total.			Approved by State boards.					Not approved by State boards.		
				Number.			Increase.				
	1919	1920	1918	1920	1919	1918	1920 over 1919.	1919 over 1918.	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k
VOCATIONAL SCHOOLS.											
Total.....	3,281	1,931	1,810	2,773	1,780	1,415	984	374	354	142	395
Agricultural.....	1,199	754	746	1,030	694	569	336	125	117	60	177
Trade or industrial:											
Evening.....	496	385	276	438	369	260	69	109	35	16	16
Part time.....	143	85	( <sup>2</sup> )	131	78	.....	53	.....	12	7	( <sup>2</sup> )
All day.....	.....	155	160	195	135	122	60	13	16	20	34
Home economics:	223										
Evening.....	313	103	140	235	96	95	139	1	49	7	45
Part time.....	163	27	( <sup>2</sup> )	29	25	.....	4	.....	34	2	( <sup>2</sup> )
All day.....	552	305	320	454	276	209	178	67	79	29	111
Part-time continuation.....	1292	117	( <sup>2</sup> )	261	116	.....	145	.....	12	1	( <sup>2</sup> )
Total part time.....	498	229	168	421	219	160	202	59	58	10	8
TEACHER-TRAINING INSTITUTIONS.											
Total.....	177	126	89	165	123	83	42	40	12	3	6

<sup>1</sup> Includes 151 not separately reported as approved or not approved. Agricultural, 52; trade or industrial, evening, 23; trade and industrial, all-day, 12; home economics, evening, 29; home economics, all-day, 19; part-time continuation, 19.

<sup>2</sup> Not separately reported for 1918.

TABLE 6.—*State directors and supervisors, for years ended June 30, 1920, 1919, and 1918.*

Item.	1920	1919	1918	Increase.	
				1920 over 1919	1919 over 1918
	a	b	c	d	e
Number, total.....	217	182	139	35	43
Number giving to supervision:					
Full time.....	117	57	63	60	16
Part time.....	86	105	51	19	54
Time not specified.....	14	20	25	6	5
Number reimbursed in part out of Federal funds.....	180	105	54	75	51
Amount of salaries reimbursed or paid out of—					
Federal funds.....	\$161,228.80	\$81,120.78	\$40,842.28	\$80,108.02	\$40,278.50
State funds.....	272,857.55	164,054.96	140,611.12	108,802.69	23,443.74

<sup>1</sup> Decrease.

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TABLE 7.—Number of schools federally aided, by States, for years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			Agricultural.			Trade or industrial.			Home economics.			Part-time general continuation.	
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919 <sup>1</sup>
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
United States.....	3,155	2,039	1,741	1,375	863	609	758	575	809	700	463	323	322	138
REGION.														
I. North Atlantic.....	742	560	794	219	150	166	187	170	450	187	141	178	149	99
II. Southern.....	768	430	285	449	296	200	159	72	51	123	56	34	37	6
III. East Central.....	978	646	423	433	261	159	243	202	195	198	156	69	106	27
IV. West Central.....	305	178	92	153	70	45	76	61	21	68	40	26	8	1
V. Pacific.....	362	225	147	121	80	39	93	70	92	126	70	16	22	5
I. NORTH ATLANTIC.														
Maine.....	31	23	27	15	9	8	5	6	7	11	8	12		
New Hampshire.....	20	21	26	14	12	17	6	9	8			1		
Vermont.....	12	10	24	2	2	2	4	6	6	6	2	16		
Massachusetts.....	86	83	83	17	17	17	41	35	38	27	30	28	1	1
Rhode Island.....	11	9	8	2			8	9	8				1	
Connecticut.....	11	27	28	3	3	3	8	19	19		5	6		
New York.....	92	72	114	69	52	54	18	15	1				5	5
New Jersey.....	75	42	71	15	7	15	30	18	24	29	16	32	1	1
Pennsylvania.....	329	236	393	50	38	42	52	36	273	86	70	78	141	92
Delaware.....	40	16	11	16	5	3	6	6	4	18	5	4		
Maryland.....	35	21	9	16	5	5	9	11	3	10	5	1		
II. SOUTHERN.														
Virginia.....	70	53	26	47	36	18	11	5	4	12	10	4		2
North Carolina.....	83	36	19	42	30	14	32	3	4	7	3	1	2	
South Carolina.....	78	40	14	42	25	13	29	14	1	7	1			
Georgia.....	87	51	49	40	27	23	15	11	16	20	11	10	12	2
Florida.....	34	16	13	16	10	8	9	1	1	5	5	4	4	
Tennessee.....	49	29	23	31	21	22	5	5	1	8	3		5	
Alabama.....	86	48	23	40	27	13	31	18	9	9	3	1	6	
Mississippi.....	45	42	34	36	36	30	2	1	1	6	4	3	1	1
Arkansas.....	58	20	15	47	17	11	5	2	2	6	1	2		
Louisiana.....	36	28	21	28	21	16	1	1	1	7	6	4		
Texas.....	142	67	48	80	46	32	19	11	11	36	9	5	7	1
III. EAST CENTRAL.														
West Virginia.....	74	54	22	35	20	11	32	30	7	7	4	4		
Ohio.....	154	131	61	59	40	18	55	55	30	36	35	13	4	1
Kentucky.....	53	48	21	33	25	8	7	6	4	12	17	9	1	
Michigan.....	101	72	60	57	49	43	21	13	8	23	10	9		
Indiana.....	113	90	88	41	32	35	28	27	37	28	23	16	10	8
Wisconsin.....	62	36	26	26	13	8		10	12		8	6	36	5
Illinois.....	126	102	45	54	42	15	36	21	21	26	29	6	10	10
Minnesota.....	88	53	68	40	23	12	29	18	50	9	9	6	10	3
Iowa.....	97	20	10	43	10	6	21	6	4	17	4		16	
Missouri.....	110	40	22	45	7	3	14	16	19	38	17		13	
IV. WEST CENTRAL.														
North Dakota.....	25	19	14	10	8	7	5	1	3	10	10	4		
South Dakota.....	17	11	1	11	9					3	2	1	3	
Nebraska.....	37	13	7	30	8	2	3	3	4	4	2	1		
Kansas.....	52	31	8	32	16	6	13	11	2	7	4			
Oklahoma.....	47	24	26	30	10	13	5	10		12	4	13		
Montana.....	25	17	13	9	9	9	9	4	1	4	4	3	3	
Wyoming.....	17	10	10	5	5	4	7	2	4	5	3	2		
Colorado.....	60	36	11	17	6	4	28	25	5	14	4	2	1	1
New Mexico.....	25	17	2	9	5		6	5	2	9	7		1	
V. PACIFIC.														
Idaho.....	39	13	6	17	7	4	15	4	2	7	2			
Utah.....	65	59	28	26	24	15	4	4	7	33	30	6	2	1
Arizona.....	69	31	14	15	7	4	15	10	5	36	12	5	3	2
Nevada.....	17	11	11	5	3	1	6	6	10	3	2		3	
Washington.....	47	29	18	19	12	5	11	13	10	10	2	3	7	2
Oregon.....	27	10	6	7	5		9	4	5	4	1	1	7	
California.....	98	72	64	32	22	10	33	29	53	33	21	1		

<sup>1</sup> Not separately reported in schedule for 1918.

TABLE 8.—Number of trade or industrial schools federally aided, by States, for years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			All-day.			Evening.			Part-time.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918 <sup>1</sup>
	a	b	c	d	e	f	g	h	i	j	k	l
United States.....	758	575	809	199	167	163	435	325	300	124	83	341
REGION.												
I. North Atlantic.....	187	170	450	80	66	71	79	82	104	28	22	275
II. Southern.....	159	72	51	26	18	17	115	52	24	18	2	10
III. East Central.....	243	202	195	38	35	33	159	120	125	46	47	37
IV. West Central.....	76	61	21	19	11	6	48	48	12	9	2	3
V. Pacific.....	93	70	92	36	37	41	34	23	35	23	10	16
I. NORTH ATLANTIC.												
Maine.....	5	6	7	2	1	4	2	5	3	1		
New Hampshire.....	6	9	8	6	6	4					3	4
Vermont.....	4	6	6				1	3	5	3	3	1
Massachusetts.....	41	35	38	16	16	16	20	19	20	5		2
Rhode Island.....	8	9	8	1			4	6	6	3	3	2
Connecticut.....	8	19	19	2	7	7	1	7	7	5	5	5
New York.....	18	15	60	18	15	15			10			35
New Jersey.....	30	18	24	12	8	11	16	10	7	2		6
Pennsylvania.....	52	36	273	22	12	14	25	19	39	5	5	220
Delaware.....	6	6	4				3	3	4	3	3	
Maryland.....	9	11	3	1	1		7	10	3	1		
II. SOUTHERN.												
Virginia.....	11	5	4	4	1	1	4	4	2	3		1
North Carolina.....	32	3	4				32	3	4			
South Carolina.....	20	14	1				29	14	1			
Georgia.....	15	11	16	4	4	6	10	7	5	1		5
Florida.....	9	1	1				4	1	1	5		
Tennessee.....	5	5	1	2	1	1	3	4				
Alabama.....	31	18	9	4	5	2	20	11	4	7	2	3
Mississippi.....	2	1	1				1	1		1		1
Arkansas.....	5	2	2	3	1	1	1	1	1	1		
Louisiana.....	1	1	1	1	1	1						
Texas.....	10	11	11	8	5	5	11	6	6			
III. EAST CENTRAL.												
West Virginia.....	32	30	7				31	28	7	1	2	
Ohio.....	55	55	30	2	4	3	35	37	24	18	14	3
Kentucky.....	7	6	4	3	3	3	3	2	1	1	1	
Michigan.....	21	13	8	5	3	1	9	5	4	7	5	3
Indiana.....	28	27	37	10	9	3	18	13	24		5	10
Wisconsin.....		10	12		1	4		4			5	4
Illinois.....	36	21	24	2	4	1	30	10	14	4	7	9
Minnesota.....	29	18	50	7	5	13	14	8	35	8	5	2
Iowa.....	21	6	4	5	2	1	10	4	2	6		1
Missouri.....	14	16	19	4	4	4	9	9	10	1	3	5
IV. WEST CENTRAL.												
North Dakota.....	5	1	3	2		2	1	1	1	2		
South Dakota.....												
Nebraska.....	3	3	4		1			2	4	2		
Kansas.....	13	11	2	3	3		9	8	1	1		1
Oklahoma.....	5	10		4	1			9		1		
Montana.....	9	4	1	2	2	1	6	2				
Wyoming.....	7	2	4	2	1		5	1	3			1
Colorado.....	28	25	5	2	1	2	24	22	2	2	2	1
New Mexico.....	6	5	2	3	2	1	3	3	1			
V. PACIFIC.												
Idaho.....	15	4	2	1		2	7	1		7	3	
Utah.....	4	4	7	1	2	3	3	2	3			1
Arizona.....	15	10	5	6	5		9	5	5			
Nevada.....	6	6	10				5	6	10	1		
Washington.....	11	13	10	5	8	5	5	5	5	1		
Oregon.....	9	4	5	4	4	4	3		1	2		
California.....	33	29	53	19	18	27	2	4	11	12	7	15

<sup>1</sup> Includes part-time home economics and general continuation schools. Such schools were not separately reported on the schedule for 1918.

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TABLE 9.—Number of home economics schools federally aided, by States, for years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			All-day.			Evening.			Part-time.	
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919 <sup>1</sup>
	a	b	c	d	e	f	g	h	i	j	k
United States.....	700	463	323	462	309	200	193	127	123	45	27
REGION.											
I. North Atlantic.....	187	141	178	112	90	102	74	49	76	1	2
II. Southern.....	123	56	34	86	44	24	35	10	10	2	2
III. East Central.....	106	156	69	135	96	34	55	55	35	5	5
IV. West Central.....	68	40	26	53	33	25	12	6	1	3	1
V. Pacific.....	126	70	16	76	46	15	16	7	1	34	17
I. NORTH ATLANTIC.											
Maine.....	11	8	12	3	3	6	8	5	6		
New Hampshire.....			1			1					
Vermont.....	6	2	16	1	2	16	5				
Massachusetts.....	27	30	28	8	9	9	19	21	19		
Rhode Island.....											
Connecticut.....		5	6		3	3		2	3		
New York.....											
New Jersey.....	29	16	32	9	6	10	19	8	22	1	2
Pennsylvania.....	86	70	78	66	57	52	20	13	26		
Delaware.....	18	5	4	18	5	4					
Maryland.....	10	5	1	7	5	1	3				
II. SOUTHERN.											
Virginia.....	12	10	4	8	1		4	8	4		1
North Carolina.....	7	3	1	1	3	1	6				
South Carolina.....	7	1		6	1		1				
Georgia.....	20	11	10	10	11	7	10		3		
Florida.....	5	5	4	5	5	4					
Tennessee.....	8	3		3	1		3	1		2	1
Alabama.....	9	3	1	9	3	1					
Mississippi.....	6	4	3	4	4	3	2				
Arkansas.....	6	1	2	4	1	1	2		1		
Louisiana.....	7	6	4	7	6	4					
Texas.....	36	9	5	29	8	3	7	1	2		
III. EAST CENTRAL.											
West Virginia.....	7	4	4	2	1		5	3	4		
Ohio.....	36	35	13	23	21	7	12	14	6	1	
Kentucky.....	12	17	9	12	16	8		1	1		
Michigan.....	23	10	9	13	6	5	10	4	4		
Indiana.....	28	23	16	10	8	3	18	15	13		
Wisconsin.....		8	6		2	2		1	4		5
Illinois.....	26	29	6	25	20	3	1	9	3		
Minnesota.....	9	9	6	8	9	6				1	
Iowa.....	17	4		11	3		3	1		3	
Missouri.....	38	17		31	10		7	7			
IV. WEST CENTRAL.											
North Dakota.....	10	10	4	9	9	4	1	1			
South Dakota.....	3	2	1	3	2	1					
Nebraska.....	4	2	1	4	2	1					
Kansas.....	7	4		3	1		4	3			
Oklahoma.....	12	4	13	11	4	13				1	
Montana.....	4	4	3	4	4	3					
Wyoming.....	5	3	2	2	2	1	3		1		1
Colorado.....	14	4	2	10	4	2	2			2	
New Mexico.....	9	7		7	5		2	2			
V. PACIFIC.											
Idaho.....	7	2		5	2		2				
Utah.....	33	30	6	32	30	6	1				
Arizona.....	36	12	5	19	5	5	11	7		6	
Nevada.....	3	2		3	2						
Washington.....	10	2	3	7	2	3	1			2	
Oregon.....	4	1	1	2	1		1		1	1	
California.....	33	21	1	8	4	1				25	17

<sup>1</sup> Not separately reported on the schedule for 1918.

TABLE 10.—Number of teachers of vocational courses in schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Total			Agricultural schools.			Trade or industrial schools.			Home economics schools.			Part-time general continuation schools.	
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919 <sup>1</sup>
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
United States.....	7,675	6,252	5,257	1,570	1,201	895	3,182	3,002	3,276	1,637	1,433	1,086	1,286	616
REGION.														
I. North Atlantic.....	2,782	2,446	3,035	321	253	305	1,301	1,288	1,099	623	611	731	537	494
II. Southern.....	1,202	746	473	465	464	240	487	179	173	202	94	60	48	9
III. East Central.....	2,363	1,913	1,311	470	206	220	864	1,045	852	434	474	239	505	98
IV. West Central.....	544	397	161	174	90	62	239	185	78	110	116	21	21	6
V. Pacific.....	784	550	277	140	98	68	291	305	174	268	138	35	85	9
I. NORTH ATLANTIC.														
Maine.....	61	60	50	15	9	8	22	29	27	27	22	15		
New Hampshire.....	29	31	55	14	12	25	15	19	29			1		
Vermont.....	28	32	44	4	8	17	20	17	10	8	7	17		
Massachusetts.....	858	917	758	88	100	49	480	453	408	280	320	301	10	38
Rhode Island.....	49	45	20	5			43	45	29				1	
Connecticut.....		164	220	3	3	36	80	142	169	( <sup>2</sup> )	10	15	( <sup>2</sup> )	
New York.....	392	299	395	89	52	97	235	214	298				68	32
New Jersey.....	261	183	330	20	12	18	125	82	106	115	88	146	1	1
Pennsylvania.....	897	798	1,117	55	41	47	221	189	830	164	145	231	457	123
Delaware.....	51	43	22	12	5	3	25	33	15	14	5	4		
Maryland.....	66	75	15	16	5	5	35	65	9	15	5	1		
II. SOUTHERN.														
Virginia.....	140	78	56	51	36	25	57	14	17	32	25	14		3
North Carolina.....	129	39	20	39	30	14	69	5	4	19	4	2	2	
South Carolina.....	125	56	14	42	25	13	76	30	1	7	1			
Georgia.....	153	94	111	57	40	42	53	36	50	30	15	19	13	3
Florida.....	90	15	10	16	10	5	63		2	5	5	3	6	
Tennessee.....	88	41	19	37	24	10	26	23		20	14		5	
Alabama.....	100	56	67	40	27	13	44	26	53	9	3	1	7	
Mississippi.....	78	57	56	56	40	48	6	1	5	7	5	3	9	2
Arkansas.....	59	175	19	22	171	13	15	3	4	22	1	2		
Louisiana.....	52	28	38	28	21	16	16		16	8	7	6		
Texas.....	188	87	63	81	31	32	62	41	21	43	14	10	6	1
III. EAST CENTRAL.														
West Virginia.....	95	100	46	42	23	12	33	68	25	20	9	9		
Ohio.....	415	524	166	57	40	18	285	328	82	42	147	66	31	9
Kentucky.....	86	71	42	34	25	8	24	15	11	20	31	23	8	
Michigan.....	184	228	132	58	49	43	68	118	44	58	61	45		
Indiana.....	273	297	252	41	32	35	80	161	156	114	74	61	38	30
Wisconsin.....	271	157	166	39	34	10	( <sup>2</sup> )	72	139	( <sup>2</sup> )	20	17	232	25
Illinois.....	323	243	70	50	42	16	137	96	51	56	70	9	71	26
Minnesota.....	206	150	324	52	34	69	121	95	246	17	13	9	16	8
Iowa.....	203	22	42	43	10	6	43	8	36	40	4		77	
Missouri.....	307	121	65	45	7	3	73	84	62	67	30		22	
IV. WEST CENTRAL.														
North Dakota.....	50	86	22	16	14	10	21	2	6	13	70	6		
South Dakota.....	14	12	2	11	9					3	3	2		
Nebraska.....	42	23	19	30	8	2	8	13	16	4	2	1		
Kansas.....	93	55	13	36	16	6	39	20	7	18	10			
Oklahoma.....	71	54	32	36	15	14	18	30	18	17	9			
Montana.....	46	19	24	10	9	16	18	4	2	6	6	6	12	
Wyoming.....	39	12	20	6	7	9	14	2	7	19	3	4		
Colorado.....	156	118	23	18	7	5	109	101	16	21	4	2	3	6
New Mexico.....	33	18	6	11	5		12	4	6	9	9		1	
V. PACIFIC.														
Idaho.....	61	20	13	17	9	10	33	6	3	11	5			
Utah.....	179	83	36	26	24	17	56	9	8	54	48	11	43	2
Arizona.....	101	58	20	16	7	4	25	27	10	54	19	6	6	5
Nevada.....	17	11	12	5	3	1	6	6	11	3	2		3	
Washington.....	71	51	55	19	12	13	30	34	35	15	3	7	7	2
Oregon.....	84	12	18	11	5		28	5	13	19	2	5	26	
California.....	271	315	123	46	38	23	113	218	94	112	59	6		

<sup>1</sup> Not separately reported in 1918.<sup>2</sup> Included in part-time general continuation schools.

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TABLE 11.—*Number of teachers of vocational courses in agricultural schools federally aided, by States, for the year ended June 30, 1920.*

Region or State.	Total.			Full year (12 months).			School year only.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i
United States.....	1,570	1,201	895	1,460	941	686	110	260	209
REGION.									
I. North Atlantic.....	321	253	305	271	196	216	50	57	89
II. Southern.....	465	461	240	444	298	185	21	166	55
III. East Central.....	470	296	220	454	288	208	16	8	12
IV. West Central.....	174	90	62	160	80	38	8	10	24
V. Pacific.....	140	98	68	125	79	39	15	19	29
I. NORTH ATLANTIC.									
Maine.....	15	9	8	15	9	8			
New Hampshire.....	14	12	25	14	12	11			14
Vermont.....	4	8	17	4	8	12			5
Massachusetts.....	88	106	49	44	53	45	44	53	4
Rhode Island.....	5			5					
Connecticut.....	3	3	36	3	3	36			
New York.....	89	52	97	89	52	40			57
New Jersey.....	20	12	18	20	12	18			
Pennsylvania.....	55	41	47	50	37	38		4	9
Delaware.....	12	5	3	12	5	3	5		
Maryland.....	16	5	5	15	5	5	1		
II. SOUTHERN.									
Virginia.....	51	36	25	49	36	12	2		13
North Carolina.....	39	30	14	39	30	8			6
South Carolina.....	42	25	13	42	25				13
Georgia.....	57	40	42	57	35	34		5	8
Florida.....	16	10	5	16	9	5		1	
Tennessee.....	37	24	19	35	24	19	2		
Alabama.....	40	27	13	40	27	13			
Mississippi.....	56	49	48	43	41	34	13	8	14
Arkansas.....	22	171	13	22	20	12		151	1
Louisiana.....	28	21	16	28	21	16			
Texas.....	77	31	32	73	30	32	4	1	
III. EAST CENTRAL.									
West Virginia.....	42	23	12	37	16	11	5	7	1
Ohio.....	57	40	18	46	39	18	11	1	
Kentucky.....	34	25	8	34	25	8			
Michigan.....	58	49	43	58	49	43			
Indiana.....	41	32	35	41	32	35			
Wisconsin.....	39	34	10	39	34	5			5
Illinois.....	59	42	16	59	42	15			1
Minnesota.....	52	34	69	52	34	67			2
Iowa.....	43	10	6	43	10	6			
Missouri.....	45	7	3	45	7				3
IV. WEST CENTRAL.									
North Dakota.....	16	14	10	11	8	9	5	6	1
South Dakota.....	11	9		11	9				
Nebraska.....	30	8	2	30	8	2			
Kansas.....	36	16	6	35	16		1		6
Oklahoma.....	36	15	14	36	15	13			1
Montana.....	10	9	16	10	9	8			8
Wyoming.....	6	7	9	5	4	2	1	3	7
Colorado.....	18	7	5	17	6	4	1	1	1
New Mexico.....	11	5		11	5				
V. PACIFIC.									
Idaho.....	17	9	10	17	9	6			4
Utah.....	26	24	17	26	24	15			2
Arizona.....	16	7	4	16	7	4			
Nevada.....	5	3	1	3	3	1	2		
Washington.....	19	12	13	19	12	5			8
Oregon.....	11	5		7	5		4		
California.....	46	38	23	37	19	8	9	19	15

TABLE 12.—*Number of teachers of vocational courses in trade or industrial schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.*

Region or State.	Total.			All day.			Evening.			Part time.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918 <sup>1</sup>
	a	b	c	d	e	f	g	h	i	j	k	l
United States.....	3,182	3,002	3,276	1,086	1,058	1,052	1,740	1,652	1,397	356	292	827
REGION.												
I. North Atlantic.....	1,301	1,288	1,999	653	586	738	501	602	662	144	100	509
II. Southern.....	487	179	173	96	38	79	351	138	71	40	3	23
III. East Central.....	804	1,045	852	154	196	138	590	680	530	120	169	184
IV. West Central.....	239	185	78	55	25	12	158	156	62	26	4	4
V. Pacific.....	291	305	174	128	213	85	137	76	72	26	16	17
I. NORTH ATLANTIC.												
Maine.....	22	29	27	4	4	10	16	25	17	2		
New Hampshire.....	15	19	29	15	14	16					5	13
Vermont.....	20	17	10				3	11	6	17	6	4
Massachusetts.....	480	453	408	193	192	185	232	241	189	55	20	34
Rhode Island.....	43	45	29	8			11	25	19	24	20	10
Connecticut.....	80	142	169	39	65	73	26	63	87	15	14	9
New York.....	235	214	298	235	214	270		28				
New Jersey.....	125	82	166	78	28	61	39	49	96	8	5	9
Pennsylvania.....	221	189	839	76	64	123	132	112	196	13	13	520
Delaware.....	25	33	15				17	16	15	8	17	
Maryland.....	35	65	9	5	5		28	60	9	2		
II. SOUTHERN.												
Virginia.....	57	14	17	18	2	3	26	12	13	13		1
North Carolina.....	69	5	4				69	5	4			
South Carolina.....	76	30	1				76	30	1			
Georgia.....	53	36	50	13	8	11	38	28	28	2		11
Florida.....	63		2				57		2	6		
Tennessee.....	26	23		6			20	23				
Alabama.....	44	26	53	7	11	42	25	12	5	12	3	6
Mississippi.....	0	1	5				4	1		2		5
Arkansas.....	15	3	4	6	2	2	4	1	2	5		
Louisiana.....	16		16	16		16						
Texas.....	62	41	21	30	15	5	32	26	16			
III. EAST CENTRAL.												
West Virginia.....	33	68	25				29	66	25	4	2	
Ohio.....	285	328	82	5	15		241	274	52	39	39	30
Kentucky.....	24	15	11	11	8	9	11	5	2	2	2	
Michigan.....	68	118	44	16	17	8	29	69	30	23	32	6
Indiana.....	80	161	156	23	64	13	57	89	114		8	29
Wisconsin.....	(3)	72	139	(2)	5	16	(3)	31	45	(2)	36	78
Illinois.....	137	96	51	14	21	4	109	55	27	14	20	20
Minnesota.....	121	95	240	43	35	54	51	51	184	27	9	8
Iowa.....	43	8	30	15	4	17	22	4	18	6		1
Missouri.....	73	84	62	27	27	17	41	36	33	5	21	12
IV. WEST CENTRAL.												
North Dakota.....	21	2	6	9		4	3	2	2	9		
South Dakota.....												
Nebraska.....	8	13	16	6	7			6	16	2		
Kansas.....	39	29	7	7	5		31	24	6	1		1
Oklahoma.....	18	30	18	14	7			23	18	4		
Montana.....	18	4	2	4	2	2	13	2		1		
Wyoming.....	14	2	7	3	1		11	1	6			1
Colorado.....	109	101	16	5	2	4	95	95	10	9	4	2
New Mexico.....	12	4	6	7	1	2	5	3	4			
V. PACIFIC.												
Idaho.....	33	6	3	7		3	16	1		10	5	
Utah.....	56	9	8	5	3	3	51	6	4			1
Arizona.....	25	27	10	11	5		14	22	10			
Nevada.....	6	6	11				5	6	11	1		
Washington.....	30	34	35	11	15	13	18	19	22	1		
Oregon.....	28	5	13	9	5	8	17		5	2		
California.....	113	218	94	85	185	58	16	22	20	12	11	16

<sup>1</sup> Includes part-time home economics and general continuation schools. Such schools were not separately reported on the schedule for 1918.

<sup>2</sup> Included in part-time general continuation schools.

TABLE 13.—Number of teachers of vocational courses in home economics schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			All day.			Evening.			Part time.	
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919 <sup>1</sup>
	a	b	c	d	e	f	g	h	i	j	k
United States.....	1,637	1,433	1,086	714	604	398	786	758	688	137	71
REGION.											
I. North Atlantic.....	623	611	731	225	210	252	391	395	479	7	6
II. Southern.....	202	94	60	103	52	30	97	40	30	2	2
III. East Central.....	434	474	239	205	157	68	216	298	171	13	19
IV. West Central.....	110	116	21	66	103	18	41	12	3	3	1
V. Pacific.....	268	138	35	115	82	30	41	13	5	112	43
I. NORTH ATLANTIC.											
Maine.....	27	22	15	4	9		23	13	15		
New Hampshire.....			1			1					
Vermont.....	8	7	17	2	7	17	6				
Massachusetts.....	230	320	301	60	53	49	220	267	252		
Rhode Island.....											
Connecticut.....	( <sup>2</sup> )	19	15	( <sup>2</sup> )	9	7	( <sup>2</sup> )	10	8	( <sup>2</sup> )	
New York.....											
New Jersey.....	115	88	146	27	25	42	81	57	104	7	6
Pennsylvania.....	164	145	231	111	97	131	53	48	100		
Delaware.....	14	5	4	14	5	4					
Maryland.....	15	5	1	7	5	1	8				
II. SOUTHERN.											
Virginia.....	32	25	11	14	2		18	22	14	( <sup>3</sup> )	1
North Carolina.....	19	4	2	1	4	2	18				
South Carolina.....	7	1		6	1		1				
Georgia.....	30	15	19	14	15	11	16		8		
Florida.....	5	5	3	5	5	3					
Tennessee.....	20	14		6	3		12	10		2	1
Alabama.....	9	3	1	9	3	1					
Mississippi.....	7	5	3	4	5	3	3				
Arkansas.....	22	1	2	5	1	1	17		1		
Louisiana.....	8	7	6	8	7	6					
Texas.....	43	14	10	31	6	3	12	8	7		
III. EAST CENTRAL.											
West Virginia.....	20	9	9	2	1		18	8	9		
Ohio.....	42	147	64	25	21	7	16	126	59	1	
Kentucky.....	20	31	23	20	29	22		2	1		
Michigan.....	58	61	45	28	20	17	30	41	28		
Indiana.....	114	74	61	11	8	3	103	66	58		
Wisconsin.....	( <sup>3</sup> )	26	17	( <sup>2</sup> )	4	4	( <sup>3</sup> )	3	13	( <sup>3</sup> )	19
Illinois.....	56	79	9	55	49	6	1	30	3		
Minnesota.....	17	13	9	15	13	9				2	
Iowa.....	40	4		16	3		14	1		10	
Missouri.....	67	30		33	9		34	21			
IV. WEST CENTRAL.											
North Dakota.....	13	70	6	11	68	6	2	2			
South Dakota.....	3	3	2	3	3	2					
Nebraska.....	4	2	1	4	2	1					
Kansas.....	18	10		6	2		12	8			
Oklahoma.....	17	9		16	9					1	
Montana.....	6	6	6	6	6	6					
Wyoming.....	19	3	4	3	2	1	16		3		1
Colorado.....	21	4	2	10	4	2	9			2	
New Mexico.....	9	9		7	7		2	2			
V. PACIFIC.											
Idaho.....	11	5		8	5		3				
Utah.....	54	48	11	52	49	11	2				
Arizona.....	54	19	6	27	6	6	20	13		7	
Nevada.....	3	2		3	2						
Washington.....	15	3	7	11	3	7	2			2	
Oregon.....	19	2	5	3	2		14		5	2	43
California.....	112	59	6	11	16	6				104	

<sup>1</sup> Not separately reported on the schedule for 1918.<sup>2</sup> No report.<sup>3</sup> Included in part time general continuation schools.



TABLE 14.—Sex of teachers of vocational courses in schools federally aided, by States, for the year ended June 30, 1920.

Region or State.	Total.			Agricultural schools.				Trade or industrial schools.						Home economics schools.						Part-time general continuation schools.	
				Full year (12 months).		School year only.		All day.		Evening.		Part time.		All day.		Evening.		Part time.			
	Both sexes.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
United States.....	7,675	4,996	2,679	1,460	1	108	1	884	163	1,712	68	259	97	11	703	1	785	4	133	558	728
REGION.																					
I. North Atlantic.....	2,782	1,621	1,161	271	1	49		508	106	509	34	93	51		225		391		7	191	346
II. Southern.....	1,202	916	286	444		21		76	20	342	9	24	16		103		97		2	9	39
III. East Central.....	2,363	1,613	750	454		16		129	25	589	1	104	16		197	1	215		13	312	283
IV. West Central.....	544	413	131	166		8		54	1	154	4	19	7		64		41		3	10	11
V. Pacific.....	784	433	351	125		14	1	117	11	118	20	19	7	1	114		41	4	108	36	49
I. NORTH ATLANTIC.																					
Maine.....	64	37	27	15				4		16		2			4		23				
New Hampshire.....	29	29		14				15													
Vermont.....	32	13	19	4						1	2	8	9		2		6				
Massachusetts.....	558	465	393	44			44	139	54	211	21	21	34		60		220				4
Rhode Island.....	49	39	10	5				6	2	11		17	7						6		1
Connecticut.....	83	75	8	3				35	4	22	4	15									
New York.....	392	368	84	89				190	45												
New Jersey.....	261	142	119	20				38	1	76	2	8			27		81		7	29	39
Pennsylvania.....	897	427	470	50		5		76		127	5	13			111		53			156	301
Delaware.....	51	38	14	12						17		8			14						
Maryland.....	66	49	17	15	1			5		28		1	1		7		8				
II. SOUTHERN.																					
Virginia.....	140	100	40	49		2		17	1	26		6	7		14		18				
North Carolina.....	129	107	22	39						68	1				1		18				2
South Carolina.....	125	118	7	42						76					6		1				
Georgia.....	153	103	50	57					11	2	34	4			14		16			1	12
Florida.....	90	81	9	16						57					5					4	2
Tennessee.....	88	65	23	35		2		6		20			2		6		12		2	2	3
Alabama.....	100	84	16	40				7		25		12			9						7
Mississippi.....	78	61	17	43		13				4			2		4		3		1		8
Arkansas.....	59	33	26	22				5	1	4		2	3		5		17				
Louisiana.....	52	28	24	28					16						8						
Texas.....	188	136	52	73		4		30		28	4				31		12		1		5

TABLE 14.—Sex of teachers of vocational courses in schools federally aided, by States, for the year ended June 30, 1920—Continued.

Region or State.	Total.			Agricultural schools.				Trade or industrial schools.						Home economics schools.						Part-time general continuation schools.	
				Full year (12 months).		School year only.		All day.		Evening.		Part time.		All day.		Evening.		Part time.			
	Both sexes.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
III. EAST CENTRAL.																					
West Virginia.....	95	75	20	37	.....	5	.....	.....	.....	29	.....	4	.....	.....	2	.....	18	.....	.....	.....	.....
Ohio.....	415	346	69	46	.....	11	.....	5	.....	241	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Kentucky.....	86	52	34	34	.....	.....	.....	8	3	10	1	37	.....	.....	25	.....	16	.....	1	6	25
Michigan.....	184	124	60	58	.....	.....	.....	16	.....	29	.....	21	2	.....	20	.....	.....	.....	.....	8	
Indiana.....	273	132	141	41	.....	.....	.....	23	.....	57	.....	.....	.....	.....	28	.....	30	.....	.....	.....	
Wisconsin.....	271	208	63	39	.....	.....	.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	11	.....	103	.....	.....	11	27
Illinois.....	323	241	82	59	.....	.....	.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	169	63
Minnesota.....	206	163	43	52	.....	.....	.....	14	.....	109	.....	13	1	8	47	.....	1	.....	.....	38	33
Iowa.....	203	115	88	43	.....	.....	.....	27	16	51	.....	21	6	.....	15	.....	.....	.....	2	12	4
Missouri.....	307	157	150	45	.....	.....	.....	15	.....	22	.....	5	1	.....	16	1	13	.....	10	29	48
IV. WEST CENTRAL.																					
North Dakota.....	50	37	13	11	.....	5	.....	9	.....	3	.....	0	.....	.....	11	.....	2	.....	.....	.....	.....
South Dakota.....	14	11	3	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....
Nebraska.....	42	38	4	30	.....	.....	.....	6	.....	.....	.....	2	.....	.....	4	.....	.....	.....	.....	.....	.....
Kansas.....	93	75	18	35	.....	1	.....	7	.....	31	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	.....
Oklahoma.....	71	50	21	36	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	12	.....	.....	.....	.....
Montana.....	46	34	12	10	.....	.....	.....	13	1	.....	.....	.....	4	1	15	.....	.....	.....	1	.....	.....
Wyoming.....	39	21	18	5	.....	1	.....	4	.....	13	.....	1	.....	.....	6	.....	.....	.....	.....	6	6
Colorado.....	156	124	32	17	.....	1	.....	3	.....	11	.....	.....	.....	1	2	.....	16	.....	.....	.....	.....
New Mexico.....	33	23	10	11	.....	.....	.....	5	.....	91	4	6	3	.....	10	.....	.....	.....	2	4	4
V. PACIFIC.																					
Idaho.....	61	49	12	17	.....	.....	.....	7	.....	5	.....	.....	.....	.....	7	.....	2	.....	.....	.....	.....
Utah.....	179	98	81	28	.....	.....	.....	.....	2	16	.....	10	.....	1	.....	.....	3	.....	.....	.....	.....
Arizona.....	101	44	57	16	.....	.....	.....	5	.....	48	3	.....	.....	.....	52	.....	2	.....	.....	19	24
Nevada.....	17	13	4	3	.....	2	.....	11	.....	14	.....	.....	.....	.....	27	.....	20	.....	7	3	3
Washington.....	71	49	22	19	.....	.....	.....	.....	.....	5	.....	1	.....	.....	.....	.....	.....	.....	.....	1	1
Oregon.....	84	34	50	7	.....	4	.....	.....	.....	18	.....	.....	.....	.....	11	.....	2	.....	2	7	7
California.....	271	146	125	37	.....	8	1	9	9	17	.....	2	7	.....	3	.....	14	.....	2	12	14

<sup>1</sup> Included in part-time general continuation schools.

TABLE 15.—*Sex of teachers of vocational courses in agricultural schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.*

Region or State.	Total.			Full year (12 months).						School year only.					
	Both sexes.			Male.			Female.			Male.			Female.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
United States.....	1,570	1,201	895	1,460	941	686	1	.....	.....	108	259	209	1	1	.....
REGION.															
I. North Atlantic.....	321	253	305	271	196	216	1	.....	.....	49	57	89	.....	.....	.....
II. Southern.....	465	464	240	444	298	185	.....	.....	.....	21	165	55	.....	1	.....
III. East Central.....	470	296	220	454	288	208	.....	.....	.....	16	8	12	.....	.....	.....
IV. West Central.....	174	90	62	166	80	38	.....	.....	.....	8	10	24	.....	.....	.....
V. Pacific.....	140	98	68	125	79	39	.....	.....	.....	14	19	29	.....	.....	.....
I. NORTH ATLANTIC.															
Maine.....	15	9	8	15	9	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Hampshire.....	14	12	25	14	12	11	.....	.....	.....	.....	.....	14	.....	.....	.....
Vermont.....	4	8	17	4	8	12	.....	.....	.....	.....	.....	5	.....	.....	.....
Massachusetts.....	88	106	49	44	53	45	.....	.....	.....	44	53	4	.....	.....	.....
Rhode Island.....	5	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Connecticut.....	3	3	36	3	3	36	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York.....	89	52	97	89	52	40	.....	.....	.....	.....	.....	57	.....	.....	.....
New Jersey.....	20	12	18	20	12	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania.....	55	41	47	50	37	38	.....	.....	.....	5	4	9	.....	.....	.....
Delaware.....	12	5	3	12	5	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maryland.....	16	5	5	15	5	5	1	.....	.....	.....	.....	.....	.....	.....	.....
II. SOUTHERN.															
Virginia.....	51	36	25	49	36	12	.....	.....	.....	2	.....	13	.....	.....	.....
North Carolina.....	39	30	14	39	30	8	.....	.....	.....	.....	.....	6	.....	.....	.....
South Carolina.....	42	25	13	42	25	.....	.....	.....	.....	.....	.....	13	.....	.....	.....
Georgia.....	57	40	42	57	35	34	.....	.....	.....	.....	5	8	.....	.....	.....
Florida.....	16	10	5	16	9	5	.....	.....	.....	.....	1	.....	.....	.....	.....
Tennessee.....	37	24	19	35	24	19	.....	.....	.....	2	.....	.....	.....	.....	.....
Alabama.....	40	27	13	40	27	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mississippi.....	56	49	48	43	41	34	.....	.....	.....	13	8	14	.....	.....	.....
Arkansas.....	22	171	13	22	20	12	.....	.....	.....	.....	151	1	.....	.....	.....
Louisiana.....	28	21	16	28	21	16	.....	.....	.....	.....	.....	.....	.....	.....	.....
Texas.....	77	31	32	73	30	32	.....	.....	.....	4	.....	.....	.....	1	.....

TABLE 15.—Sex of teachers of vocational courses in agricultural schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918—Con.

Region or State.	Total.			Full year (12 months).						School year only.					
	Both sexes.			Male.			Female.			Male.			Female.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
III. EAST CENTRAL.															
West Virginia.....	42	22	12	37	16	11				5	7	1			
Ohio.....	57	40	18	46	39	18				11	1				
Kentucky.....	34	25	8	34	25	8									
Michigan.....	58	49	43	58	49	43									
Indiana.....	41	32	35	41	32	35									
Wisconsin.....	39	34	10	39	34	5						5			
Illinois.....	59	42	16	59	42	15						1			
Minnesota.....	52	34	69	52	34	67						2			
Iowa.....	43	10	6	43	10	6									
Missouri.....	45	7	3	45	7							3			
IV. WEST CENTRAL.															
North Dakota.....	16	14	10	11	8	9				5	6	1			
South Dakota.....	11	9		11	9										
Nebraska.....	30	8	2	30	8	2									
Kansas.....	30	16	6	35	16					1		6			
Oklahoma.....	36	15	14	36	15	13						1			
Montana.....	10	9	16	10	9	8						2			
Wyoming.....	6	7	9	5	4	2				1	3				
Colorado.....	18	7	5	17	6	4				1	1	1			
New Mexico.....	11	5		11	5										
V. PACIFIC.															
Idaho.....	17	9	10	17	9	6						4			
Utah.....	26	24	17	26	24	15						2			
Arizona.....	18	7	4	16	7	4									
Nevada.....	5	3	1	3	3	1				2					
Washington.....	19	12	13	19	12	5						8			
Oregon.....	11	5		7	5					4					
California.....	46	38	23	37	19	8				8	19	15	1		

<sup>1</sup> All agricultural teachers classified as full year.

TABLE 16.—Sex of teachers of vocational courses in trade or industrial schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			Male.									Female.								
	Both sexes.			Evening.			Part time.			All day.			Evening.			Part time.			All day.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
United States.....	3,183	3,002	3,276	1,712	1,583	1,200	250	226	367	894	850	762	68	69	197	97	66	460	163	199	290
REGION.																					
I. North Atlantic.....	1,301	1,288	1,999	509	578	598	193	82	232	508	468	537	34	24	64	51	13	367	106	118	201
II. Southern.....	487	179	178	342	135	68	24	3	6	76	36	63	9	3	3	16	17	20	2	16	
III. East Central.....	864	1,045	852	589	657	422	104	127	123	129	163	83	1	23	108	16	42	61	25	33	55
IV. West Central.....	239	185	78	154	140	42	19	3	2	54	25	12	4	16	20	7	1	2	1		
V. Pacific.....	292	305	174	118	73	70	19	11	4	117	167	67	20	3	2	7	5	13	11	46	18
I. NORTH ATLANTIC.																					
Maine.....	22	29	27	16	25	17	2			4	4	10									
New Hampshire.....	15	19	29					5	13												
Vermont.....	20	17	10	1	11	6	8	5	2	15	14	16									
Massachusetts.....	480	453	408	211	229	182	21	12	21	139	131	111	2			9	1	2			
Rhode Island.....	43	45	29	11	25	19	17	18	10	6			21	12	7	34	8	13	54	61	74
Connecticut.....	80	142	169	22	57	65	15	14	9	35	61	62	4	6	22	7	2		4	4	11
New York.....	235	214	298			23				180	169	211			5				45	45	59
New Jersey.....	125	82	166	76	47	67	3	5	8	38	25	52	2	2	29			1	1	3	9
Pennsylvania.....	221	189	839	127	108	196	13	10	169	76	59	75	5	4			3	351		5	48
Delaware.....	25	33	15	17	16	15	8	13													
Maryland.....	33	65	9	23	80	8	1			5	5				1	1					
II. SOUTHERN.																					
Virginia.....	57	14	17	26	11	13	6			17	2	3		1		7		1	1		
North Carolina.....	69	5	4	68	5	4							1								
South Carolina.....	76	30	1	76	30	1															
Georgia.....	53	30	50	34	26	25			5	11	7	11	4	2	3	2		6	2	1	
Florida.....	63		2	57	(1)	2	4							(1)		2					
Tennessee.....	26	23		20	23					6	(1)					2				(1)	
Alabama.....	44	36	53	25	12	5	12	3		7	11	43						6			
Mississippi.....	6	1	5	4	1				1							2					
Arkansas.....	15	3	4	4	1	2	2			5	1	2				3			1	1	
Louisiana.....	16		16							(1)									16	(1)	16
Texas.....	62	51	21	28	26	16				30	15	5	4								

TABLE 16.—Sex of teachers of vocational courses in trade or industrial schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918—Con.

Region or State.	Total.			Male.									Female.								
	Both sexes.			Evening.			Part time.			All day.			Evening.			Part time.			All day.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
III. EAST CENTRAL.																					
West Virginia.....	33	68	25	29	66	25	4	2													
Ohio.....	285	328	82	241	271	52	37	29	23	5	9					2	10	7		6	
Kentucky.....	24	15	11	10	5	2				8	6	8	1	3		2	2		3	2	1
Michigan.....	68	118	44	29	59	17	21	24	6	16	17	6		10	13	2	8				2
Indiana.....	80	161	156	57	89	113			33	19	23	62	13		1	5	10				
Wisconsin.....	( <sup>1</sup> )	72	139	( <sup>1</sup> )	23	35	( <sup>2</sup> )	30	40	( <sup>2</sup> )	3	16	( <sup>2</sup> )	8	10	( <sup>2</sup> )	6	38	( <sup>2</sup> )		
Illinois.....	137	96	51	109	55	27	13	18	20	14	19	4				1	2				
Minnesota.....	121	95	246	51	51	114	21	6	2	27	20	17				70	6	3	6	16	37
Iowa.....	43	8	36	22	4	7	5		1	15	4	6				11	1				1
Missouri.....	73	84	62	41	34	30	3	15	12	21	23	13		2	3	2	6		6	4	4
IV. WEST CENTRAL.																					
North Dakota.....	21	2	6	3	2	1	9			9		4			1						
South Dakota.....																					
Nevada.....	8	13	18		5	16	2			6	7			1							
Kansas.....	39	29	7	31	24	6	1		1	7	5										
Oklahoma.....	18	30	18		10					13	7			13	18	4			1		
Montana.....	18	4	2	13	2		1			4	2	2									
Wyoming.....	14	2	7	11	1	5			1	3	1				1						
Colorado.....	109	101	16	91	93	10	6	3		5	2	4	4	2		3	1	2			
New Mexico.....	12	4	6	5	3	4				7	1	2									
V. PACIFIC.																					
Idaho.....	33	6	3	16	1		10	5		5		3							2		
Utah.....	56	9	8	48	6	4			1	5	2	3	3							1	
Arizona.....	25	27	10	14	19	9				11	5			3	1						
Nevada.....	6	6	11	5	6	11	1														
Washington.....	30	34	35	18	19	21	1			11	15	13			1						
Oregon.....	29	5	13	1		5	2			9	5	6	17								2
California.....	113	218	94	16	22	20	5	6	3	76	140	42				7	5	13	9	45	16

<sup>1</sup> No report.<sup>2</sup> Wisconsin includes this information in part-time general continuation schools

TABLE 17.—Sex of teachers of vocational courses in home economics schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Both sexes.			Male.									Female.								
				In evening schools.			In part-time schools.			In all-day schools.			In evening schools.			In part-time schools.			In all-day schools.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
United States.....	1,637	1,433	1,088	1	1	4	4	1	(1)	11	24	10	785	757	686	133	70	(1)	703	580	388
REGION.																					
I. North Atlantic.....	623	611	734			4					2	7	391	395	478	7	6		225	208	245
II. Southern.....	202	94	60									3	97	40	30	2	2		103	52	27
III. East Central.....	434	474	239	1						8	4		215	298	171	13	19		197	153	68
IV. West Central.....	110	116	21							2	19		41	12	3	3	1		64	84	18
V. Pacific.....	268	138	34		1		4	1		1	1		41	12	4	108	42		114	81	30
I. NORTH ATLANTIC.																					
Maine.....	27	22	15								1		23	13	15				4	8	1
New Hampshire.....			1																		17
Vermont.....	8	7	17								1		6						2	6	
Massachusetts.....	280	320	301										220	267	252				60	53	49
Rhode Island.....	(2)	19	15	(2)			(2)			(2)			(2)	10	8	(2)			(2)	9	7
Connecticut.....																					
New York.....	115	88	150			4						1	81	57	104	7	6		27	25	41
Pennsylvania.....	164	145	230									6	53	48	99				111	97	125
Delaware.....	14	5	4										4						14	5	4
Maryland.....	115	5	1										8						7	5	1
II. SOUTHERN.																					
Virginia.....	32	25	14										18	22	14		1		14	2	
North Carolina.....	19	4	2										18						1	4	2
South Carolina.....	7	1											1						6	1	
Georgia.....	30	15	19									3	16		8				14	15	8
Florida.....	5	5	3																5	5	3
Tennessee.....	20	14											12	10		2	1		6	3	
Alabama.....	9	3	1																9	3	1
Mississippi.....	7	5	3										3						4	5	3
Arkansas.....	22	1	2										17		1				5	1	1
Louisiana.....	8	7	6																8	7	8
Texas.....	43	14	10										12	8	7				31	8	3

TABLE 17.—Sex of teachers of vocational courses in home economics schools federally aided, by States, etc.—Continued.

Region or State.	Both sexes.			Male.									Female.								
				In evening schools.			In part-time schools.			In all-day schools.			In evening schools.			In part-time schools.			In all-day schools.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k		m	n	o	p	q	r	s	t	u
III. EAST CENTRAL.																					
West Virginia.....	20	9	9										18	8	9				2	1	
Ohio.....	42	147	66										16	126	59	1			25	21	7
Kentucky.....	20	31	23								1			2	1				20	28	23
Michigan.....	58	61	45										30	41	28				28	20	17
Indiana.....	114	74	61										108	66	58				11	8	3
Wisconsin.....	(3)	26	17	(2)			(2)			(4)			(3)	3	13	(2)	19		(2)	4	4
Illinois.....	56	79	9							8	3		1	30	3				47	46	6
Minnesota.....	17	13	9		(2)			(2)					(3)			2	(2)		15	13	9
Iowa.....	40	4		1									13	1		10			16	3	
Missouri.....	67	30											34	21					38	0	
IV. WEST CENTRAL.																					
North Dakota.....	13	70	6								15		2	2					11	53	6
South Dakota.....	3	3	2																3	3	2
Nebraska.....	4	2	1																4	2	1
Kansas.....	18	10											12	8					6	2	
Oklahoma.....	17	9								1	2					1			15	7	
Montana.....	6	6	6																6	6	6
Wyoming.....	19	3	4							1			16				1		2	2	1
Colorado.....	21	4	2								2		9			2			10	2	2
New Mexico.....	9	9											2	2					7	7	
V. PACIFIC.																					
Idaho.....	11	5								1	1		3						7	4	
Utah.....	54	48											2						52	48	11
Arizona.....	54	19	6		1								20	12		7			27	6	6
Nevada.....	3	2																	3	2	
Washington.....	15	3	7										2			2			11	3	7
Oregon.....	19	2	4										14		4	2			3	2	
California.....	112	59	6				4	1								97	42		11	16	6

<sup>1</sup> Not separately reported in 1918.<sup>2</sup> No report.<sup>3</sup> Wisconsin includes this information in part-time general continuation schools.



TABLE 18.—*Sex of teachers of vocational courses in part-time general continuation schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.*

Region or State.	Both sexes.			Male.			Female.		
	1920	1919	1918 <sup>1</sup>	1920	1919	1918 <sup>1</sup>	1920	1919	1918 <sup>1</sup>
	a	b	c	d	e	f	g	h	i
United States.....	1,286	616	.....	558	209	.....	728	407	.....
REGION.									
I. North Atlantic.....	537	401	.....	191	161	.....	346	330	.....
II. Southern.....	48	9	.....	9	4	.....	39	5	.....
III. East Central.....	505	98	.....	312	37	.....	233	61	.....
IV. West Central.....	21	6	.....	10	2	.....	11	4	.....
V. Pacific.....	85	9	.....	36	2	.....	49	7	.....
I. NORTH ATLANTIC.									
Maine.....									
New Hampshire.....									
Vermont.....									
Massachusetts.....	10	38		6	17		4	21	
Rhode Island.....	1						1		
Connecticut.....									
New York.....	68	32		29	12		39	20	
New Jersey.....	1	1					1	1	
Pennsylvania.....	157	123		156	135		301	288	
Delaware.....									
Maryland.....									
II. SOUTHERN.									
Virginia.....		3			2			1	
North Carolina.....	2						2		
South Carolina.....									
Georgia.....	13	3		1	2		12	1	
Florida.....	6			4			2		
Tennessee.....	5			2			3		
Alabama.....	7						7		
Mississippi.....	9	2		1			8	2	
Arkansas.....									
Louisiana.....									
Texas.....	6	1		1			5	1	
III. EAST CENTRAL.									
West Virginia.....									
Ohio.....	31	9		6	5		25	4	
Kentucky.....	8						8		
Michigan.....									
Indiana.....	38	30		11	6		27	24	
Wisconsin.....	232	25		109	10		63	15	
Illinois.....	71	26		38	16		33	10	
Minnesota.....	16	8		12			4	8	
Iowa.....	77			29			18		
Missouri.....	122			47			75		
IV. WEST CENTRAL.									
North Dakota.....									
South Dakota.....									
Nebraska.....									
Kansas.....									
Oklahoma.....									
Montana.....	12			6			6		
Wyoming.....									
Colorado.....	8	6		3	2		3	4	
New Mexico.....	1						1		
V. PACIFIC.									
Idaho.....									
Utah.....	43	2		19	1		24	1	
Arizona.....	6	5		3	1		3	4	
Nevada.....	3			2			1		
Washington.....	7	2					7	2	
Oregon.....	26			12			14		
California.....									

<sup>1</sup> Not reported separately in 1918.

TABLE 19.—Number of pupils enrolled in vocational courses in schools Federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			Agricultural schools.			Trade or industrial schools.			Home economic schools.			Part-time general continuation schools.	
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
United States.....	265,143	194,893	164,186	31,301	19,933	15,453	86,822	84,705	117,934	48,938	39,414	30,799	96,062	50,788
REGION.														
I. North Atlantic.....	109,974	102,224	105,016	5,840	3,500	3,649	58,461	37,837	81,911	14,391	15,684	19,456	51,283	43,194
II. Southern.....	23,703	12,388	9,476	9,742	5,715	4,648	7,459	3,966	2,805	5,014	2,522	2,023	1,488	153
III. East Central.....	94,117	61,067	37,145	9,709	7,072	4,681	28,212	33,056	24,911	14,287	16,074	7,553	41,959	4,885
IV. West Central.....	11,616	7,237	4,669	3,144	1,636	1,137	4,792	4,187	2,568	2,890	1,177	914	830	237
V. Pacific.....	25,733	11,989	7,880	2,866	2,001	1,288	7,598	5,719	5,739	12,436	3,957	853	2,533	312
I. NORTH ATLANTIC.														
Maine.....	1,064	1,359	1,743	321	202	248	308	650	924	435	507	573		
New Hampshire.....	507	513	741	184	132	251	323	381	473			18		
Vermont.....	423	391	631	130	90	96	162	237	80	141	64	446		
Massachusetts.....	23,086	25,475	19,027	366	458	505	15,667	16,222	10,933	5,388	7,368	7,589	1,663	1,427
Rhode Island.....	930	1,374	711	43			847	1,374	711				40	
Connecticut.....	2,743	5,009	6,563	45	55	216	2,698	4,211	5,934		748	413		
New York.....	18,185	11,339	8,330	1,484	971	1,031	6,613	5,941	7,319				10,088	4,427
New Jersey.....	8,307	6,058	9,433	305	450	327	3,904	2,173	4,426	3,869	3,410	4,680	33	25
Pennsylvania.....	52,165	48,321	56,540	2,277	1,005	852	6,728	4,945	50,107	3,704	3,056	5,581	39,456	39,315
Delaware.....	1,130	655	668	191	70	58	608	434	494	331	151	116		
Maryland.....	1,430	1,730	609	304	76	67	693	1,269	502	523	385	40		
II. SOUTHERN.														
Virginia.....	3,152	1,721	1,612	800	402	267	1,465	62	762	887	579	583		57
North Carolina.....	1,869	701	337	721	473	231	786	128	72	332	100	34	31	
South Carolina.....	1,802	798	334	886	463	309	735	313	25	151	22			
Georgia.....	3,856	2,376	2,541	1,339	1,012	1,145	982	817	916	617	496	480	818	48
Florida.....	1,243	684	306	321	147	65	745	446	22	92	91	119	85	
Tennessee.....	1,998	1,654	430	698	633	430	571	417	5	572	604		157	
Alabama.....	1,838	743	440	743	406	231	606	288	192	255	49	14	237	
Mississippi.....	1,834	1,119	829	1,638	972	736	63	30	38	113	23	65	30	34
Arkansas.....	2,103	489	497	1,064	433	254	218	26	55	821	30	188		
Louisiana.....	1,280	528	886	509	323	369	438		265	333	205	252		
Texas.....	2,818	1,545	1,364	1,013	451	621	624	818	435	841	261	288	190	15

III. EAST CENTRAL													
West Virginia.....	1,546	1,923	1,286	700	356	123	610	1,434	236	133	256	902	28
Ohio.....	10,723	13,319	8,736	1,115	745	363	7,923	7,221	1,013	4,391	2,263	902	28
Kentucky.....	2,666	2,381	788	1,104	725	131	948	630	3,506	1,076	520	108	28
Michigan.....	10,820	14,234	6,618	966	1,243	1,874	6,148	11,721	3,463	1,270	1,281	4,163	1,035
Indiana.....	13,625	9,569	7,765	951	1,912	213	3,457	3,555	3,035	3,067	1,917	17,701	1,431
Wisconsin.....	18,817	5,097	7,017	1,116	(*)	491	(*)	1,854	(*)	1,712	579	1,288	28
Illinois.....	15,179	8,923	1,835	1,326	1,136	323	4,995	2,328	1,947	3,434	311	424	28
Minnesota.....	3,466	2,954	1,542	908	238	326	2,043	1,935	972	284	288	1,842	28
Iowa.....	4,171	365	130	594	160	326	673	127	1,060	78	1,842	28	28
Missouri.....	12,975	2,322	1,398	1,000	100	40	1,673	1,598	1,358	1,357	615	8,936	28
IV. WEST CENTRAL													
North Dakota.....	1,580	537	485	353	197	266	200	54	113	337	286	106	28
South Dakota.....	490	327	(*)	213	205	(*)	196	219	(*)	207	122	(*)	28
Nebraska.....	720	409	561	539	154	76	196	372	456	54	36	29	28
Kansas.....	1,742	848	505	605	263	263	554	181	423	583	211	89	28
Oklahoma.....	824	858	700	473	229	263	181	179	13	229	89	405	28
Montana.....	835	520	448	200	168	179	363	179	157	157	173	256	135
Wyoming.....	645	134	354	107	76	102	186	20	199	352	38	63	28
Colorado.....	4,188	3,288	1,527	398	236	187	2,215	2,215	1,223	667	85	55	28
New Mexico.....	751	318	79	286	108	207	207	207	207	274	137	14	28
V. PACIFIC													
Idaho.....	1,301	338	243	524	220	123	220	220	21	148	46	290	28
Utah.....	6,472	2,471	1,186	768	228	106	805	822	220	2,966	1,186	1,933	28
Arizona.....	2,095	1,343	447	289	129	106	353	227	125	1,409	235	44	28
Nevada.....	233	215	251	51	50	12	129	135	239	37	30	28	28
Washington.....	1,406	1,543	2,901	438	223	76	590	1,198	2,620	288	211	211	28
Oregon.....	3,394	203	414	175	35	172	1,434	3,337	2,264	1,349	54	150	436
California.....	10,810	5,876	2,438	621	335	172	3,948	3,337	2,264	6,241	2,304	16	28

\* Not separately reported on schedules of 1915.

\* Wisconsin reports this information unavailable.

\* Included in general part-time continuation.

\* No report.

## 214 ANNUAL REPORT FEDERAL BOARD FOR VOCATIONAL EDUCATION.

TABLE 20.—Number of pupils enrolled in vocational courses in trade or industrial schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			All day.			Evening.			Part time.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l
—United States.....	86,822	84,765	117,934	21,224	18,064	38,596	48,354	43,485	46,333	17,244	22,616	53,905
REGION.												
I. North Atlantic.....	38,401	37,837	81,911	12,976	12,463	13,039	15,746	15,340	23,409	9,737	10,028	45,373
II. Southern.....	7,459	3,966	2,806	1,515	480	664	5,208	3,448	1,694	732	32	417
III. East Central.....	28,212	33,036	24,911	2,968	3,169	3,582	20,836	18,486	14,931	4,409	11,411	6,398
IV. West Central.....	4,792	4,187	2,568	1,185	313	136	2,793	3,419	2,340	814	455	94
V. Pacific.....	7,898	5,719	5,739	2,574	2,243	1,181	3,772	2,780	3,869	1,552	690	649
I. NORTH ATLANTIC.												
Maine.....	208	650	924	44	27	524	250	623	400	14	75	185
New Hampshire.....	323	381	472	323	303	237	.....	.....	.....	.....	75	185
Vermont.....	162	237	80	.....	.....	.....	67	161	56	95	70	33
Massachusetts.....	15,067	10,222	10,933	2,422	2,524	2,716	5,250	5,613	4,223	7,986	8,065	3,992
Rhode Island.....	847	1,374	711	26	.....	.....	248	576	730	523	708	175
Connecticut.....	2,098	4,211	5,934	543	1,390	1,110	1,600	2,340	4,502	555	481	322
New York.....	6,013	5,941	7,319	6,813	6,941	6,844	.....	.....	4,475	.....	.....	.....
New Jersey.....	3,004	2,173	4,426	1,667	660	1,161	2,796	1,483	2,968	57	34	307
Pennsylvania.....	6,728	4,945	50,197	1,766	1,528	1,987	4,719	3,042	8,351	243	375	40,359
Delaware.....	689	434	494	.....	.....	.....	414	329	404	194	405	.....
Maryland.....	603	1,260	502	174	90	.....	409	1,179	502	20	.....	.....
II. SOUTHERN.												
Virginia.....	1,465	683	762	357	20	60	605	663	533	413	.....	169
North Carolina.....	783	128	72	.....	.....	.....	785	128	72	.....	.....	.....
South Carolina.....	735	313	25	.....	.....	.....	756	313	25	.....	.....	.....
Georgia.....	962	817	916	349	149	204	368	668	534	37	.....	178
Florida.....	745	446	22	.....	.....	.....	669	446	22	85	.....	.....
Tennessee.....	571	417	.....	102	75	.....	469	342	.....	.....	.....	.....
Alabama.....	668	288	155	50	83	31	432	173	99	121	32	62
Mississippi.....	63	30	38	.....	.....	.....	52	30	.....	11	.....	34
Arkansas.....	218	26	54	81	12	21	92	14	34	65	.....	.....
Louisiana.....	438	.....	265	438	(1)	265	.....	.....	.....	.....	.....	.....
Texas.....	834	818	455	162	147	80	672	671	375	.....	.....	.....
III. EAST CENTRAL.												
West Virginia.....	610	1,434	866	.....	.....	.....	553	4,418	836	57	16	.....
Ohio.....	7,063	7,884	6,110	137	379	840	6,343	6,235	4,291	1,188	1,270	979
Kentucky.....	946	520	137	553	299	86	370	192	32	45	29	16
Michigan.....	6,148	11,721	3,463	307	167	122	4,062	4,037	3,086	1,789	7,517	255
Indiana.....	3,457	3,555	5,065	617	1,015	866	2,846	2,139	3,082	.....	404	547
Wisconsin.....	(3)	1,954	6,947	(3)	.....	788	(3)	735	1,772	(3)	1,106	3,393
Illinois.....	4,995	2,328	1,231	86	137	16	4,204	1,700	646	706	464	669
Minnesota.....	2,043	1,035	732	669	560	521	1,060	1,063	93	314	306	118
Iowa.....	675	127	52	108	58	18	376	69	29	191	.....	5
Missouri.....	1,673	1,598	1,358	511	484	328	1,937	898	504	125	216	526
IV. WEST CENTRAL.												
North Dakota.....	890	54	113	385	.....	68	150	54	45	355	.....	.....
South Dakota.....	.....	.....	(1)	.....	.....	(1)	.....	.....	(1)	.....	(1)	.....
Nebraska.....	196	210	456	194	96	.....	.....	123	456	2	.....	.....
Kansas.....	554	372	423	109	54	.....	415	320	396	10	.....	33
Oklahoma.....	181	540	.....	152	(2)	.....	.....	540	.....	29	.....	.....
Montana.....	363	179	13	112	95	18	234	84	.....	17	.....	.....
Wyoming.....	186	20	199	32	8	.....	154	12	184	.....	15	.....
Colorado.....	2,215	2,730	1,285	74	30	27	1,740	2,245	1,209	401	455	59
New Mexico.....	207	73	79	127	32	22	80	41	57	.....	.....	.....
V. PACIFIC.												
Idaho.....	629	62	21	57	.....	21	427	10	.....	146	52	.....
Utah.....	805	329	220	58	28	68	747	304	115	.....	.....	37
Arizona.....	353	697	125	89	52	.....	264	645	125	.....	.....	.....
Nevada.....	139	135	239	.....	.....	.....	139	135	239	(2)	.....	.....
Washington.....	590	1,196	2,629	154	323	128	430	871	2,402	6	.....	.....
Oregon.....	1,434	63	284	173	63	206	1,237	.....	56	14	.....	.....
California.....	3,948	3,237	2,286	2,043	1,778	756	518	821	812	4,347	636	654

(1) Includes part-time home economics and general continuation schools.

(2) No report.

(3) Included in part-time general continuation schools.

TABLE 21.—Number of pupils enrolled in vocational courses in home economics schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			All day.			Evening.			Part time.	
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919
	a	b	c	d	e	f	g	h	i	j	k
United States.....	48,938	39,414	30,799	16,437	12,445	8,439	21,768	22,601	22,380	7,733	1,278
REGION.											
I. North Atlantic.....	14,391	15,684	19,460	3,914	3,886	1,186	10,162	11,413	16,270	315	383
II. Southern.....	5,014	2,622	2,023	2,215	1,221	890	2,732	1,249	1,133	67	55
III. East Central.....	14,237	16,974	7,553	4,735	4,896	1,801	9,313	9,595	5,752	189	1,581
IV. West Central.....	2,860	1,177	914	1,468	885	850	1,191	270	55	213	12
V. Pacific.....	12,436	3,957	853	4,117	1,547	708	1,370	167	150	6,917	2,213
I. NORTH ATLANTIC.											
Maine.....	435	507	513	81	200	257	354	208	316		
New Hampshire.....			18			18					
Vermont.....	141	61	446	5	61	446	136				
Massachusetts.....	5,398	7,368	7,580	445	450	583	4,913	6,918	7,006	(2)	
Rhode Island.....											
Connecticut.....		713	413		383	247		360	166		
New York.....											
New Jersey.....	3,869	3,410	4,080	477	390	732	3,077	2,635	3,918	315	385
Pennsylvania.....	3,701	3,056	5,591	2,258	1,764	1,717	1,446	1,292	3,834		
Delaware.....	331	151	116	331	151	116					
Maryland.....	523	385	40	317	385	40	206				
II. SOUTHERN.											
Virginia.....	887	570	583	202	8		685	537	583		34
North Carolina.....	332	100	31	30	100	34	302				
South Carolina.....	151	22		126	22		25				
Georgia.....	617	498	480	358	198	337	259		143		
Florida.....	92	91	119	92	91	119					
Tennessee.....	572	606		102	24		402	559		67	21
Alabama.....	255	49	14	255	49	14					
Mississippi.....	113	83	65	85	83	65	28				
Arkansas.....	821	30	188	87	30	27	731		161		
Louisiana.....	333	205	252	333	205	252					
Texas.....	841	261	288	544	111	12	297	150	216		
III. EAST CENTRAL.											
West Virginia.....	236	133	258	29	11		207	122	258		
Ohio.....	1,913	4,391	2,293	663	624	213	336	3,767	2,050	11	
Kentucky.....	506	1,076	520	506	1,043	502		33	13		
Michigan.....	3,755	1,270	1,281	1,309	419	387	2,448	851	591		
Indiana.....	5,654	3,067	1,917	250	151	82	4,815	2,916	1,835		
Wisconsin.....	(1)	1,712	579	(1)	75	73	(1)	54	506	(5)	1,531
Illinois.....	972	3,434	311	949	2,051	120	23	1,383	191		
Minnesota.....	284	295	421	273	295	421				11	
Iowa.....	1,090	78		277	57		619	21		161	
Missouri.....	1,357	615		490	167		867	448			
IV. WEST CENTRAL.											
North Dakota.....	337	286	106	270	220	106	67	56			
South Dakota.....	207	122	(2)	207	122	(2)			(2)		
Nebraska.....	54	36	39	54	36	29					
Kansas.....	583	211		91	27		492	184			
Oklahoma.....	229	90	405	219	89	405				10	
Montana.....	157	173	256	157	173	256					
Wyoming.....	352	38	63	54	26	8	293		55		12
Colorado.....	667	85	55	156	85	55	308			203	
New Mexico.....	274	137		248	107		26	30			
V. PACIFIC.											
Idaho.....	143	46		94	46		50				
Utah.....	2,069	1,196	260	2,901	1,196	260	65				
Arizona.....	1,409	265	216	477	128	216	531	167		191	
Nevada.....	35	30		35	30						
Washington.....	283	33	211	229	32	211	32			36	
Oregon.....	1,349	34	150	156	34		602		150	499	
California.....	6,361	2,394	16	224	64	18				6,013	2,213

\* Not separately reported in the schedule for 1918.

† No report.

‡ Included in part-time general continuation.

TABLE 22.—*Sex of pupils enrolled in vocational courses in schools federally aided, by States, for the year ended June 30, 1920.*

Region or State.	Total.			Agricultural schools.		Trade or industrial schools.						Home economics schools.						Part time general continuation schools.	
						All day.		Evening.		Part time.		All day.		Evening.		Part time.			
	Both sexes.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
United States.....	265,143	163,313	101,830	29,351	1,950	17,444	3,780	46,930	1,424	11,799	5,445	.....	16,437	5	24,763	.....	7,733	57,784	40,298
REGION.																			
I. North Atlantic.....	109,974	65,717	44,257	5,487	353	10,695	2,283	14,861	885	6,028	3,709	.....	3,914	.....	10,162	.....	315	28,646	22,636
II. Southern.....	23,703	16,278	7,425	9,088	654	961	558	4,965	243	509	223	.....	2,215	5	2,727	.....	67	750	738
III. East Central.....	94,117	62,489	31,628	8,908	801	2,189	779	20,664	171	4,121	288	.....	4,735	.....	9,313	.....	189	26,607	15,352
IV. West Central.....	11,616	7,929	3,687	3,079	65	1,185	.....	2,672	121	680	154	.....	1,456	.....	1,191	.....	213	333	487
V. Pacific.....	25,733	10,900	14,833	2,789	77	2,414	160	3,768	4	481	1,071	.....	4,117	.....	1,370	.....	6,949	1,448	1,065
I. NORTH ATLANTIC.																			
Maine.....	1,064	619	445	321	.....	44	.....	240	10	14	.....	.....	81	.....	354	.....	.....	.....	.....
New Hampshire.....	507	507	.....	184	.....	323	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vermont.....	423	266	157	120	.....	.....	.....	51	16	95	.....	.....	.....	.....	.....	.....	.....	.....	.....
Massachusetts.....	23,066	12,800	10,286	364	2	2,000	422	4,991	268	4,358	2,628	.....	5	.....	136	.....	.....	.....	.....
Rhode Island.....	930	821	109	38	5	26	.....	243	.....	495	78	.....	445	.....	4,943	.....	.....	1,087	578
Connecticut.....	2,743	2,323	420	45	.....	473	70	1,250	250	555	.....	.....	.....	.....	.....	.....	14	.....	26
New York.....	18,185	12,731	5,454	1,484	.....	5,160	1,453	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Jersey.....	8,311	4,298	4,013	504	1	1,043	24	2,697	83	54	3	.....	477	.....	3,077	.....	315	6,087	4,001
Pennsylvania.....	52,165	29,685	22,430	1,971	306	1,452	314	4,561	158	243	.....	.....	2,258	.....	1,446	.....	.....	21,458	17,998
Delaware.....	1,130	799	331	191	.....	.....	.....	414	.....	194	.....	.....	351	.....	.....	.....	.....	.....	.....
Maryland.....	1,430	868	562	265	39	174	.....	409	.....	20	.....	.....	317	.....	206	.....	.....	.....	.....
II. SOUTHERN.																			
Virginia.....	3,152	2,047	1,105	739	61	357	.....	693	2	258	155	.....	202	.....	685	.....	.....	.....	.....
North Carolina.....	1,869	1,497	372	702	19	.....	.....	769	16	.....	.....	.....	.....	.....	302	.....	.....	.....	.....
South Carolina.....	1,902	1,518	284	763	133	.....	.....	755	.....	.....	.....	.....	30	.....	.....	.....	26	.....	5
Georgia.....	3,756	2,421	1,335	1,285	54	247	102	509	87	.....	37	.....	126	.....	25	.....	.....	.....	.....
Florida.....	1,243	1,071	172	292	29	.....	.....	641	19	85	.....	.....	358	.....	259	.....	380	438	32
Tennessee.....	1,998	1,265	733	604	94	99	3	465	4	.....	.....	.....	92	.....	.....	.....	53	.....	65
Alabama.....	1,633	1,417	216	703	40	50	.....	407	25	121	.....	.....	103	5	397	.....	67	92	.....
Mississippi.....	1,844	1,725	119	1,638	.....	.....	.....	52	.....	5	6	.....	255	.....	28	.....	136	101	.....

Arkansas.....	2,103	1,126	977	948	116	46	15	92		40	25		87		734			
Louisiana.....	1,280	509	771	509			438						333					
Texas.....	2,818	1,682	1,136	905	108	162		582	90				544		297		33	97
III. EAST CENTRAL.																		
West Virginia.....	1,546	1,078	468	488	212			533	20	57			29		207			
Ohio.....	10,783	9,320	1,463	1,115		137		6,343		1,154	29		663		336	14	571	421
Kentucky.....	2,666	1,295	1,371	669	435	307	226	302	68	17	28		506					108
Michigan.....	10,889	6,931	3,953	986		307		3,975	77	1,663	126		1,309		2,446			
Indiana.....	3,625	6,296	7,329	351		617		2,834	6				239		4,815			
Wisconsin.....	8,817	15,272	3,545	1,116													1,894	2,269
Illinois.....	15,179	10,556	4,623	1,299	27	86		4,204		705							14,156	13,545
Minnesota.....	3,466	2,474	992	782	26	232	437	1,060		209	105		949		23		4,262	3,624
Iowa.....	4,171	2,395	1,776	594		108		376		191			273			11	191	140
Missouri.....	12,975	6,872	6,103	908	101	395	116	1,037		125			277		619	164	1,126	716
													490		867		4,407	4,526
IV. WEST CENTRAL.																		
North Dakota.....	1,580	1,243	337	353		385		150		355			270		67			
South Dakota.....	420	191	229	191	22								207					
Nebraska.....	789	735	54	539		194				2			54					
Kansas.....	1,742	1,149	593	605		109		435			10		91		492			
Oklahoma.....	883	654	229	473		152				29			219			10		
Montana.....	855	635	220	200		112		234					157				73	62
Wyoming.....	645	288	357	103	4	32		153	1	16	1		54		298			
Colorado.....	3,951	2,571	1,380	359	39	74		1,820	120	258	143		156		308	203	200	411
New Mexico.....	751	463	288	256		127		80					248		26			14
V. PACIFIC.																		
Idaho.....	1,301	1,117	184	435	29	50	7	427		145			98		50			
Utah.....	6,472	2,691	3,781	768		58		744	3				2,901		65		1,121	812
Arizona.....	2,065	667	1,428	289		89		264					477		531	401	23	19
Nevada.....	253	213	40	51				139		( <sup>2</sup> )	( <sup>2</sup> )		35				23	5
Washington.....	1,408	1,018	390	424	14	154		430		6			220		32	36	4	8
Oregon.....	3,394	1,869	1,525	166	9	168	5	1,246	1	14			158		692	499	275	161
California.....	10,810	3,325	7,485	596	25	1,895	148	518		316	1,071		228			6,013		

<sup>1</sup> Includes trade or industrial and part-time general continuation.<sup>2</sup> No report.

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TABLE 23.—*Sex of pupils enrolled in vocational course in agricultural schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.*

Region or State.	Both sexes.			Male.			Female.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i
United States.....	31,301	10,933	15,453	20,351	10,959	13,901	1,050	1,534	1,290
REGION.									
I. North Atlantic.....	5,840	3,509	3,640	5,487	3,359	3,569	353	150	80
II. Southern.....	9,742	5,715	4,648	9,088	5,140	3,922	654	575	726
III. East Central.....	9,709	7,072	4,681	8,908	5,216	4,247	801	613	434
IV. West Central.....	3,141	1,630	1,187	3,079	1,257	880	65	182	41
V. Pacific.....	2,868	2,001	1,288	2,780	1,087	1,283	77	14	5
I. NORTH ATLANTIC.									
Maine.....	321	202	246	321	178	248		21	
New Hampshire.....	184	132	251	184	132	251			
Vermont.....	120	90	96	120	90	98			
Massachusetts.....	366	458	505	364	452	503	2	6	
Rhode Island.....	43			38			5		
Connecticut.....	45	55	216	45	55	185			31
New York.....	1,484	971	1,031	1,484	971	1,011			20
New Jersey.....	505	450	327	504	420	314	1	30	13
Pennsylvania.....	2,277	1,005	852	1,971	915	850	306	90	2
Delaware.....	191	70	58	191	70	44			14
Maryland.....	304	70	67	265	76	67	39		
II. SOUTHERN.									
Virginia.....	800	402	267	739	379	229	61	23	38
North Carolina.....	721	473	231	702	473	231	19		
South Carolina.....	896	443	309	763	424	297	133	39	12
Georgia.....	1,339	1,012	1,145	1,285	941	823	54	71	322
Florida.....	321	147	65	292	138	50	29	9	15
Tennessee.....	698	633	430	604	364	340	94	269	81
Alabama.....	743	403	231	703	369	103	40	37	39
Mississippi.....	1,633	972	726	1,638	972	726			
Arkansas.....	1,064	433	254	948	359	195	116	74	59
Louisiana.....	509	323	300	509	323	369			
Texas.....	1,013	451	621	905	398	460	108	53	161
III. EAST CENTRAL.									
West Virginia.....	700	350	182	488	241	106	212	115	76
Ohio.....	1,115	745	363	1,115	726	301		19	62
Kentucky.....	1,104	785	131	669	464	131	435	321	
Michigan.....	986	1,243	1,874	986	(*)	1,827		(*)	47
Indiana.....	951	1,912	813	951	1,912	813			
Wisconsin.....	1,116	(*)	491	1,116	(*)	303		(*)	189
Illinois.....	1,326	1,136	323	1,209	1,013	323	27	123	
Minnesota.....	808	626	386	782	592	325	26	31	61
Iowa.....	594	160	78	594	160	78			
Missouri.....	1,000	109	40	908	108	40	101	1	
IV. WEST CENTRAL.									
North Dakota.....	353	197	206	353	(*)	(*)		(*)	(*)
South Dakota.....	213	205		191	150	(*)	22	55	(*)
Nebraska.....	539	154	76	539	137	76		17	
Kansas.....	605	293	82	605	263	82			
Oklahoma.....	473	229	295	473	193	276		36	19
Montana.....	200	169	179	200	168	179			
Wyoming.....	107	76	102	103	73	102	4	3	
Colorado.....	398	236	187	359	193	165	39	43	22
New Mexico.....	250	108		250	80			28	
V. PACIFIC.									
Idaho.....	524	230	222	495	221	222	29	9	
Utah.....	768	888	706	768	888	706			
Arizona.....	289	190	106	289	129	106			
Nevada.....	51	50	12	51	47	12		3	
Washington.....	438	283	70	424	283	65	14		5
Oregon.....	175	86		166	86		9		
California.....	621	335	172	596	333	172	25	2	

\* Includes 1,440 pupils not reported by sex—Michigan, 1,243; North Dakota, 197.

† Includes 266 pupils not reported by sex.

‡ Pupils not reported separately by sex.

§ No report. Wisconsin reports this information unavailable.



TABLE 24.—Sex of pupils enrolled in vocational courses in trade or industrial schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Both sexes.			Male.									Female.								
			1918	In evening schools.			In part-time schools.			In all-day schools.			In evening schools.			In part-time schools.			In all-day schools.		
	1920	1919		1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b		d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
United States.....	86,832	84,765	117,934	48,930	42,094	39,580	11,790	17,276	32,605	18,108	15,111	14,645	1,424	1,391	6,708	5,445	5,340	20,400	3,466	3,553	3,883
REGION.																					
I. North Atlantic.....	38,461	37,837	51,911	14,861	14,649	18,428	6,028	6,468	28,185	10,665	9,983	10,639	885	697	5,071	3,708	3,560	17,188	2,283	2,480	2,400
II. Southern.....	7,459	3,966	2,805	4,965	3,211	1,604	509	32	169	961	437	399	243	237	90	223	3,560	278	558	49	265
III. East Central.....	28,212	33,086	24,911	20,664	18,061	13,451	4,121	10,518	4,120	2,190	2,264	2,489	171	405	1,490	288	893	2,278	779	895	1,093
IV. West Central.....	4,792	4,187	2,568	2,672	3,410	2,272	660	131	48	1,185	313	62	121	9	23	154	324	50			
V. Pacific.....	7,898	5,719	5,730	3,768	2,743	3,825	481	127	83	2,414	2,114	1,056	4	43	44	1,071	563	606	160	129	125
I. NORTH ATLANTIC.																					
Maine.....	308	650	924	240	490	375	14			44	27	524	10	133	25						
New Hampshire.....	323	381	472					78	185	323	303	287									
Vermont.....	162	237	89	51	161	56	95	76	33												
Massachusetts.....	15,667	16,222	10,933	4,091	5,440	1,068	4,358	4,634	3,992	2,000	1,832	1,871	268	173	142	3,628	3,451		422	692	845
Rhode Island.....	847	1,374	711	248	565	485	495	796	175	26				11	51	78	2				
Connecticut.....	2,698	4,211	5,934	1,250	2,080	3,513	555	481	322	473	1,223	978	350	260	989						
New York.....	6,613	5,941	7,319			1,475				5,160	4,446	4,491									
New Jersey.....	3,904	2,173	4,426	2,697	1,439	2,550	54	30	236	1,043	620	1,161	83	44	408	3			1,453	1,495	1,353
Pennsylvania.....	6,728	4,945	30,107	4,561	2,966	4,943	243	268	23,242	1,452	1,442	1,327	158	76	3,408		107	17,117	314	96	70
Delaware.....	608	134	494	414	329	494	194	105													
Maryland.....	603	1,269	502	400	1,179	454	20			174	90				48						
II. SOUTHERN.																					
Virginia.....	1,465	683	762	693	471	533	258		1	357	20	60	2	192		155		168			
North Carolina.....	755	128	72	769	128	72							16								
South Carolina.....	755	313	25	755	313	25															
Georgia.....	982	817	916	509	647	444			99	247	101	204	87	21	90	37		79	102	48	
Florida.....	745	446	22	641	446	22	85						19								
Tennessee.....	571	417		465	326					99	74		4	16							
Alabama.....	603	288	195	407	173	99	121	32	31	50	83	34	25					31	3	1	
Mississippi.....	63	30	38	32	30		5		38												
Arkansas.....	218	26	55	92	14	34	40									6					
Louisiana.....	438		265							46	12	21				25			15		265
Texas.....	834	818	455	582	663	375				162	147	30	90	8					438	(?)	

TABLE 24.—*Sex of pupils enrolled in vocational courses in trade or industrial schools federally aided, by States, etc.—Continued.*

Region or State.	Both sexes.			Male.									Female.								
	1920	1919	1918	In evening schools.			In part-time schools.			In all-day schools.			In evening schools.			In part-time schools.			In all-day schools.		
				1920	1919	1918 <sup>a</sup>	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	
III. EAST CENTRAL.																					
West Virginia.....	610	1,434	856	533	1,396	855	57	16													
Ohio.....	7,663	7,884	6,110	6,343	6,229	4,270	1,154	1,057	713	137	200	465	20	22	1						
Kentucky.....	948	520	137	302	161	32	17		16	307	165	89	68	31	29	213	266		179	375	
Michigan.....	6,148	11,721	3,463	3,975	4,037	2,224	1,663	7,434	255	307	167	69	77		862	126	83		226		
Indiana.....	3,457	3,555	5,035	2,834	2,106	3,549		87	189	617	977	886	6	33	73	314	358		38	53	
Wisconsin.....	( <sup>3</sup> )	1,954	5,947	( <sup>3</sup> )	446	1,249	( <sup>3</sup> )	1,045	1,857	( <sup>3</sup> )	54	557	( <sup>3</sup> )	289	523	( <sup>3</sup> )	120	1,536	( <sup>3</sup> )		
Illinois.....	4,905	2,328	1,221	4,204	1,676	646	705	462	559	86	137	16		24		29				225	
Minnesota.....	2,043	1,935	732	1,060	1,063	93	209	234		232	170	224				105	72	118	437	297	
Iowa.....	675	127	52	376	69	29	191		5	108	58	18							396	297	
Missouri.....	1,673	1,598	1,358	1,037	898	504	125	183	526	395	336	185				33		116	148	143	
IV. WEST CENTRAL.																					
North Dakota.....	890	54	<sup>4</sup> 113	150	54	( <sup>4</sup> )	355			385		( <sup>4</sup> )			( <sup>4</sup> )					( <sup>4</sup> )	
South Dakota.....			( <sup>5</sup> )																		
Nebraska.....	196	219	456		123	455	2			194	96				1						
Kansas.....	554	372	423	435	320	390				109	52					10					
Oklahoma.....	181	540			540		29		33	152	( <sup>2</sup> )										
Montana.....	363	179	13	234	84		16			112	95	13			14	1			( <sup>2</sup> )		
Wyoming.....	186	20	199	153	12	170		15		32	8		1								
Colorado.....	2,215	2,730	1,285	1,620	2,236	1,200	258	131		74	30	27	120	9	8	143	324	50			
New Mexico.....	207	73	79	80	41	57				127	32	22									
V. PACIFIC.																					
Idaho.....	629	62	21	427	10		145	52		50		21									
Utah.....	805	329	220	744	304	115			37	58	25	68	3						7		
Arizona.....	353	697	125	264	645	88				89	52										
Nevada.....	139	135	239	139	135	235	( <sup>2</sup> )								37						
Washington.....	590	1,196	2,620	439	871	2,489	6			154	325	128			4	( <sup>2</sup> )					
Oregon.....	1,434	63	264	1,246	56	14				168	58	208	1		3				5	5	
California.....	3,948	3,237	2,250	518	778	842	316	75	46	1,895	1,654	631		43		1,071	563	606	148	124	

<sup>1</sup> Includes part-time general continuation and part-time home economics.  
<sup>2</sup> No report.

<sup>3</sup> Included in part-time general continuation.

<sup>4</sup> Number pupils not reported separately by sex—all day, 68; evening, 45.

TABLE 25.—Sex of pupils enrolled in vocational courses in home economics schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Both sexes.			Male.									Female.								
	1920	1919	1918	In evening schools.			In part-time schools.			In all-day schools.			In evening schools.			In part-time schools.			In all-day schools.		
				1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
United States.....	48,938	39,414	30,799	5		4			(1)		147	25	24,763	22,691	22,356	7,733	4,278	(1)	16,437	12,298	8,308
REGION.																					
I. North Atlantic.....	14,391	15,684	19,456			4							10,162	11,413	15,266	315	385		3,914	3,886	4,186
II. Southern.....	5,014	2,522	2,023	5								25	2,727	1,246	1,133	67	55		2,215	1,221	865
III. East Central.....	14,237	16,074	7,533								147		9,313	9,595	5,752	189	1,583		4,735	4,749	1,801
IV. West Central.....	2,860	1,177	914										1,191	270	55	213	12		1,456	895	753
V. Pacific.....	12,436	3,957	853										1,370	167	150	6,949	2,243		4,117	1,547	703
I. NORTH ATLANTIC.																					
Maine.....	435	507	573										354	208	316				81	299	257
New Hampshire.....			18																		18
Vermont.....	111	64	446										136						5	64	449
Massachusetts.....	5,388	7,368	7,589										4,943	6,918	7,006				445	450	583
Rhode Island.....		743	413											360	166					383	247
Connecticut.....																315	385				
New York.....	3,869	3,410	4,680			4							3,077	2,635	3,944				447	390	532
New Jersey.....	3,704	3,056	5,581										1,446	1,292	5,834				2,258	1,764	1,747
Pennsylvania.....	331	151	116																321	151	116
Delaware.....	523	385	40										206						317	385	40
Maryland.....																					
II. SOUTHERN.																					
Virginia.....	887	579	583										645	537	583		34		202	8	
North Carolina.....	332	100	34										302						30	100	34
South Carolina.....	151	22																	126	22	
Georgia.....	617	498	480									25	259		143				358	498	312
Florida.....	92	91	119																92	91	119
Tennessee.....	572	604		5									397	559		67	21		103	24	
Alabama.....	255	49	14																255	49	14
Mississippi.....	113	83	65										28						83	83	65
Arkansas.....	821	30	188										244		161				87	30	27
Louisiana.....	333	205	252																333	205	252
Texas.....	841	261	288										297	150	246				544	111	42

TABLE 25.—Sex of pupils enrolled in vocational courses in home economics schools federally aided, by States, etc.—Continued.

Region or State	Both sexes.			Male.									Female.								
	1920	1919	1918	In evening schools.			In part-time schools.			In all-day schools.			In evening schools.			In part-time schools.			In all-day schools.		
				1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1918	1918	1920	191	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
III. EAST CENTRAL.																					
West Virginia.....	236	133	258										207	222	258				20	11	
Ohio.....	1,013	4,391	2,283										336	3,767	2,050	14			663	624	213
Kentucky.....	506	1,076	520											33	18				506	896	502
Michigan.....	3,755	1,270	1,281							147				851	894				1,309	419	387
Indiana.....	5,054	3,067	1,917										2,446	851	894				239	151	82
Wisconsin.....	(3)	1,712	579	(3)			(3)			(3)			4,815	2,916	1,835				(3)	75	73
Illinois.....	972	3,434	311										(3)	54	506	(3)	1,583		949	2,051	120
Minnesota.....	284	298	424										23	1,383	191				273	298	424
Iowa.....	1,060	78											(4)	21		(4)			277	57	
Missouri.....	1,357	615											619	448		164			490	167	
IV. WEST CENTRAL.																					
North Dakota.....	337	286	2106										67	56					270	230	
South Dakota.....	207	122	(4)																207	122	
Nebraska.....	54	36	29																54	36	29
Kansas.....	583	211																	27		
Oklahoma.....	229	89	405										492	184					219	89	405
Montana.....	157	173	256													10			157	173	256
Wyoming.....	352	38	63																54	26	8
Colorado.....	667	85	55										298		55		12		156	85	55
New Mexico.....	274	137											308			206			248	107	
V. PACIFIC.																					
Idaho.....	148	46											50						98	46	
Utah.....	2,966	1,196	260										65						2,901	1,196	260
Arizona.....	1,409	295	216										531	167		401			477	128	216
Nevada.....	35	30																	35	30	
Washington.....	288	32	211										32			36			229	32	211
Oregon.....	1,349	54	150										692		150	499			158	54	
California.....	6,241	2,304	16													6,013	2,243		228	61	16

1 Not reported separately in 1918.

2 106 pupils not reported by sex.

3 Included in part-time general continuation and all day schools.

4 No report.

TABLE 26.—*Sex of pupils enrolled in vocational courses in part-time general continuation schools federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.*

Region or State.	Both sexes.			Male.			Female.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i
United States.....	98,082	50,783	(1)	57,784	27,821	(1)	40,298	23,450	(1)
REGION.									
I. North Atlantic.....	51,282	45,194	.....	28,646	21,906	.....	22,636	20,108	.....
II. Southern.....	1,488	155	.....	750	83	.....	738	72	.....
III. East Central.....	41,950	4,885	.....	26,607	2,109	.....	15,352	2,776	.....
IV. West Central.....	820	237	.....	333	73	.....	487	164	.....
V. Pacific.....	2,533	312	.....	1,448	63	.....	1,085	249	.....
I. NORTH ATLANTIC.									
Maine.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Hampshire.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vermont.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Massachusetts.....	1,665	1,427	.....	1,087	964	.....	578	463	.....
Rhode Island.....	40	.....	.....	14	.....	.....	26	.....	.....
Connecticut.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York.....	10,088	4,427	.....	6,037	2,085	.....	4,051	2,342	.....
New Jersey.....	33	25	.....	.....	.....	.....	33	25	.....
Pennsylvania.....	39,456	39,315	.....	21,458	21,917	.....	17,998	17,368	.....
Delaware.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maryland.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
II. SOUTHERN.									
Virginia.....	.....	57	.....	.....	4	.....	.....	53	.....
North Carolina.....	31	.....	.....	26	.....	.....	5	.....	.....
South Carolina.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Georgia.....	818	49	.....	380	39	.....	438	10	.....
Florida.....	85	.....	.....	53	.....	.....	32	.....	.....
Tennessee.....	157	.....	.....	92	.....	.....	65	.....	.....
Alabama.....	237	.....	.....	136	.....	.....	101	.....	.....
Mississippi.....	30	34	.....	30	30	.....	.....	4	.....
Arkansas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Louisiana.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Texas.....	139	15	.....	33	10	.....	97	5	.....
III. EAST CENTRAL.									
West Virginia.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio.....	992	299	.....	571	299	.....	421	.....	.....
Kentucky.....	108	.....	.....	.....	.....	.....	108	.....	.....
Michigan.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Indiana.....	4,163	1,035	.....	1,894	122	.....	2,269	913	.....
Wisconsin.....	17,701	1,431	.....	14,156	717	.....	3,545	714	.....
Illinois.....	7,866	2,025	.....	4,262	941	.....	3,624	1,031	.....
Minnesota.....	331	95	.....	191	30	.....	140	65	.....
Iowa.....	1,842	.....	.....	1,126	.....	.....	716	.....	.....
Missouri.....	8,930	.....	.....	4,407	.....	.....	4,529	.....	.....
IV. WEST CENTRAL.									
North Dakota.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Dakota.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nebraska.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kansas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oklahoma.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montana.....	135	.....	.....	73	.....	.....	62	.....	.....
Wyoming.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colorado.....	671	237	.....	260	73	.....	411	161	.....
New Mexico.....	14	.....	.....	.....	.....	.....	14	.....	.....
V. PACIFIC.									
Idaho.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utah.....	1,983	58	.....	1,121	23	.....	812	35	.....
Arizona.....	44	222	.....	25	40	.....	19	182	.....
Nevada.....	28	.....	.....	23	.....	.....	5	.....	.....
Washington.....	92	32	.....	4	.....	.....	88	32	.....
Oregon.....	436	.....	.....	275	.....	.....	161	.....	.....
California.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

1 Not separately reported in 1918.

2 Includes trade or industrial and home economics schools.

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TABLE 27.—Number of vocational teacher-training institutions federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Total. <sup>2</sup>			Training vocational teachers of—											
				Agriculture.			Trade or industry.			Home economics.			Not classified subject.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
United States....	135	144	94	64	60	40	71	68	45	85	78	60	5	11	.....
REGION.															
I. North Atlantic....	23	29	27	13	12	8	18	18	20	15	13	12	2	1	.....
II. Southern.....	47	42	24	25	20	9	18	16	6	23	20	13	1	1	.....
III. East Central....	30	38	17	11	14	11	20	20	7	16	17	11	2	8	.....
IV. West Central....	19	20	12	9	9	7	8	8	5	16	15	12	.....	.....	.....
V. Pacific.....	16	15	14	6	5	5	7	6	7	13	13	12	.....	1	.....
I. NORTH ATLANTIC.															
Maine.....	1	3	4	1	1	1	.....	1	1	1	2	2	.....	.....	.....
New Hampshire.....	1	1	1	1	1	1	1	.....	.....	1	.....	1	.....	.....	.....
Vermont.....	1	1	2	1	1	1	.....	.....	1	1	1	1	.....	.....	.....
Massachusetts.....	1	8	6	1	2	.....	1	5	5	1	1	2	.....	.....	.....
Rhode Island.....	2	1	.....	2	1	.....	2	.....	.....	2	1	.....	2	.....	.....
Connecticut.....	2	4	2	1	1	.....	1	3	3	1	1	.....	.....	.....	.....
New York.....	6	4	5	1	1	1	5	3	5	3	2	2	.....	.....	.....
New Jersey.....	2	2	2	2	1	1	2	2	1	2	2	3	.....	1	.....
Pennsylvania.....	3	3	3	1	1	1	3	2	3	1	1	.....	.....	.....	.....
Delaware.....	3	1	1	1	1	1	1	1	1	1	1	1	.....	.....	.....
Maryland.....	1	1	1	1	1	1	1	1	.....	1	1	.....	.....	.....	.....
II. SOUTHERN.															
Virginia.....	9	4	(1)	4	1	.....	6	.....	.....	5	3	.....	.....	.....	.....
North Carolina.....	6	4	3	2	2	1	.....	.....	.....	2	2	2	1	.....	.....
South Carolina.....	3	3	2	2	2	2	1	1	.....	2	2	.....	.....	.....	.....
Georgia.....	5	5	5	2	3	1	2	4	1	2	2	3	.....	.....	.....
Florida.....	3	3	.....	2	2	.....	1	1	.....	2	2	.....	.....	.....	.....
Tennessee.....	2	3	(1)	2	3	(1)	.....	1	(1)	.....	1	(1)	.....	.....	.....
Alabama.....	4	4	4	2	2	1	2	1	2	2	2	2	.....	1	.....
Mississippi.....	3	3	3	2	2	2	2	1	2	2	2	2	.....	.....	.....
Arkansas.....	3	3	(1)	3	2	(1)	1	1	(1)	2	1	(1)	.....	.....	.....
Louisiana.....	3	5	5	2	1	1	1	1	1	2	3	3	.....	.....	.....
Texas.....	6	5	2	2	.....	1	2	5	.....	4	.....	1	.....	.....	.....
III. EAST CENTRAL.															
West Virginia.....	2	5	1	1	1	1	2	1	.....	.....	1	1	.....	7	.....
Ohio.....	8	14	1	1	3	1	6	8	.....	3	4	.....	.....	.....	.....
Kentucky.....	2	2	2	2	2	2	1	.....	.....	2	2	.....	.....	.....	.....
Michigan.....	3	3	3	1	1	1	1	1	1	2	2	2	.....	.....	.....
Indiana.....	4	4	3	1	1	1	3	3	3	2	2	3	2	1	.....
Wisconsin.....	2	2	2	1	1	.....	1	1	1	1	1	1	.....	.....	.....
Illinois.....	2	2	3	(1)	2	3	1	1	1	2	2	2	.....	.....	.....
Minnesota.....	4	2	1	2	1	.....	2	2	1	2	1	1	.....	.....	.....
Iowa.....	2	3	(1)	1	1	.....	2	2	.....	1	1	.....	.....	.....	.....
Missouri.....	1	1	1	1	1	1	1	1	.....	1	1	1	.....	.....	.....
IV. WEST CENTRAL.															
North Dakota.....	1	2	1	1	1	1	1	1	1	1	2	1	.....	.....	.....
South Dakota.....	2	2	2	1	1	1	.....	.....	.....	2	2	2	.....	.....	.....
Nebraska.....	1	1	1	1	1	1	.....	.....	.....	.....	1	1	.....	.....	.....
Kansas.....	1	2	2	1	1	.....	.....	.....	.....	2	2	2	.....	.....	.....
Oklahoma.....	3	3	2	1	1	1	.....	.....	2	3	3	2	.....	.....	.....
Montana.....	2	1	1	1	1	1	1	1	1	2	1	1	.....	.....	.....
Wyoming.....	1	1	1	1	1	.....	1	1	1	1	1	1	.....	.....	.....
Colorado.....	3	6	1	1	1	1	3	5	.....	1	1	1	.....	.....	.....
New Mexico.....	5	2	1	1	1	1	2	.....	.....	4	2	1	.....	.....	.....
V. PACIFIC.															
Idaho.....	3	2	2	1	1	1	3	1	1	1	1	1	.....	.....	.....
Utah.....	1	1	1	1	1	1	1	1	1	1	1	1	.....	1	.....
Arizona.....	1	1	1	1	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....
Nevada.....	1	1	1	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....
Washington.....	3	2	2	1	1	1	1	1	1	2	2	2	.....	.....	.....
Oregon.....	1	1	1	1	1	1	1	1	1	1	1	1	.....	.....	.....
California.....	6	7	6	1	1	1	1	2	2	6	6	5	.....	.....	.....

<sup>1</sup> No report.<sup>2</sup> Different institutions some of which conduct teacher training work in two or more fields.

TABLE 28.—Number of teachers of teacher-training courses in institutions federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			Training vocational teachers for—											
				Agriculture.			Trade or Industry.			Home economics.			Not classified subject.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
United States...	1,082	829	524	293	222	116	359	219	95	414	366	263	16	22	50
REGION.															
I. North Atlantic...	277	197	113	75	29	18	116	86	61	86	81	34	.....	1	.....
II. Southern...	218	163	115	79	66	24	45	19	15	93	73	76	1	5	.....
III. East Central...	249	226	108	37	53	30	113	80	8	84	81	35	15	9	35
IV. West Central...	131	115	96	53	43	19	13	13	4	65	59	61	.....	.....	12
V. Pacific...	207	128	92	49	31	25	72	21	7	86	69	57	.....	7	3
I. NORTH ATLANTIC.															
Maine.....	8	8	14	4	3	7	.....	(1)	2	1	5	5	.....	.....	.....
New Hampshire.....	5	(1)	9	2	(1)	4	1	(1)	.....	2	(1)	5	.....	.....	.....
Vermont.....	9	2	6	3	1	2	.....	.....	.....	6	1	4	.....	.....	.....
Massachusetts.....	53	57	17	15	4	.....	16	33	12	22	20	5	.....	.....	.....
Rhode Island.....	20	2	.....	2	1	.....	11	.....	.....	7	.....	.....	.....	.....	.....
Connecticut.....	24	23	7	17	(1)	.....	2	6	7	5	17	.....	.....	.....	.....
New York.....	94	43	30	18	6	.....	51	23	22	25	14	8	.....	.....	.....
New Jersey.....	18	24	5	7	6	1	4	8	1	7	9	3	.....	1	.....
Pennsylvania.....	37	20	18	4	6	2	29	11	16	4	3	.....	.....	.....	.....
Delaware.....	5	13	6	1	1	1	1	4	1	3	8	4	.....	.....	.....
Maryland.....	4	5	1	2	1	1	1	1	.....	1	3	.....	.....	.....	.....
II. SOUTHERN.															
Virginia.....	19	12	.....	4	2	.....	5	.....	.....	10	10	.....	.....	.....	.....
North Carolina.....	22	19	10	8	11	2	.....	.....	.....	13	8	8	1	.....	.....
South Carolina.....	22	12	3	13	11	3	1	1	.....	8	.....	.....	.....	.....	.....
Georgia.....	19	25	17	5	15	5	6	5	2	8	5	10	.....	.....	.....
Florida.....	10	12	.....	3	3	.....	2	3	.....	5	6	.....	.....	.....	.....
Tennessee.....	3	7	.....	3	4	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Alabama.....	51	38	20	26	12	4	12	3	4	13	18	12	.....	5	.....
Mississippi.....	20	24	21	7	4	5	1	1	.....	12	19	16	.....	.....	.....
Arkansas.....	7	6	.....	3	2	.....	.....	1	.....	4	3	.....	.....	.....	.....
Louisiana.....	17	3	31	2	2	2	10	(1)	9	5	1	20	.....	.....	.....
Texas.....	28	5	13	5	.....	3	8	5	.....	15	.....	10	.....	.....	.....
III. EAST CENTRAL.															
West Virginia.....	11	11	6	3	1	4	5	1	.....	3	2	2	.....	7	.....
Ohio.....	67	33	2	5	3	2	56	25	.....	6	5	.....	.....	.....	.....
Kentucky.....	19	16	6	6	5	6	1	.....	.....	12	11	.....	.....	.....	.....
Michigan.....	13	13	11	2	2	2	4	4	2	7	7	7	.....	.....	.....
Indiana.....	31	23	27	2	6	.....	10	9	.....	4	6	.....	15	2	27
Wisconsin.....	25	35	.....	5	9	.....	9	13	.....	11	13	.....	.....	.....	.....
Illinois.....	25	36	26	.....	14	8	11	8	1	14	14	17	.....	.....	.....
Minnesota.....	24	32	22	5	6	8	7	13	5	12	13	9	.....	.....	.....
Iowa.....	16	13	.....	4	3	.....	5	4	.....	7	6	.....	.....	.....	.....
Missouri.....	18	14	8	5	4	.....	5	3	.....	8	7	.....	.....	.....	8
IV. WEST CENTRAL.															
North Dakota.....	10	17	12	5	4	.....	.....	6	.....	5	7	.....	.....	.....	12
South Dakota.....	8	8	17	2	2	5	.....	.....	.....	6	6	12	.....	.....	.....
Nebraska.....	28	32	16	28	15	6	.....	.....	.....	.....	17	10	.....	.....	.....
Kansas.....	8	8	24	3	3	.....	.....	.....	.....	5	5	24	.....	.....	.....
Oklahoma.....	28	(1)	.....	2	(1)	.....	.....	(1)	.....	26	(1)	.....	.....	(1)	.....
Montana.....	9	4	6	2	1	2	2	1	2	5	2	2	.....	.....	.....
Wyoming.....	6	6	7	3	2	.....	1	1	2	2	3	5	.....	.....	.....
Colorado.....	27	30	12	7	14	5	9	5	.....	11	11	7	.....	.....	.....
New Mexico.....	7	10	2	1	2	1	1	.....	.....	5	8	1	.....	.....	.....
V. PACIFIC.															
Idaho.....	11	6	4	1	1	.....	4	1	1	6	4	.....	.....	.....	3
Utah.....	14	10	5	7	1	2	3	1	1	4	1	2	.....	7	.....
Arizona.....	5	7	3	1	.....	.....	.....	.....	.....	4	7	3	.....	.....	.....
Nevada.....	2	1	1	.....	.....	.....	.....	.....	.....	2	1	1	.....	.....	.....
Washington.....	13	10	8	1	2	3	4	2	.....	8	6	5	.....	.....	.....
Oregon.....	10	12	6	4	3	2	2	4	1	4	5	3	.....	.....	.....
California.....	152	82	65	35	24	18	59	13	4	58	45	43	.....	.....	.....

1 No report.

TABLE 29.—*Sex of teachers of teacher-training courses in institutions federally aided, by States, for the year ended June 30, 1920.*

Region or State.	Training vocational teachers of										
	Total.			Agriculture.		Trade or industry.		Home economics.		Not specified subject.	
	Both sexes.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	a	b	c	d	e	f	g	h	i	j	k
United States....	1,082	657	425	279	14	320	39	42	372	16	.....
REGION.											
I. North Atlantic....	277	100	87	75	.....	107	9	3	78	.....	.....
II. Southern.....	218	112	106	79	.....	31	14	1	92	1	.....
III. East Central.....	249	165	84	27	.....	108	5	5	79	15	.....
IV. West Central.....	131	65	66	39	14	13	.....	13	52	.....	.....
V. Pacific.....	207	125	82	49	.....	61	11	15	71	.....	.....
I. NORTH ATLANTIC.											
Maine.....	8	4	4	14	.....	.....	.....	.....	4	.....	.....
New Hampshire.....	5	4	2	2	.....	1	.....	1	1	.....	.....
Vermont.....	9	3	6	3	.....	.....	.....	.....	6	.....	.....
Massachusetts.....	53	30	23	15	.....	15	1	.....	22	.....	.....
Rhode Island.....	20	13	7	2	.....	11	.....	.....	7	.....	.....
Connecticut.....	24	24	.....	17	.....	2	.....	5	.....	.....	.....
New York.....	94	66	28	18	.....	48	3	.....	25	.....	.....
New Jersey.....	18	13	5	7	.....	4	.....	2	5	.....	.....
Pennsylvania.....	37	28	9	4	.....	24	5	.....	4	.....	.....
Delaware.....	5	2	3	1	.....	1	.....	.....	3	.....	.....
Maryland.....	4	3	1	2	.....	1	.....	.....	1	.....	.....
II. SOUTHERN.											
Virginia.....	19	9	10	4	.....	5	.....	1	10	.....	.....
North Carolina.....	22	9	13	8	.....	.....	.....	.....	13	1	.....
South Carolina.....	22	14	8	13	.....	1	.....	.....	8	.....	.....
Georgia.....	19	11	8	5	.....	6	.....	.....	8	.....	.....
Florida.....	10	5	5	3	.....	2	.....	.....	5	.....	.....
Tennessee.....	3	3	.....	3	.....	.....	.....	.....	.....	.....	.....
Alabama.....	51	38	13	26	.....	12	.....	.....	13	.....	.....
Mississippi.....	20	9	11	7	.....	1	.....	1	11	.....	.....
Arkansas.....	7	3	4	3	.....	.....	.....	.....	4	.....	.....
Louisiana.....	17	2	15	2	.....	.....	10	.....	5	.....	.....
Texas.....	28	9	19	5	.....	4	4	.....	15	.....	.....
III. EAST CENTRAL.											
West Virginia.....	11	8	3	3	.....	5	.....	.....	3	.....	.....
Ohio.....	67	61	6	5	.....	56	.....	.....	6	.....	.....
Kentucky.....	19	8	11	6	.....	1	.....	1	11	.....	.....
Michigan.....	13	4	9	2	.....	2	2	.....	7	.....	.....
Indiana.....	31	26	5	2	.....	9	1	.....	4	15	.....
Wisconsin.....	25	14	11	5	.....	9	.....	.....	11	.....	.....
Illinois.....	25	13	12	.....	.....	11	.....	2	12	.....	.....
Minnesota.....	24	11	13	5	.....	6	1	.....	12	.....	.....
Iowa.....	16	10	6	4	.....	4	1	2	5	.....	.....
Missouri.....	18	10	8	5	.....	5	.....	.....	8	.....	.....
IV. WEST CENTRAL.											
North Dakota.....	10	5	5	5	.....	.....	.....	.....	5	.....	.....
South Dakota.....	8	4	4	2	.....	.....	.....	2	4	.....	.....
Nebraska.....	28	15	13	15	13	.....	.....	.....	.....	.....	.....
Kansas.....	8	3	5	3	.....	.....	.....	.....	5	.....	.....
Oklahoma.....	28	0	19	2	.....	.....	.....	7	19	.....	.....
Montana.....	9	4	5	2	.....	2	.....	.....	5	.....	.....
Wyoming.....	6	5	1	3	.....	1	.....	1	1	.....	.....
Colorado.....	27	18	9	6	1	9	.....	3	8	.....	.....
New Mexico.....	7	2	5	1	.....	1	.....	.....	5	.....	.....
V. PACIFIC.											
Idaho.....	11	5	6	1	.....	4	.....	.....	6	.....	.....
Utah.....	14	11	3	7	.....	3	.....	1	3	.....	.....
Arizona.....	5	1	4	1	.....	.....	.....	.....	4	.....	.....
Nevada.....	2	.....	2	.....	.....	.....	.....	.....	2	.....	.....
Washington.....	13	5	8	1	.....	4	.....	.....	8	.....	.....
Oregon.....	10	6	4	4	.....	2	.....	.....	4	.....	.....
California.....	152	97	55	35	.....	48	11	14	44	.....	.....



TABLE 30.—Number of pupils enrolled in vocational teacher-training courses in institutions federally aided, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			In courses training vocational teachers of—											
				Agriculture.			Trade or industry.			Home economics.			Not classified subject.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
United States.....	12,456	7,364	6,589	2,310	1,334	1,534	6,150	2,774	1,191	3,652	3,098	3,319	344	158	635
REGION.															
I. North Atlantic.....	3,034	2,315	1,014	352	247	155	1,681	1,327	450	1,001	732	409		9	
II. Southern.....	2,206	1,042	1,597	849	389	193	344	209	65	970	406	1,239	43	38	
III. East Central.....	3,846	2,391	2,082	343	282	1,010	2,423	965	371	779	1,087	376	301	57	325
IV. West Central.....	1,198	807	1,316	491	164	79	109	87	28	598	556	951			258
V. Pacific.....	2,172	809	580	275	252	97	1,593	186	187	304	317	244		54	52
I. NORTH ATLANTIC.															
Maine.....	82	84	115	15	14	49		(1)	4	67	70	62			
New Hampshire.....	20	3	35	3	3	8		(1)		15	(1)	27			
Vermont.....	73	70	50	10	7	6	2			63	63	44			
Massachusetts.....	749	897	129	79	69		352	523	93	318	305	36			
Rhode Island.....	238	17		48	7					123	10				
Connecticut.....	66	76	9	13	1		67			3	39				
New York.....	1,081	426	395	82	69	38	50	36	9						
New Jersey.....	206	267	120	32	23	22	785	204	186	224	153	171			
Pennsylvania.....	404	422	100	32	37	15	61	191	61	113	44	37		9	
Delaware.....	51	10	51	14	4	7	332	352	85	40	33				
Maryland.....	54	43	10	24	13	10	11	6	12	26		32			
II. SOUTHERN															
Virginia.....	269	5		63	3		21	15		9	15				
North Carolina.....	205	91	40				85			121	2				
South Carolina.....	92	85	7	72	55	7				84	56	39	45		
Georgia.....	169	134	116	65	79	19	(1)	30		20					
Florida.....	48	67		14	3		50	37	10	54	18	87			
Tennessee.....	31	58		31	35		5	(1)		29	64				
Alabama.....	310	222	224	122	63	11					23				
Mississippi.....	268	179	133	46	66	47	91	51	47	97	70	166		38	
Arkansas.....	161	90		54	35		4	4		218	109	91			
Louisiana.....	203	38	418	49	15	25	13	14		94	41				
Texas.....	459	73	634	255		74	4	(1)	8	150	23	385			
							92	73		103		580			

TABLE 30.—Number of pupils enrolled in vocational teacher-training courses in institutions federally aided, by States, etc.—Continued.

Region or State	Total.			In courses training vocational teachers.											
				Agriculture.			Trade or industry.			Home economics.			Not classified subject.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
<b>III. EAST CENTRAL.</b>															
West Virginia.....	141	48	22	21	9	7	93	4	-----	27	-----	15	-----	35	-----
Ohio.....	1,286	356	27	( <sup>1</sup> )	7	27	1,258	318	-----	28	31	-----	-----	-----	-----
Kentucky.....	146	224	21	28	54	21	( <sup>1</sup> )	-----	-----	118	170	-----	-----	-----	-----
Michigan.....	186	272	141	61	30	45	50	171	15	75	71	81	-----	-----	-----
Indiana.....	634	244	272	14	18	-----	276	147	-----	43	57	-----	301	22	272
Wisconsin.....	279	-----	-----	35	-----	-----	128	-----	-----	116	-----	-----	-----	-----	-----
Illinois.....	385	606	193	( <sup>1</sup> )	34	60	285	132	4	100	440	129	-----	-----	-----
Minnesota.....	366	235	1,353	100	52	850	190	125	352	76	58	151	-----	-----	-----
Iowa.....	181	325	-----	26	62	-----	77	28	-----	78	235	-----	-----	-----	-----
Missouri.....	242	81	53	58	16	-----	66	40	-----	118	25	-----	-----	-----	53
<b>IV. WEST CENTRAL.</b>															
North Dakota.....	131	77	145	68	5	-----	-----	12	-----	63	60	-----	-----	-----	145
South Dakota.....	71	194	-----	13	78	-----	-----	-----	-----	58	116	-----	-----	-----	-----
Nebraska.....	195	43	111	195	18	44	-----	-----	-----	-----	25	67	-----	-----	-----
Kansas.....	100	160	620	18	12	-----	-----	-----	-----	82	148	620	-----	-----	-----
Oklahoma.....	141	( <sup>1</sup> )	113	14	( <sup>1</sup> )	-----	-----	( <sup>1</sup> )	-----	127	( <sup>1</sup> )	-----	-----	( <sup>1</sup> )	113
Montana.....	81	46	100	51	23	15	1	-----	18	29	23	67	-----	-----	-----
Wyoming.....	24	21	22	6	5	-----	10	11	10	8	5	12	-----	-----	-----
Colorado.....	330	187	184	123	21	9	93	64	-----	114	102	175	-----	-----	-----
New Mexico.....	125	79	21	3	2	11	5	-----	-----	117	77	10	-----	-----	-----
<b>V. PACIFIC.</b>															
Idaho.....	64	41	57	8	2	-----	8	3	5	48	36	-----	-----	-----	52
Utah.....	203	115	65	95	36	30	73	6	19	35	19	16	-----	54	-----
Arizona.....	24	( <sup>1</sup> )	34	14	-----	-----	-----	-----	-----	10	( <sup>1</sup> )	34	-----	-----	-----
Nevada.....	4	10	16	-----	-----	-----	-----	-----	-----	4	10	16	-----	-----	-----
Washington.....	130	223	107	17	15	14	61	48	18	52	160	75	-----	-----	-----
Oregon.....	127	61	132	16	6	6	18	2	40	93	53	86	-----	-----	-----
California.....	1,620	359	169	125	193	47	1,433	127	105	62	39	17	-----	-----	-----

<sup>1</sup> No report.

TABLE 31.—*Sex of pupils enrolled in vocational teacher-training courses in institutions federally aided, by States, for the year ended June 30, 1920.*

Region or State.	Total.			In courses training vocational teachers of—							
				Agriculture.		Trade or industry.		Home economics.		Not classified subject.	
	Both sexes.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	a	b	c	d	e	f	g	h	i	j	k
United States.....	12,456	6,985	5,471	2,150	160	4,560	1,590	76	3,576	199	145
REGION.											
I. North Atlantic.....	3,034	1,722	1,312	351	1	1,371	310	.....	1,001	.....	.....
II. Southern.....	2,206	1,209	997	848	1	318	26	.....	970	43	.....
III. East Central.....	3,846	2,677	1,169	343	.....	2,102	321	76	703	150	145
IV. West Central.....	1,198	464	734	355	136	109	.....	.....	598	.....	.....
V. Pacific.....	2,172	913	1,259	253	22	660	933	.....	304	.....	.....
I. NORTH ATLANTIC.											
Maine.....	72	14	68	14	1	.....	.....	.....	67	.....	.....
New Hampshire.....	20	5	15	3	.....	2	.....	.....	15	.....	.....
Vermont.....	73	10	63	10	.....	.....	.....	.....	63	.....	.....
Massachusetts.....	749	424	325	70	.....	345	7	.....	318	.....	.....
Rhode Island.....	238	114	124	48	.....	66	1	.....	123	.....	.....
Connecticut.....	66	63	3	13	.....	50	.....	.....	3	.....	.....
New York.....	1,091	617	474	82	.....	535	250	.....	224	.....	.....
New Jersey.....	206	93	113	32	.....	61	.....	.....	113	.....	.....
Pennsylvania.....	404	312	92	32	.....	280	52	.....	40	.....	.....
Delaware.....	51	25	26	14	.....	11	.....	.....	26	.....	.....
Maryland.....	54	45	9	24	.....	21	.....	.....	9	.....	.....
II. SOUTHERN.											
Virginia.....	269	147	122	63	.....	84	1	.....	121	.....	.....
North Carolina.....	205	121	84	78	.....	.....	.....	.....	84	43	.....
South Carolina.....	92	72	20	72	.....	.....	.....	.....	20	.....	.....
Georgia.....	169	115	54	65	.....	50	.....	.....	54	.....	.....
Florida.....	48	19	29	14	.....	5	.....	.....	29	.....	.....
Tennessee.....	31	31	.....	31	.....	.....	.....	.....	.....	.....	.....
Alabama.....	310	207	103	121	1	86	5	.....	97	.....	.....
Mississippi.....	268	48	220	46	.....	2	2	.....	218	.....	.....
Arkansas.....	161	66	95	54	.....	12	1	.....	94	.....	.....
Louisiana.....	203	49	154	49	.....	.....	4	.....	150	.....	.....
Texas.....	450	334	116	255	.....	79	13	.....	103	.....	.....
III. EAST CENTRAL.											
West Virginia.....	141	87	54	21	.....	66	27	.....	27	.....	.....
Ohio.....	1,236	1,250	36	(1)	(1)	1,250	8	.....	28	.....	.....
Kentucky.....	146	28	118	28	.....	(1)	(1)	.....	118	.....	.....
Michigan.....	186	186	.....	61	.....	50	.....	75	.....	.....	.....
Indiana.....	634	299	335	14	.....	128	148	1	42	156	145
Wisconsin.....	279	163	116	35	.....	128	.....	.....	116	.....	.....
Illinois.....	385	205	180	(1)	(1)	205	80	.....	100	.....	.....
Minnesota.....	366	265	101	100	.....	165	25	.....	76	.....	.....
Iowa.....	181	70	111	26	44	39	33	.....	78	.....	.....
Missouri.....	242	124	118	58	.....	66	.....	.....	118	.....	.....
IV. WEST CENTRAL.											
North Dakota.....	131	68	63	68	.....	.....	.....	.....	63	.....	.....
South Dakota.....	71	13	58	13	.....	.....	.....	.....	58	.....	.....
Nebraska.....	195	59	136	59	136	.....	.....	.....	.....	.....	.....
Kansas.....	100	18	82	18	.....	.....	.....	.....	82	.....	.....
Oklahoma.....	141	14	127	14	.....	.....	.....	.....	127	.....	.....
Montana.....	81	52	29	51	.....	1	.....	.....	29	.....	.....
Wyoming.....	24	16	8	6	.....	10	.....	.....	8	.....	.....
Colorado.....	330	216	114	123	.....	93	.....	.....	114	.....	.....
New Mexico.....	125	8	117	3	.....	5	.....	.....	117	.....	.....
V. PACIFIC.											
Idaho.....	64	16	48	8	.....	8	.....	.....	48	.....	.....
Utah.....	203	153	50	95	.....	58	15	.....	35	.....	.....
Arizona.....	24	14	10	14	.....	.....	.....	.....	10	.....	.....
Nevada.....	4	.....	4	.....	.....	.....	.....	.....	4	.....	.....
Washington.....	130	73	57	17	.....	56	5	.....	52	.....	.....
Oregon.....	127	34	93	16	.....	18	.....	.....	93	(1)	(1)
California.....	1,620	623	997	103	22	520	913	.....	62	.....	.....

(1) No report.

TABLE 32.—State directors and supervisors—Number paid or reimbursed out of Federal, State, and local funds, and number giving full time and part time to supervision, by States, for years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			Source of salary.									Apportionment of time.								
				Federal and State funds.			State funds.			Other, none, and no report.			Give full time to supervision.			Give part time to supervision.			No report.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
United States.....	217	182	139	180	105	54	30	40	44	7	37	41	117	57	63	86	105	51	14	20	25
REGION.																					
I. North Atlantic.....	61	47	49	51	32	19	5	11	19	5	4	11	33	22	31	21	20	13	7	5	5
II. Southern.....	46	44	22	42	29	10	3	4	7	1	11	5	29	8	6	16	34	9	1	2	7
III. East Central.....	47	38	31	40	19	11	7	14	7		5	13	27	15	13	17	18	15	3	5	3
IV. West Central.....	23	20	21	20	10	8	8	5	6		5	7	12	2	6	15	14	7	1	4	8
V. Pacific.....	35	33	16	27	15	6	7	6	5	1	12	5	16	10	7	17	19	7	2	4	2
I. NORTH ATLANTIC.																					
Maine.....	6	4	3	4	3		2				1	3				5	3	3	1	1	
New Hampshire.....	2	1	1	2	1	1										2	1	1			
Vermont.....	1	1	2	1	1	1															
Massachusetts.....	12	11	10	11	7	7	1	4				1	1	1	1			1			
Rhode Island.....	5	4		3	2					2	2	3	10	6	6		4		2	1	4
Connecticut.....	2	2	10	1			1	2	6			4				3			2	2	
New York.....	13	5	5	13	5	4			1				12	3	10	1	2				
New Jersey.....	4	4	4	3	3	3			1	1	1		2	2	5	2	2				
Pennsylvania.....	9	9	9	9	4			5	9				7	7	4	2	1	4		1	1
Delaware.....	4	3	1	3	3	1	1							1	1	4	2				
Maryland.....	3	3	4	1	3	2			2	2			1			2	3	4			
II. SOUTHERN.																					
Virginia.....	3	3	1	3		1					3		2	1		1	2				1
North Carolina.....	5	2	2	4	2		1						1			2					1
South Carolina.....	3	3	1	2	3	1				1		1	4			2	2	1	1		1
Georgia.....	5	5	3	4	4	1	1	1	2				2	1	1	3	4	2			
Florida.....	3	3	3	3	3						2	3	3				2	2		1	1
Tennessee.....	3	5		3	2						3		2			1	5				
Alabama.....	4	3		4				1	3		2	1	3			1	3				4

Mississippi.....	5	4	2	5	4	2	1					2	2	2	3	2	1		
Arkansas.....	4	5	1	3	4	1	1				1				4	1			
Louisiana.....	3	3	1	3	3	1						2	2	1	1	6	2	1	
Texas.....	2	2	4	2	6	2		2	2					2					
III. EAST CENTRAL.																			
West Virginia.....	7	7	5	7	6	2		1	1			2			7	5	3		2
Ohio.....	6	2	4	6					1			2	3		2	2	2		1
Kentucky.....	4	3	2	3		1	1	1	1		2			4	2	3	1		
Michigan.....	4	4	3	4	2	1		2						1		3	2		
Indiana.....	4	4	3				4	3	3			2		1	1	3	3		
Wisconsin.....	5	4	6	5		1		4	1			4		3	3				
Illinois.....	5	3	3	3	2	3	1	1			1	2		5	2	2	1	1	
Minnesota.....	1	4	3	3	3	1											1	3	2
Iowa.....	1	3	1	4	3	1	1				1			3	1	1	1	1	1
Missouri.....		4	1	3	3	1	1							4	1	1			
IV. WEST CENTRAL.																			
North Dakota.....	1	2	4		2		1					4				1	2		4
South Dakota.....	2	2	2	1			1		2		2					2			
Nebraska.....	4	3	3	3	1	1	1	1	1		1	1	4	1	1	2	1	1	2
Kansas.....	3	1	1	2	1	1	1	1					2	1	1		2		
Oklahoma.....	3	4	1	1		1	1	1					2	1	2		1	1	
Montana.....	4	3	3	3	1	1	1	1			2	2				2	1		
Wyoming.....	4	1	3	3	1	2	1						1	1	2	4	1	2	2
Colorado.....	4	1	1	4	1	1	1		1						1	4	1	2	
New Mexico.....	3	3	2	3	3				2				2		2	1	3		
V. PACIFIC.																			
Idaho.....	4	4	1	4	3	1					1		3	2		1	2	1	
Utah.....	5	4	4	4	1	1	1	2	2		1		3	2		1	1		
Arizona.....	4	4	1	3	3		1	1	1			1	3	1	3	2	1	1	1
Nevada.....	4	4	1	4	4			1	1				4	1		3	3	1	
Washington.....	5	5	2	4	4	2	1		1				1	1	1	3	5	1	3
Oregon.....	5	3	4	2		2	2			1	3		1	1	1	3	1	1	1
California.....	2	2	3	6	2	2	2	2	1		4		4	4	2	4	4	1	

TABLE 33.—Amount of salaries of State directors and supervisors paid or reimbursed out of Federal and State funds, by States, for the years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			Source of salaries.					
				Federal funds.			State funds.		
	1920	1919	1918	1920	1919	1918	1920	1919	1918
	a	b	c	d	e	f	g	h	i
United States.....	\$434,086.35	\$245,175.64	\$181,453.40	\$161,228.80	\$81,120.78	\$40,842.28	\$272,857.55	\$164,054.86	\$140,611.12
REGION.									
I. North Atlantic.....	104,772.84	85,054.77	85,999.82	43,976.44	27,405.59	14,007.58	60,796.40	57,649.18	71,992.24
II. Southern.....	98,463.50	46,784.08	21,785.01	45,056.74	20,509.54	8,952.09	53,406.76	26,254.54	12,832.92
III. East Central.....	109,544.31	56,122.61	29,018.59	36,401.07	17,090.30	5,924.29	73,143.24	39,032.31	23,094.30
IV. West Central.....	61,080.58	19,390.37	15,675.02	15,848.66	6,351.44	6,262.50	45,231.92	13,038.93	9,412.52
V. Pacific.....	60,225.12	37,843.81	28,974.96	19,945.89	9,763.91	5,695.82	40,279.23	28,079.90	23,279.14
I. NORTH ATLANTIC.									
Maine.....	3,450.45	5,558.32		1,240.26	1,689.40		2,210.19	3,868.92	
New Hampshire.....	1,966.64	749.96	500.00	983.32	374.98	250.00	983.32	374.98	250.00
Vermont.....	1,375.00	3,882.44	2,075.16	687.50	1,695.85	1,037.58	687.50	2,186.59	1,037.58
Massachusetts.....	34,550.00	25,650.01	13,700.00	11,750.00	7,058.34	5,465.00	22,800.00	18,591.67	8,235.00
Rhode Island.....	2,814.75	1,065.52		1,407.38	532.76		1,407.37	532.76	
Connecticut.....	7,528.10	5,250.00	15,000.00	1,264.05			6,264.05	5,250.00	15,000.00
New York.....	18,912.94	14,201.66	13,624.68	9,456.46	6,100.83	3,017.50	9,456.48	8,100.83	10,607.16
New Jersey.....	5,199.96	580.00	10,200.00	2,599.98	320.00		2,599.98	260.00	7,350.00
Pennsylvania.....	19,875.00	18,650.00	22,100.00	9,937.49	4,900.00	2,850.00	9,937.51	13,750.00	22,100.00
Delaware.....	6,350.00	5,866.86	1,500.00	3,275.00	2,933.43	750.00	3,075.00	2,933.43	750.00
Maryland.....	2,750.00	3,600.00	7,300.00	1,375.00	1,800.00	637.50	1,375.00	1,800.00	6,662.50
II. SOUTHERN.									
Virginia.....	7,058.30	(1)	1,041.66	3,529.15	(1)	520.83	3,529.15	(1)	520.83
North Carolina.....	11,278.26	2,866.66	2,600.00	4,114.13	1,133.33	1,300.00	7,164.13	1,733.33	1,300.00
South Carolina.....	4,651.98	1,229.11	1,081.31	2,325.99	1,229.11	1,081.31	2,325.99		
Georgia.....	7,648.00	5,379.74	3,150.00	3,523.99	2,389.88	875.00	4,124.01	2,989.86	2,275.00
Florida.....	7,000.00	404.42		3,500.00	202.21		3,500.00	202.21	
Tennessee.....	6,954.00	650.00		3,477.00			3,477.00	650.00	
Alabama.....	9,520.85	6,100.00	3,333.33	4,066.67	3,050.00	1,666.66	5,454.18	3,050.00	1,666.67
Mississippi.....	8,429.75	8,422.46	1,600.00	3,608.63	3,541.21	400.00	4,821.12	4,881.25	1,200.00

Arkansas.....	9,250.00	8,400.00	2,200.00	4,125.00	3,650.00	1,100.00	5,125.00	4,750.00	1,100.00
Louisiana.....	8,400.00	9,550.76	6,778.71	3,650.00	3,433.33	2,008.29	4,750.00	6,117.43	4,770.42
Texas.....	18,272.36	3,760.93		9,136.18	1,880.47		9,136.18	1,880.46	
III. EAST CENTRAL.									
West Virginia.....	5,986.08	5,941.68	1,600.00	2,483.04	2,758.34	800.00	3,483.04	3,183.34	800.00
Ohio.....	10,553.33	(1)		5,276.67	(1)		5,276.66	(1)	
Kentucky.....	6,250.00	1,000.00	437.50	2,625.00		218.75	3,625.00	1,000.00	218.75
Michigan.....	10,278.18	3,999.99	661.13	5,139.09	1,999.99	330.56	5,139.09	2,000.00	330.57
Indiana.....	15,850.00	1,565.00	10,800.00				15,850.00	1,565.00	10,800.00
Wisconsin.....	13,305.49	11,112.00	5,570.00	1,366.66		220.00	11,938.83	11,112.00	5,350.00
Illinois.....	15,600.00	7,800.00	900.00	7,750.00	3,900.00	900.00	7,850.00	3,900.00	
Minnesota.....	11,824.93	9,100.00	5,449.96	3,912.46	2,550.00	1,724.98	7,912.47	6,550.00	3,724.98
Iowa.....	9,950.00	5,303.94	3,400.00	4,615.00	2,481.97	1,530.00	5,335.00	2,821.97	1,870.00
Missouri.....	9,946.30	10,300.00	200.00	3,223.15	3,400.00	200.00	6,723.15	6,900.00	
IV. WEST CENTRAL.									
North Dakota.....	2,500.00	728.72			364.36		2,500.00	364.36	
South Dakota.....	2,450.00	(1)		100.00	(1)		2,350.00	(1)	
Nebraska.....	15,805.65	4,720.00	2,500.00	4,068.55	1,210.00	1,250.00	11,737.10	3,510.00	1,250.00
Kansas.....	7,000.00	1,791.66	2,000.00	2,500.00	447.92	1,000.00	4,500.00	1,343.74	1,000.00
Oklahoma.....	7,400.00	2,466.66	3,600.00	500.00		2,700.00	6,900.00	2,466.66	900.00
Montana.....	4,700.00	625.00	900.00	1,725.00	312.50	450.00	2,975.00	312.50	450.00
Wyoming.....	2,230.00	683.33	3,075.00	703.34	341.66	237.50	1,626.66	341.67	2,837.50
Colorado.....	12,428.19	1,875.00	2,500.00	3,318.40	625.00	625.00	9,109.79	1,250.00	1,875.00
New Mexico.....	6,466.74	6,500.00	1,100.02	2,933.37	3,050.00		3,533.37	3,450.00	1,100.02
V. PACIFIC.									
Idaho.....	5,143.03	1,685.30	424.96	2,171.52	842.65	212.48	2,971.51	842.65	212.48
Utah.....	9,116.66	7,250.00	7,750.00	2,908.33	1,000.00	1,250.00	6,208.33	6,250.00	6,500.00
Arizona.....	13,104.14	6,218.72	3,000.00	5,052.07	1,609.36		8,052.07	4,609.36	3,000.00
Nevada.....	4,365.46	3,389.81	2,000.00	2,182.73	1,307.74		2,182.73	2,082.07	2,000.00
Washington.....	6,804.16	5,799.98	5,800.00	1,889.58	1,504.16	1,233.34	4,914.58	4,295.82	4,566.66
Oregon.....	3,841.67	500.00		616.66	500.00		3,225.01		
California.....	17,850.00	13,000.00	10,000.00	5,125.00	3,000.00	3,000.00	12,725.00	10,000.00	7,000.00

1 No report.

TABLE 34.—*Reimbursement of expenditure for agriculture, for trade, industry, and home economics, and for teaching training, by States, for the years ended June 30, 1920, 1919, and 1918.*

Region or State.	Total.					For vocational agriculture.				
	1920 <sup>1</sup>	1919	1918	Increase 1920 over 1919. <sup>1</sup>	Increase 1919 over 1918.	1920 <sup>1</sup>	1919	1918	Increase 1920 over 1919. <sup>1</sup>	Increase 1919 over 1918.
	a	b	c	d	e	f	g	h	i	j
United States.....	\$2,474,617.12	\$1,558,456.50	\$830,126.96	\$916,160.56	\$728,329.60	\$889,886.31	\$528,679.13	\$273,587.68	\$361,207.18	\$255,091.45
REGION.										
I. North Atlantic.....	704,971.19	520,181.36	343,673.72	184,789.83	176,507.64	139,063.78	92,256.67	78,002.49	46,805.11	14,256.18
II. Southern.....	573,074.91	317,852.93	144,176.20	255,221.98	173,678.73	305,579.29	174,107.88	52,332.41	131,462.41	91,755.47
III. East Central.....	731,731.22	469,446.13	218,522.88	312,285.09	232,923.25	289,819.88	170,243.90	68,576.31	119,575.98	101,688.59
IV. West Central.....	212,868.43	125,564.88	70,074.22	87,303.55	55,490.66	99,322.76	51,639.90	25,892.48	47,682.86	25,747.42
V. Pacific.....	201,971.37	125,411.26	55,679.94	76,560.11	69,731.32	56,109.60	40,428.78	18,764.99	15,660.82	21,663.79
I. NORTH ATLANTIC.										
Maine.....	19,671.82	12,641.40	7,582.00	7,030.42	5,069.40	7,290.16	3,892.86	1,750.00	3,397.30	2,142.86
New Hampshire.....	10,913.14	11,702.59	11,391.35	789.45	311.24	5,000.00	5,000.00	5,000.00	0.00	0.00
Vermont.....	17,892.82	14,970.78	12,665.50	2,922.04	2,385.28	4,999.96	5,000.00	5,000.00	0.00	0.00
Massachusetts.....	100,996.98	75,868.87	46,543.61	25,735.41	28,714.90	5,000.00	5,000.00	5,000.00	0.00	0.00
Rhode Island.....	20,727.70	10,265.33	4,454.65	10,472.37	5,800.68	1,892.54	5,000.00	5,000.00	0.00	0.00
Connecticut.....	39,028.10	29,742.80	16,524.34	9,285.50	13,218.26	4,439.03	3,496.88	845.88	1,642.15	2,651.00
New York.....	191,060.94	159,490.00	115,504.20	31,570.94	43,985.74	31,511.54	18,679.52	19,535.00	12,832.62	2,856.08
New Jersey.....	63,011.79	44,312.00	27,203.98	18,699.79	17,108.02	12,765.38	9,574.03	6,296.18	3,191.35	3,277.85
Pennsylvania.....	196,714.26	135,556.88	90,510.75	61,157.38	45,046.13	53,373.16	34,598.08	30,744.79	18,775.08	3,853.29
Delaware.....	17,612.27	11,917.56	7,521.95	5,694.71	4,395.61	5,000.00	3,890.22	1,610.98	1,109.78	2,279.24
Maryland.....	27,341.37	14,333.65	3,831.33	13,007.72	10,502.32	7,792.01	3,127.08	2,219.06	4,664.92	308.02
II. SOUTHERN.										
Virginia.....	62,751.07	29,917.38	14,429.14	32,833.69	15,488.24	32,119.94	18,277.79	10,264.89	13,842.24	8,012.81
North Carolina.....	15,185.47	22,932.07	10,598.74	22,333.40	12,333.37	26,456.24	15,444.60	4,584.76	11,011.64	10,859.84
South Carolina.....	41,252.24	28,615.14	6,612.16	15,637.10	22,002.98	26,151.92	16,915.84	5,295.09	9,236.08	11,620.75
Georgia.....	69,412.06	39,740.02	27,507.80	20,672.04	12,232.22	37,148.81	23,510.49	14,739.26	13,638.32	8,721.22
Florida.....	24,186.88	12,717.48	4,790.05	11,469.40	7,927.45	10,077.10	5,568.75	2,730.27	4,508.35	2,833.48
Tennessee.....	45,477.16	22,778.97	14,184.22	22,698.19	8,594.75	21,179.16	12,547.21	10,189.22	8,631.95	2,857.99
Alabama.....	54,672.38	31,482.51	9,745.56	23,189.87	21,736.95	29,415.80	18,816.35	4,850.00	10,599.45	13,968.35
Mississippi.....	49,393.28	34,151.07	13,952.75	15,242.21	20,198.32	32,215.58	21,919.51	9,567.20	10,296.07	12,352.31
Arkansas.....	43,614.81	17,683.21	4,453.34	25,931.60	13,224.87	27,797.35	10,216.19	3,144.96	17,581.16	7,071.23



Louisiana.....	43,389.66	34,263.74	17,590.15	9,125.92	16,673.50	22,442.87	16,164.16	9,956.78	6,278.71	6,207.38
Texas.....	90,739.90	43,571.34	20,307.29	47,168.56	23,264.05	40,565.52	14,727.08	6,979.98	25,838.44	7,747.10
III. EAST CENTRAL.										
West Virginia.....	28,509.09	18,082.54	8,375.70	10,426.55	9,706.84	18,335.41	8,384.99	4,182.39	9,930.42	3,902.60
Ohio.....	131,378.08	87,644.07	24,619.08	43,734.01	63,024.99	36,594.71	23,612.49	5,275.09	12,982.22	18,337.40
Kentucky.....	52,181.04	33,189.80	13,888.77	18,991.15	19,321.12	29,175.98	17,090.68	2,091.94	12,085.30	14,998.74
Michigan.....	80,657.96	61,000.55	37,592.75	19,657.41	23,407.80	30,053.11	22,538.64	14,916.90	7,514.47	7,621.74
Indiana.....	74,205.65	49,323.32	35,115.31	24,882.33	14,208.01	31,551.70	20,049.34	15,775.85	11,502.66	4,273.19
Wisconsin.....	59,913.00	46,38.60	21,916.68	13,531.31	24,465.01	28,841.54	20,005.49	2,928.04	6,836.05	17,077.45
Illinois.....	159,997.92	30,747.81	26,476.16	79,250.11	54,271.65	43,803.67	28,700.34	7,825.12	15,103.33	20,875.22
Minnesota.....	65,322.16	45,767.36	27,868.06	19,554.80	17,899.30	24,831.65	18,623.74	10,800.00	6,207.91	7,823.74
Iowa.....	54,940.16	18,124.60	4,328.57	36,815.56	13,796.03	23,180.24	7,955.25	3,458.32	15,224.99	4,496.93
Missouri.....	74,626.16	29,184.30	16,361.80	45,441.86	12,822.50	25,451.87	3,283.24	1,021.66	22,168.63	2,261.58
IV. WEST CENTRAL.										
North Dakota.....	19,731.09	11,212.86	12,615.98	8,518.29	11,403.18	7,798.73	5,117.80	5,205.98	2,680.93	288.18
South Dakota.....	11,013.61	8,232.51	3,492.50	2,781.10	4,740.01	5,230.00	3,382.51	1,847.49	3,382.51	3,382.51
Nebraska.....	33,292.08	17,725.03	4,486.66	15,567.05	13,238.37	17,859.82	6,664.39	1,196.41	11,195.43	5,473.98
Kansas.....	35,506.44	15,348.80	4,180.17	20,157.55	11,168.72	22,198.41	9,372.29	1,760.03	12,826.12	7,612.26
Oklahoma.....	39,351.45	21,601.53	17,128.83	17,749.92	4,472.70	23,354.10	8,122.50	6,150.00	15,231.60	1,972.50
Montana.....	18,990.05	11,929.82	9,439.19	7,060.23	2,490.63	5,000.00	4,999.85	5,000.00	.15	2.15
Wyoming.....	13,382.66	9,110.12	5,780.59	4,272.54	3,329.53	4,789.08	4,270.25	2,498.55	518.83	1,771.70
Colorado.....	22,457.54	18,357.11	11,070.84	4,100.43	7,296.27	7,403.94	5,990.78	3,737.50	1,413.16	2,253.28
New Mexico.....	19,143.51	12,047.07	1,879.46	7,096.44	10,167.61	5,688.68	3,719.53	650.01	1,969.15	3,369.32
V. PACIFIC.										
Idaho.....	20,181.39	9,910.36	4,436.43	10,271.03	5,473.93	5,181.39	4,862.92	3,223.14	318.47	1,639.78
Utah.....	19,996.75	13,315.55	9,999.22	6,681.20	3,316.33	5,000.00	5,000.00	5,000.00	.....	.....
Arizona.....	17,997.24	12,601.06	5,095.78	5,396.18	7,505.28	4,999.91	3,970.79	2,732.50	1,029.12	1,233.29
Nevada.....	13,848.98	7,607.93	3,957.66	6,241.05	3,650.27	4,251.18	2,571.42	360.00	1,679.76	2,211.42
Washington.....	34,946.55	21,870.83	9,280.02	13,075.72	12,590.81	10,870.76	8,153.07	3,002.69	2,717.69	5,160.38
Oregon.....	24,523.63	12,182.58	6,188.64	12,340.05	5,994.94	7,410.60	3,416.67	250.00	3,996.93	3,166.67
California.....	70,476.83	47,921.95	16,722.19	24,554.88	31,199.76	18,395.76	12,453.91	4,196.66	7,941.85	8,257.25

<sup>1</sup> Provisional figures subject to final auditing of State accounts.

<sup>2</sup> Decrease.

TABLE 34.—Reimbursement of expenditure for agriculture, for trade, industry, and home economics, and for teaching training, by States, etc.—Con.

Region or State.	For vocational trade, industry, and home economics.					For teacher training.				
	1920	1919	1918	Increase 1920 over 1919. <sup>1</sup>	Increase 1919 over 1918.	1920 <sup>1</sup>	1919	1918	Increase 1920 over 1919. <sup>1</sup>	Increase 1919 over 1918.
	k	l	m	n	o	p	q	r	s	t
United States.....	\$855,725.03	\$607,144.66	\$365,812.46	\$248,580.37	\$241,332.20	\$729,005.78	\$422,632.77	\$190,726.82	\$306,373.01	\$231,905.95
REGION.										
I. North Atlantic.....	365,730.99	306,620.14	208,904.02	59,110.85	97,716.12	200,176.42	121,302.55	56,767.21	78,873.87	64,535.34
II. Southern.....	78,333.10	43,534.02	22,644.02	34,799.08	20,890.00	180,171.52	100,211.03	39,179.77	88,960.49	61,031.26
III. East Central.....	298,420.28	186,041.93	96,617.03	112,378.35	89,424.90	193,491.06	113,160.30	51,330.54	80,330.76	61,829.76
IV. West Central.....	43,487.12	27,519.46	12,917.57	15,967.66	14,601.89	70,058.55	46,405.52	31,264.17	23,653.08	15,141.35
V. Pacific.....	69,753.54	42,429.11	24,729.82	26,324.43	18,699.29	76,108.23	41,553.37	12,185.13	34,554.86	29,368.24
I. NORTH ATLANTIC.										
Maine.....	5,338.41	4,267.60	2,432.00	1,100.81	1,855.60	6,993.25	4,460.94	3,400.00	2,532.31	1,060.94
New Hampshire.....	3,307.09	3,928.83	5,000.00	1,621.74	1,071.17	2,606.05	2,773.76	1,391.35	1,677.71	1,382.41
Vermont.....	4,749.41	5,000.00	2,964.44	2,035.56	2,035.56	8,143.45	4,970.78	4,641.06	3,172.67	329.73
Massachusetts.....	73,899.17	55,424.38	36,949.59	18,474.79	18,474.79	22,097.81	14,834.19	4,594.02	7,263.62	10,240.17
Rhode Island.....	12,406.42	9,304.07	4,454.65	3,101.35	4,849.42	6,429.74	951.26		5,478.48	951.26
Connecticut.....	23,641.15	17,730.67	11,820.58	5,910.48	5,910.09	10,947.92	8,515.05	3,857.88	2,432.87	4,657.17
New York.....	83,911.57	94,818.64	67,804.74	27,013.90	27,013.90	75,637.83	45,991.84	28,163.92	29,645.99	17,827.92
New Jersey.....	31,567.84	24,214.71	18,531.73	7,353.13	5,682.98	18,678.57	10,523.26	2,376.07	8,153.31	8,147.19
Pennsylvania.....	109,491.98	82,114.21	54,745.99	27,377.77	27,368.22	33,849.12	18,844.59	5,019.97	15,004.53	13,824.62
Delaware.....	4,492.35	3,716.82	3,128.80	775.53	588.02	8,119.92	4,310.52	2,782.17	3,809.40	1,528.35
Maryland.....	12,876.60	6,060.21	1,071.50	6,796.39	5,008.71	6,672.76	5,126.36	540.77	1,546.40	4,585.59
II. SOUTHERN.										
Virginia.....	10,384.22	4,641.24	4,164.25	5,742.98	476.99	20,246.91	6,998.44		13,248.47	6,998.44
North Carolina.....	2,207.51	1,885.63	773.75	821.88	611.88	16,521.72	6,101.84	5,240.23	10,419.88	861.61
South Carolina.....	3,217.72	1,297.25	44.00	1,920.47	1,253.25	14,882.60	10,402.05	1,273.07	4,480.55	9,128.98
Georgia.....	11,972.01	6,701.27	6,306.14	5,270.74	395.13	20,291.24	9,528.26	6,412.40	10,782.98	3,115.86
Florida.....	4,110.30	2,024.00	496.05	2,066.36	1,527.95	9,999.42	5,124.73	1,563.73	4,874.60	3,561.00
Tennessee.....	8,827.62	5,416.64	1,005.00	3,410.98	3,811.64	15,470.38	4,815.12	2,390.00	10,655.26	2,425.12
Alabama.....	6,776.28	4,499.45	1,303.54	2,776.83	3,155.91	18,480.30	8,186.71	3,492.02	10,213.59	4,774.69
Mississippi.....	2,335.70	1,745.98	678.72	589.72	1,067.26	14,842.00	10,485.58	3,706.83	4,356.42	6,778.75
Arkansas.....	4,599.08	1,347.61	1,241.36	3,251.47	106.25	11,218.38	6,119.41	72.02	5,098.97	6,047.39

Louisiana.....	7,826.74	5,870.05	3,913.37	1,956.69	1,956.68	13,120.05	12,229.53	3,720.00	890.52	8,509.53
Texas.....	16,075.86	8,604.90	2,117.84	7,470.96	6,487.06	34,098.52	20,239.36	11,209.47	13,859.16	9,029.89
III. EAST CENTRAL.										
West Virginia.....	4,127.85	4,084.57	2,868.31	43.28	1,216.26	6,045.83	5,612.98	1,025.00	432.85	4,587.96
Ohio.....	55,308.50	45,384.93	18,673.99	9,923.57	26,710.94	39,474.87	18,646.65	670.00	20,286.22	17,976.65
Kentucky.....	8,905.25	6,795.95	4,491.85	2,109.30	2,304.10	14,099.81	9,303.26	7,284.98	4,796.55	2,018.28
Michigan.....	29,286.10	23,530.30	14,687.75	5,755.80	8,832.55	21,318.75	14,931.61	7,978.10	6,387.14	6,953.51
Indiana.....	27,045.93	18,977.11	12,294.80	8,968.82	5,782.31	15,608.02	11,197.17	7,044.66	4,410.85	4,152.51
Wisconsin.....	22,280.06	16,343.59	11,873.55	5,936.77	4,489.74	10,791.40	10,032.91	7,115.09	758.49	2,917.82
Illinois.....	82,211.84	37,087.28	9,977.52	45,124.56	27,109.76	33,982.41	14,960.19	8,673.52	19,022.22	6,286.67
Minnesota.....	20,105.17	13,324.66	7,783.48	6,780.31	5,541.38	20,385.34	13,818.76	9,284.58	6,566.58	4,534.18
Iowa.....	16,079.85	1,959.58	870.25	14,120.27	1,089.33	15,680.07	8,209.77	-----	7,470.30	8,209.77
Missouri.....	33,069.73	19,454.06	13,085.53	13,615.67	6,368.53	16,104.56	6,447.00	2,254.61	9,657.56	4,192.39
IV. WEST CENTRAL.										
North Dakota.....	4,519.86	1,095.00	2,410.00	3,424.86	<sup>2</sup> 1,315.00	7,412.50	5,000.00	5,000.00	2,412.50	-----
South Dakota.....	972.03	950.00	563.75	22.03	358.25	4,811.58	3,900.00	2,898.75	911.58	1,001.25
Nebraska.....	4,748.55	3,617.04	355.00	1,131.51	3,262.04	10,683.71	7,443.60	2,841.25	3,240.11	4,502.35
Kansas.....	7,719.24	3,440.57	700.01	4,278.67	2,740.56	5,588.79	2,536.03	1,720.13	3,052.76	815.90
Oklahoma.....	6,200.25	3,785.03	1,937.30	2,415.22	1,847.73	9,797.10	9,694.00	9,041.53	103.10	652.47
Montana.....	5,000.00	3,333.33	1,562.50	1,666.67	1,770.83	8,990.05	3,596.64	2,876.69	5,393.41	719.95
Wyoming.....	2,667.38	1,409.28	1,206.02	1,258.10	203.26	5,926.20	3,430.59	2,076.02	2,495.61	1,354.57
Colorado.....	8,204.98	6,561.67	3,333.34	1,643.31	3,228.33	6,848.62	5,804.66	4,000.00	1,043.96	1,804.66
New Mexico.....	3,454.83	3,327.54	819.65	127.29	2,507.89	10,000.00	5,000.00	709.80	5,000.00	4,290.20
V. PACIFIC.										
Idaho.....	5,000.00	1,804.62	310.12	3,185.38	1,494.50	10,000.00	3,242.82	903.17	6,757.18	2,339.65
Utah.....	4,996.75	3,315.55	3,362.07	1,681.20	<sup>2</sup> 46.52	10,000.00	5,000.00	1,637.15	5,000.00	3,362.85
Arizona.....	4,985.96	3,766.72	1,805.00	1,219.24	1,961.72	8,011.37	4,863.55	558.28	3,147.82	4,305.27
Nevada.....	5,000.00	2,376.00	3,333.33	2,624.00	<sup>2</sup> 957.33	4,597.80	2,680.51	264.33	1,937.29	2,396.18
Washington.....	13,926.42	7,503.87	4,772.58	6,422.55	2,731.29	10,149.37	6,213.89	1,504.75	3,935.48	4,709.14
Oregon.....	7,113.03	3,630.21	2,999.55	3,482.82	630.66	10,000.00	5,136.70	2,939.09	4,863.39	2,197.61
California.....	28,731.38	21,032.14	8,147.17	7,099.24	12,884.97	23,249.69	14,435.90	4,378.36	8,913.79	10,057.54

<sup>1</sup> Provisional figures subject to final auditing of State accounts.

<sup>2</sup> Decrease.

TABLE 35.—Reimbursement of trade or industrial evening, part-time, and all-day schools, by States—Amount of Federal money expended for each type of school, for years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			Increase.		1920. <sup>1</sup>		
	1920 <sup>1</sup>	1919	1918	1920 over 1919.	1919 over 1918.	In evening schools.	In part-time schools.	In all-day schools.
	a	b	c	d	e	f	g	h
United States.....	\$511,850.92	\$425,836.19	\$305,352.00	\$109,642.65	\$120,484.19	\$106,036.44	\$105,377.69	\$300,436.79
REGION.								
I. North Atlantic.....	248,170.30	224,059.13	181,629.06	47,734.09	42,430.07	28,614.90	49,936.15	169,619.25
II. Southern.....	50,109.79	27,242.87	15,196.40	22,866.92	12,046.38	16,739.23	5,371.81	27,998.75
III. East Central.....	136,987.75	123,978.48	90,580.36	13,009.27	43,398.12	46,257.39	39,549.55	50,890.81
IV. West Central.....	30,169.04	17,141.62	7,307.80	13,027.42	9,833.82	7,106.80	4,243.98	18,718.26
V. Pacific.....	46,414.04	33,414.09	20,638.29	13,004.95	12,775.80	7,318.12	5,676.20	33,219.72
I. NORTH ATLANTIC.								
Maine.....	3,584.71	2,935.47	1,656.75	649.24	1,278.72	684.11	662.50	2,238.10
New Hampshire.....	3,307.09	3,328.83	4,892.86	621.74	1,584.03			3,307.09
Vermont.....	4,000.00	4,000.00	1,964.44		2,035.56	206.00	3,795.00	
Massachusetts.....	53,111.28	39,176.24	29,569.67	13,935.04	9,616.57	5,148.60	18,625.01	29,337.67
Rhode Island.....	11,505.42	9,304.07	4,454.65	2,201.35	4,849.42	781.33	9,672.49	1,061.60
Connecticut.....	23,641.15	15,747.60	9,456.58	7,885.55	6,291.02	1,190.72	7,860.39	14,570.04
New York.....	73,760.64	84,950.36	67,804.74	11,189.72	17,145.62			73,760.64
New Jersey.....	22,461.16	17,401.57	14,707.28	5,059.59	2,694.29	10,000.00	944.06	11,558.50
Pennsylvania.....	39,966.50	39,280.46	43,790.79	686.04	4,516.33	6,469.14	4,969.75	28,537.61
Delaware.....	3,492.35	2,716.82	2,263.80	775.53	453.02	1,354.00	2,138.35	
Maryland.....	9,340.00	4,617.71	1,071.50	4,722.29	3,546.21	2,792.00	1,248.00	5,300.00
II. SOUTHERN.								
Virginia.....	8,130.72	1,866.38	3,037.50	6,234.34	1,141.12	1,077.95	2,872.60	4,180.17
North Carolina.....	1,752.51	800.00	475.00	952.51	325.00	1,592.51	200.00	
South Carolina.....	2,154.50	847.25	44.00	1,307.25	803.25	2,154.50		
Georgia.....	6,166.14	4,314.22	4,326.11	1,851.82	11.79	2,405.25	222.50	8,688.39
Florida.....	2,468.00	1,024.00	43.55	1,444.00	980.45	2,468.00		
Tennessee.....	5,284.13	3,796.98	325.00	1,487.15	3,471.98	2,886.43	217.50	2,180.20
Alabama.....	4,045.82	3,486.84	1,241.04	584.88	2,255.80	1,627.70	883.46	2,684.66
Mississippi.....	581.00	210.00	607.47	371.00	397.47	371.00		
Arkansas.....	3,932.42	897.61	503.86	3,034.81	398.75	348.75	1,265.75	2,317.92
Louisiana.....	5,478.72	4,103.04	3,008.37	1,369.68	1,100.67			5,478.72
Texas.....	10,115.83	5,850.45	1,584.59	4,265.38	4,265.86	1,847.14		8,268.69

III. EAST CENTRAL.								
West Virginia.....	3,058.10	3,428.82	2,601.31	* 370.72	827.51	2,528.10	530.00	.....
Ohio.....	37,129.71	35,986.93	15,936.82	1,142.78	20,050.11	15,568.44	19,591.70	1,969.57
Kentucky.....	6,278.57	4,825.95	3,210.00	1,452.62	1,615.95	671.55	227.00	5,380.02
Michigan.....	* 25,102.11	18,823.91	11,559.97	6,278.20	7,263.94	7,207.67	8,367.49	9,526.95
Indiana.....	12,621.43	11,558.59	9,590.21	1,062.84	1,968.38	2,661.21	.....	9,960.22
Wisconsin.....	9,197.93	9,498.84	9,498.84	* 9,197.93	* 300.91	.....	.....	.....
Illinois.....	23,091.10	14,538.63	8,442.43	8,552.47	6,096.20	11,946.60	6,082.36	5,062.14
Minnesota.....	13,459.00	9,604.08	5,785.00	3,854.92	3,819.08	2,766.00	4,522.00	6,164.00
Iowa.....	4,678.61	1,520.68	879.25	3,157.78	650.58	673.20	522.00	3,483.41
Missouri.....	11,569.12	14,492.81	13,085.53	* 2,923.69	1,407.28	2,234.62	.....	9,334.50
IV. WEST CENTRAL.								
North Dakota.....	* 4,000.00	95.00	1,410.00	3,905.00	* 1,315.00	146.80	1,186.53	2,666.67
South Dakota.....	.....	.....	168.75	.....	* 168.75	.....	.....	.....
Nebraska.....	3,659.79	2,712.04	163.75	.....	2,548.29	.....	36.00	3,623.79
Kansas.....	5,659.48	2,413.21	700.01	3,246.27	1,713.20	2,410.87	81.00	3,167.61
Oklahoma.....	4,686.24	2,669.50	237.30	2,016.74	2,482.20	.....	1,578.50	3,107.74
Montana.....	2,523.09	2,333.45	562.50	189.64	1,770.95	665.75	189.75	1,667.40
Wyoming.....	1,913.48	642.55	632.50	1,272.63	10.35	229.13	.....	1,686.36
Colorado.....	5,391.63	3,947.93	2,613.34	1,443.70	1,334.59	2,994.43	1,272.20	1,125.00
New Mexico.....	2,333.33	2,327.64	819.65	5.69	1,507.99	659.83	.....	1,673.90
V. PACIFIC.								
Idaho.....	4,000.00	1,042.75	310.12	2,957.25	732.63	300.50	1,719.50	1,980.00
Utah.....	2,285.08	1,848.05	2,362.07	447.03	* 514.02	721.88	.....	1,573.20
Arizona.....	3,994.04	2,333.42	805.00	1,665.62	1,528.42	376.01	793.60	2,824.43
Nevada.....	3,000.00	1,751.00	3,333.33	1,249.00	* 1,582.33	2,060.00	1,000.00	.....
Washington.....	6,931.46	6,427.45	4,172.58	504.01	2,254.87	2,762.50	60.00	4,168.96
Oregon.....	4,412.40	2,630.21	2,474.55	1,782.25	155.66	783.23	1,187.37	2,441.96
California.....	21,781.00	17,381.21	7,180.64	4,399.79	10,200.57	434.00	1,115.73	20,231.27

\* Provisional figures subject to final auditing of State accounts.

\* Includes over expenditure—Michigan, \$2,091.35; North Dakota, \$480.14.

\* Decrease.

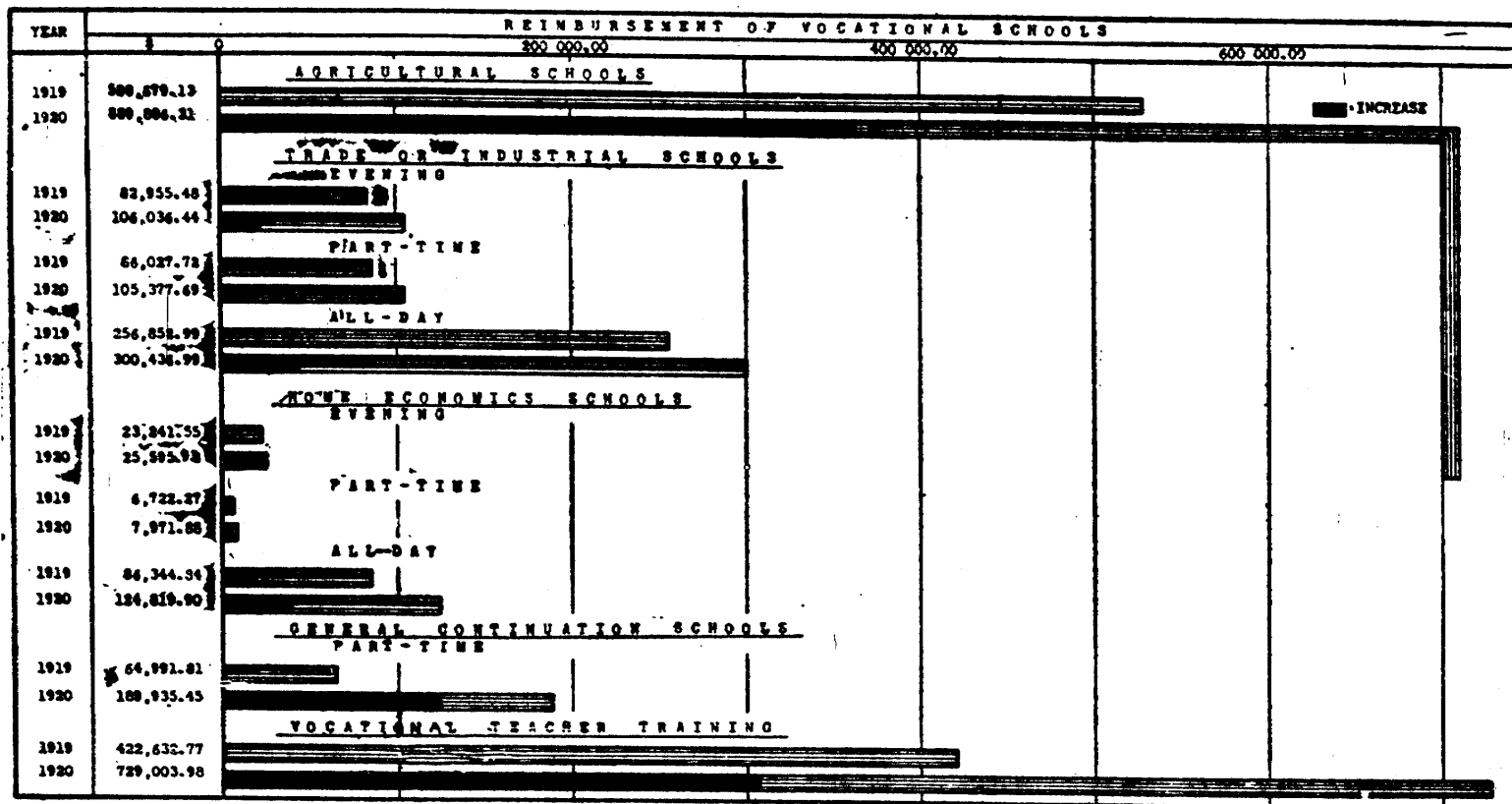


DIAGRAM IV. Reimbursement out of Federal funds of specified types of vocational schools and of teacher-training courses: Years ended June 30, 1919 and 1920.

TABLE 36.—Reimbursement of home economics evening, part-time, and all-day schools, by States—Amount of Federal money expended for each type of school, for years ended June 30, 1920, 1919, and 1918.

Region or State.	Total.			Increase 1920 over 1919.	Increase 1919 over 1918.	1920 <sup>1</sup>		
	1920 <sup>1</sup>	1919	1918			In evening schools.	In part-time schools.	In all-day schools.
	a	b	c	d	e	f	g	h
United States.....	\$158,387.71	\$116,308.66	\$80,460.46	\$46,562.30	\$55,848.20	\$25,505.93	\$7,971.88	\$124,819.90
REGION.								
I. North Atlantic.....	52,787.12	39,790.23	27,274.96	17,464.16	12,515.27	12,870.25	471.75	39,445.12
II. Southern.....	19,462.42	13,912.23	7,447.53	5,550.09	6,461.80	2,690.10	200.00	16,572.32
III. East Central.....	59,500.00	44,642.87	16,036.67	14,857.13	28,606.20	7,897.50	2,076.97	49,531.53
IV. West Central.....	11,711.50	9,194.10	5,609.77	2,517.40	3,584.33	1,813.24	433.50	9,464.76
V. Pacific.....	14,926.67	8,769.13	4,091.53	6,163.52	4,677.60	324.84	4,795.66	9,806.17
I. NORTH ATLANTIC.								
Maine.....	1,803.70	1,352.13	775.25	451.57	576.88	1,062.57		741.13
New Hampshire.....			107.14		107.14			
Vermont.....	749.41	1,000.00	1,000.00	250.59		257.50		491.91
Massachusetts.....	14,779.84	11,084.88	7,389.92	3,694.96	3,694.96	5,921.96		8,857.88
Rhode Island.....								
Connecticut.....		1,983.07	2,364.00	1,983.07	380.93			
New York.....								
New Jersey.....	9,019.18	6,764.39	3,824.45	2,254.79	2,939.94	3,202.37	471.75	5,345.06
Pennsylvania.....	21,898.39	15,143.28	10,949.20	6,755.08	4,194.06	1,700.35		20,198.04
Delaware.....	1,000.00	1,000.00	865.00		135.00			1,000.00
Maryland.....	3,536.60	1,462.50		2,074.10	1,462.50	725.50		2,811.10
II. SOUTHERN.								
Virginia.....	2,253.50	1,690.13	1,126.75	563.37	563.38	958.88		1,294.62
North Carolina.....	455.00	585.63	298.75	130.63	286.88	255.00		200.00
South Carolina.....	1,063.22	450.00		613.22	450.00			1,063.22
Georgia.....	2,547.27	1,910.45	1,980.03	636.82	69.58	366.91		2,180.36
Florida.....	943.49	1,000.00	452.50	56.51	547.50			943.49
Tennessee.....	2,085.71	1,564.27	1,280.00	521.44	284.27	391.00	200.00	1,494.71
Alabama.....	1,719.27	1,002.61	62.50	716.66	940.11			1,719.27
Mississippi.....	1,000.00	968.78	71.25	31.22	897.53	80.02		919.98
Arkansas.....	666.66	450.00	737.50	216.66	287.50	220.75		445.91
Louisiana.....	2,348.02	1,761.01	905.00	587.01	856.01			2,348.02
Texas.....	4,380.28	2,529.45	533.25	1,850.83	1,906.20	417.54		3,962.74

TABLE 36.—Reimbursement of home economics evening, part-time, and all-day schools, by States—Amount of Federal money expended for each type of school, for years ended June 30, 1920, 1919, and 1918.—Continued.

Region or State.	Total.			Increase 1920 over 1919.	Increase 1919 over 1918.	1920 <sup>1</sup>		
	1920 <sup>1</sup>	1919	1918			In evening schools.	In part-time schools.	In all-day schools.
	a	b	c	d	e	f	g	h
III. EAST CENTRAL.								
West Virginia.....	\$1,099.75	\$655.75	\$267.00	\$414.00	\$388.75	\$372.25		\$697.50
Ohio.....	12,374.69	8,945.00	2,737.17	3,429.69	6,207.83	756.50	\$240.00	11,378.19
Kentucky.....	2,626.68	1,970.00	1,281.85	656.68	688.15			2,626.68
Michigan.....	6,275.34	4,706.39	3,137.78	1,568.95	1,568.61	1,370.37		4,901.97
Indiana.....	5,409.19	4,056.80	2,704.50	1,352.30	1,352.30	2,838.03		2,571.16
Wisconsin.....	<sup>2</sup> 1,467.04	3,562.07	2,374.71	<sup>2</sup> 2,095.03	1,157.36		1,467.04	
Illinois.....	16,442.36	12,331.77	1,535.09	4,110.59	10,796.68	40.00		16,402.36
Minnesota.....	4,021.00	3,015.00	1,998.48	1,006.00	1,016.52		21.00	4,000.00
Iowa.....	3,215.97	438.75		2,777.22	438.75	\$23.65	342.93	2,049.39
Missouri.....	6,597.98	4,961.25		1,636.73	4,961.25	1,696.70		4,901.28
IV. WEST CENTRAL.								
North Dakota.....	1,000.00	1,000.00	1,000.00			126.25		873.75
South Dakota.....	830.00	950.00	425.00	<sup>3</sup> 120.00	525.00			830.00
Nebraska.....	1,088.76	905.00	191.25	183.76	713.75			1,088.76
Kansas.....	2,059.76	1,027.36		1,032.40	1,027.36	1,146.90		912.86
Oklahoma.....	<sup>2</sup> 1,523.07	1,115.53	1,700.00	407.54	<sup>3</sup> 584.47		13.50	1,509.57
Montana.....	1,000.00	999.88	1,000.00	<sup>3</sup> .12	<sup>3</sup> .12			1,000.00
Wyoming.....	751.90	766.43	573.52	<sup>3</sup> 14.53	192.91	124.00		627.90
Colorado.....	<sup>2</sup> 2,458.01	1,430.00	720.00	1,028.01	710.00	351.92	420.00	1,696.08
New Mexico.....	1,000.00	999.90		.10	999.90	64.17		935.83
V. PACIFIC.								
Idaho.....	1,000.00	761.87		238.13	761.87	72.50		927.50
Utah.....	<sup>2</sup> 1,034.67	1,000.00	1,000.00	34.67		41.57		993.10
Arizona.....	901.92	999.91	1,000.00	<sup>3</sup> 7.99	3.09	88.02	187.95	715.95
Nevada.....	1,000.00	625.00		375.00	625.00			1,000.00
Washington.....	2,833.70	731.42	600.00	2,102.28	131.42	106.75	160.00	2,566.95
Oregon.....	1,116.00	1,000.00	525.00	116.00	475.00	16.00		1,100.00
California.....	6,950.38	3,650.93	966.53	3,299.45	2,684.40		4,447.71	2,502.67

<sup>1</sup> Provisional figures subject to final auditing of State accounts.<sup>2</sup> Includes illegal or over expenditure—Wisconsin, \$1,467.04; Oklahoma, \$9.06; Colorado, \$543.52; Utah, \$34.67.<sup>3</sup> Decrease.



TABLE 37.—*Reimbursement of part-time schools, by States—Amount of Federal money expended for part-time trade or industrial, home economics, and general continuation schools for years ended June 30, 1920, 1919, and 1918.*

State or region.	Total.					1920		
	1920	1919	1918	Increase 1920 over 1919.	Increase 1919 over 1918.	Trade or industrial.	Home eco- nomic.	General con- tinuation.
	a	b	c	d	e	f	g	h
United States.....	\$303,285.05	\$157,749.80	\$92,241.45	\$147,051.93	\$65,568.35	\$105,377.69	\$7,971.88	\$189,935.48
REGION.								
I. North Atlantic.....	115,181.47	\$2,804.62	58,690.26	33,893.53	24,114.36	49,936.15	471.75	64,773.57
II. Southern.....	14,332.70	2,997.07	2,585.33	11,335.63	411.74	5,371.81	200.00	8,780.89
III. East Central.....	147,411.44	64,164.87	29,132.82	83,246.57	35,032.05	39,849.55	2,070.97	105,490.92
IV. West Central.....	7,274.75	1,919.42	467.65	5,355.33	1,451.77	4,343.98	433.50	2,497.27
V. Pacific.....	19,084.69	5,863.82	1,365.39	13,220.87	4,498.43	5,876.20	4,795.66	8,412.83
I. NORTH ATLANTIC.								
Maine.....	662.50			662.50		662.50		
New Hampshire.....		595.50	1,777.50	595.50	1,182.00			
Vermont.....	3,795.00	3,407.50	1,526.44	387.50	1,881.06	3,795.00		
Massachusetts.....	24,633.06	18,474.79	12,316.53	6,158.27	6,158.26	18,625.01		6,008.05
Rhode Island.....	10,572.49	7,464.51	3,192.42	3,107.98	4,272.09	9,672.49		900.00
Connecticut.....	7,880.39	5,910.22	3,940.00	1,970.17	1,970.22	7,880.39		
New York.....	10,150.93	9,868.28	11,171.17	282.65	1,302.89			10,150.93
New Jersey.....	1,503.91	1,666.75	3,499.76	162.84	1,833.01	944.66	471.75	87.50
Pennsylvania.....	52,596.84	34,580.60	21,266.44	18,016.24	13,314.16	4,969.75		47,627.09
Delaware.....	2,138.35	836.47		1,301.88	836.47	2,138.35		
Maryland.....	1,248.00			1,248.00		1,248.00		
II. SOUTHERN.								
Virginia.....	2,872.60	1,094.73	561.25	1,777.87	533.48	2,872.60		
North Carolina.....	200.00			200.00		200.00		
South Carolina.....								
Georgia.....	3,481.10	476.50	1,231.61	3,004.60	1,755.11	222.50		3,258.60
Florida.....	698.87			698.87				698.87
Tennessee.....	1,875.28	292.39		1,672.89	202.39	217.50	200.00	1,457.78
Alabama.....	1,394.65	431.25	185.00	963.40	246.25	383.46		1,011.19
Mississippi.....	964.70	567.20	607.47	397.50	40.27	210.00		754.70
Arkansas.....	1,265.75			1,265.75		1,265.75		
Louisiana.....								
Texas.....	1,579.75	225.00		1,354.75	225.00			1,579.75

TABLE 37.—Reimbursement of part-time schools, by States—Amount of Federal money expended for part-time trade or industrial, home economics, and general continuation schools for years ended June 30, 1920, 1919, and 1918—Continued.

State or region.	Total.					1920		
	1920	1919	1918	Increase 1920 over 1919.	Increase 1919 over 1918.	Trade or industrial.	Home eco- nomics.	General con- tinuation.
	a	b	c	d	e	f	g	h
III. EAST CENTRAL.								
West Virginia.....	\$530.00	\$751.24		\$221.24	\$751.24	\$530.00		
Ohio.....	25,635.80	15,739.60	\$4,931.72	9,896.20	10,807.88	19,591.70	\$240.00	\$5,804.10
Kentucky.....	227.00	229.25	229.00	\$2.25	.25	227.00		
Michigan.....	8,367.49	7,842.90	4,238.53	524.59	3,604.37	8,367.49		
Indiana.....	9,015.31	4,554.14	3,279.49	4,461.17	1,274.65			9,015.31
Wisconsin.....	23,747.10	14,061.72	7,915.70	9,685.38	6,146.02		1,467.04	22,280.06
Illinois.....	48,760.74	14,797.17	4,586.83	33,963.57	10,210.34	6,082.36		42,678.38
Minnesota.....	7,175.17	3,272.28	1,125.00	3,902.89	2,147.28	4,529.00	21.00	2,625.17
Iowa.....	9,050.20		48.75	9,050.20	\$48.75	522.00	342.93	8,185.27
Missouri.....	14,902.63	2,916.57	2,777.80	11,986.06	138.77			14,902.63
IV. WEST CENTRAL.								
North Dakota.....	1,186.53			1,186.53		1,186.53		
South Dakota.....			168.75		\$168.75			
Nebraska.....	36.00			36.00		36.00		
Kansas.....	81.00		71.40	81.00	\$71.40	81.00		
Oklahoma.....	1,592.00			1,592.00		1,578.50	13.50	
Montana.....	1,666.66			1,666.66		189.75		1,476.91
Wyoming.....		65.18	227.50	\$65.18	\$162.32			
Colorado.....	2,591.06	1,854.24		736.82	1,854.24	1,272.20	420.00	898.86
New Mexico.....	121.50			121.50				121.50
V. PACIFIC.								
Idaho.....	1,719.50	961.75	45.12	757.75	916.63	1,719.50		
Utah.....	1,067.00	467.50	393.75	1,199.50	73.75			1,067.00
Arizona.....	981.55	433.39		548.16	433.39	793.60	187.95	
Nevada.....	2,000.00			2,000.00		1,000.00		1,000.00
Washington.....	4,381.26	345.00		4,036.26	345.00	60.00	160.00	4,161.26
Oregon.....	2,771.94			2,771.94		1,187.37		1,584.57
California.....	5,563.44	3,656.18	926.52	1,907.26	2,729.66	1,115.73	4,447.71	

<sup>1</sup> Provisional figures subject to final auditing of State accounts.<sup>2</sup> Decrease.

TABLE 38.—Availability of Federal fund for home economics and for all-day and evening schools, by States—Amount expended for home economics compared with 20 per cent of the total allotment for trade, industry, and home economics, and amount expended for all-day and evening schools compared with 66⅔ per cent of the total, for the year ended June 30, 1920.

State or region.	Total allotment for trade, industry, and home economics.	Home-economics schools.		All-day and evening schools.	
		Maximum amount available (20 per cent of allotment).	Amount expended. <sup>1</sup>	Maximum amount available (66⅔ per cent of allotment).	Amount expended. <sup>1</sup>
	a	b	c	d	e
United States.....	\$1,032,875.06	\$206,575.19	\$158,387.71	\$688,583.97	\$556,889.06
REGION.					
I. North Atlantic.....	475,048.26	95,000.65	52,787.12	316,608.84	250,540.52
II. Southern.....	105,139.30	21,027.88	19,462.42	70,092.87	64,000.40
III. East Central.....	315,190.13	63,038.03	50,500.00	210,126.75	154,567.23
IV. West Central.....	61,168.20	12,233.64	11,711.50	40,778.80	37,173.06
V. Pacific.....	76,330.07	15,266.01	14,921.17	50,896.71	50,668.85
I. NORTH ATLANTIC.					
Maine.....	9,019.20	1,803.84	1,803.70	6,012.80	4,725.09
New Hampshire.....	6,031.81	1,206.36	.....	4,021.21	3,307.09
Vermont.....	5,000.00	1,000.00	749.41	3,333.33	954.41
Massachusetts.....	73,809.17	14,779.84	14,779.84	49,266.11	49,266.11
Rhode Island.....	12,405.42	2,481.08	.....	8,270.28	1,832.93
Connecticut.....	23,641.15	4,728.23	.....	15,760.77	15,760.76
New York.....	169,600.71	33,980.14	.....	113,267.15	73,760.64
New Jersey.....	45,095.90	9,019.18	9,019.18	30,063.93	30,063.93
Pennsylvania.....	109,491.98	21,898.40	21,898.39	72,994.65	56,895.14
Delaware.....	5,000.00	1,000.00	1,000.00	3,333.33	2,354.00
Maryland.....	15,562.92	3,112.58	1,536.60	10,375.28	11,628.60
II. SOUTHERN.					
Virginia.....	11,267.51	2,253.50	2,253.50	7,511.67	7,511.62
North Carolina.....	7,530.30	1,506.06	455.00	5,020.20	2,007.51
South Carolina.....	5,316.14	1,063.23	1,063.22	3,544.09	3,217.72
Georgia.....	12,736.36	2,547.27	2,547.27	8,490.91	8,490.91
Florida.....	5,180.14	1,036.03	943.49	3,453.43	3,411.41
Tennessee.....	10,428.49	2,085.70	2,085.71	6,952.33	6,952.34
Alabama.....	8,758.83	1,751.77	1,719.27	5,839.22	5,381.63
Mississippi.....	5,000.00	1,000.00	1,000.00	3,333.33	1,371.00
Arkansas.....	5,000.00	1,000.00	666.66	3,333.33	3,333.33
Louisiana.....	11,740.10	2,348.02	2,348.02	7,826.74	7,826.74
Texas.....	22,181.43	4,436.28	4,380.28	14,787.62	14,496.11
III. EAST CENTRAL.					
West Virginia.....	5,396.77	1,079.35	1,069.75	3,597.84	3,597.85
Ohio.....	63,017.20	12,603.44	12,374.69	42,011.47	20,672.70
Kentucky.....	13,133.40	2,626.68	2,626.68	8,755.60	8,678.25
Michigan.....	31,377.60	6,275.58	6,275.34	20,918.60	23,009.96
Indiana.....	27,045.93	5,409.19	5,409.19	18,030.62	18,030.62
Wisconsin.....	23,747.10	4,749.42	4,467.04	15,831.40	.....
Illinois.....	82,211.84	16,442.37	16,442.36	54,807.89	33,451.10
Minnesota.....	20,105.17	4,021.03	4,021.00	13,403.45	12,930.00
Iowa.....	16,079.85	3,215.97	3,215.97	10,719.90	7,029.65
Missouri.....	33,074.97	6,615.00	6,597.98	22,049.98	18,167.10
IV. WEST CENTRAL.					
North Dakota.....	5,000.00	1,000.00	1,000.00	3,333.33	3,813.47
South Dakota.....	5,000.00	1,000.00	830.00	3,333.33	830.00
Nebraska.....	7,350.08	1,470.02	1,088.76	4,900.06	4,712.55
Kansas.....	11,675.64	2,335.13	2,059.70	7,783.76	7,638.24
Oklahoma.....	7,570.05	1,514.01	1,523.07	5,046.70	4,617.31
Montana.....	5,000.00	1,000.00	1,000.00	3,333.33	3,333.34
Wyoming.....	5,000.00	1,000.00	751.80	3,333.33	2,667.38
Colorado.....	9,572.43	1,914.48	2,458.01	6,381.63	6,157.44
New Mexico.....	5,000.00	1,000.00	1,000.00	3,333.33	3,333.33
V. PACIFIC.					
Idaho.....	5,000.00	1,000.00	1,000.00	3,333.33	3,280.50
Utah.....	5,000.00	1,000.00	1,034.67	3,333.33	3,329.75
Arizona.....	5,000.00	1,000.00	991.92	3,333.33	4,004.41
Nevada.....	5,000.00	1,000.00	1,000.00	3,333.33	3,000.00
Washington.....	14,317.73	2,863.55	2,833.70	9,545.16	9,545.16
Oregon.....	7,260.42	1,452.08	1,116.00	4,840.28	4,341.09
California.....	34,761.92	6,950.38	6,950.38	23,167.95	23,167.94

<sup>1</sup> Provisional figures subject to final auditing of State accounts.

<sup>2</sup> Includes illegal or overexpenditures: Maryland, \$424.02; Tennessee, \$0.01; West Virginia, \$0.01; Michigan, \$2,091.36; Wisconsin, \$1,467.04; North Dakota, \$480.14; Oklahoma, \$0.00; Montana, \$0.01; Colorado, \$543.53; Utah, \$34.67; Arizona, \$671.06.

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TABLE 30.—Availability of Federal fund for each class of teacher training, by States—Amount expended for training teachers of agriculture, of trade or industry, and of home economics compared with 60 per cent of total allotment for maintenance of teacher training for year ended June 30, 1920.

Region or State.	Allotment.	Maximum amount available for one class of training (60 per cent of allotment).	Amount expended for training teachers of 1—		
			Agriculture.	Trade or industry.	Home economics.
	a	b	c	d	e
United States.....	\$996,405.30	\$597,843.18	\$250,661.24	\$226,738.22	\$252,657.86
REGION.					
I. North Atlantic.....	296,430.32	177,858.10	60,843.96	73,901.61	65,427.96
II. Southern.....	222,522.50	133,613.50	78,801.91	46,108.07	64,361.54
III. East Central.....	288,297.34	172,978.40	58,958.94	68,667.94	67,016.82
IV. West Central.....	104,590.06	62,754.04	26,403.21	12,902.82	30,762.52
V. Pacific.....	84,585.08	50,739.08	25,756.22	25,254.78	25,099.03
I. NORTH ATLANTIC.					
Maine.....	10,000.00	6,000.00	2,692.40	759.37	3,541.48
New Hampshire.....	10,000.00	6,000.00	929.46	308.01	1,268.58
Vermont.....	10,000.00	6,000.00	2,540.00	143.45	5,460.00
Massachusetts.....	33,061.27	19,836.76	5,285.37	8,974.30	7,838.14
Rhode Island.....	10,000.00	6,000.00	2,033.48	2,152.13	2,244.13
Connecticut.....	10,947.92	6,568.75	2,189.58	3,284.38	5,473.96
New York.....	89,503.99	53,702.39	21,673.68	30,437.67	23,526.48
New Jersey.....	24,917.29	14,950.38	5,416.42	8,000.10	5,262.05
Pennsylvania.....	75,278.37	45,167.02	11,838.71	15,507.00	6,502.51
Delaware.....	10,000.00	6,000.00	4,362.69	1,062.64	2,724.70
Maryland.....	12,721.48	7,632.89	1,852.17	3,334.66	1,185.03
II. SOUTHERN.					
Virginia.....	20,246.91	12,148.15	8,382.23	5,915.50	5,949.12
North Carolina.....	21,567.75	13,000.65	7,258.39	2,826.34	6,436.99
South Carolina.....	14,882.61	8,929.57	7,359.64	3,091.06	4,431.06
Georgia.....	25,623.94	15,374.36	10,801.49	2,679.18	6,720.57
Florida.....	10,000.00	6,000.00	4,567.19	2,368.11	3,061.03
Tennessee.....	21,456.62	12,873.97	6,690.79	4,003.53	4,777.06
Alabama.....	20,998.02	12,598.81	7,360.74	5,930.89	5,182.67
Mississippi.....	17,649.30	10,589.58	7,060.70	1,775.15	6,006.09
Arkansas.....	15,462.52	9,277.51	5,803.75	2,574.97	2,839.66
Louisiana.....	16,267.24	9,760.34	3,709.23	3,003.89	5,500.96
Texas.....	38,267.59	22,960.56	9,618.70	11,026.49	13,453.33
III. EAST CENTRAL.					
West Virginia.....	11,992.50	7,105.50	2,316.98	2,496.39	1,232.46
Ohio.....	46,817.47	28,090.48	10,615.80	17,098.54	11,760.53
Kentucky.....	22,488.95	13,493.37	3,091.89	1,582.04	8,525.88
Michigan.....	27,668.46	16,559.08	6,108.40	9,141.24	6,069.12
Indiana.....	26,525.06	15,915.03	3,631.28	8,156.44	3,820.30
Wisconsin.....	22,920.63	13,752.38	3,923.89	4,366.82	3,553.33
Illinois.....	55,376.10	33,225.66	10,839.07	12,306.01	10,837.33
Minnesota.....	20,385.34	12,231.20	7,919.18	6,215.58	6,250.58
Iowa.....	21,849.28	13,109.57	4,836.41	3,800.61	6,053.02
Missouri.....	32,343.55	19,406.13	4,776.01	3,314.24	8,014.25
IV. WEST CENTRAL.					
North Dakota.....	10,000.00	6,000.00	2,612.50	.....	4,300.00
South Dakota.....	10,000.00	6,000.00	2,669.55	.....	2,142.03
Nebraska.....	11,708.63	7,025.18	5,588.19	1,438.55	3,656.97
Kansas.....	16,606.66	9,964.00	1,993.24	823.12	2,772.43
Oklahoma.....	16,274.77	9,764.86	2,253.67	1,033.62	6,609.81
Montana.....	10,000.00	6,000.00	3,006.58	2,512.39	3,471.04
Wyoming.....	10,000.00	6,000.00	2,182.31	2,411.08	1,332.81
Colorado.....	10,000.00	6,000.00	2,559.29	1,338.69	2,950.61
New Mexico.....	10,000.00	6,000.00	3,537.88	3,345.37	3,116.75
V. PACIFIC.					
Idaho.....	10,000.00	6,000.00	1,932.26	4,124.80	3,944.74
Utah.....	10,000.00	6,000.00	3,495.97	2,349.18	4,154.85
Arizona.....	10,000.00	6,000.00	2,710.69	2,210.70	3,669.98
Nevada.....	10,000.00	6,000.00	1,920.06	1,569.02	1,077.81
Washington.....	11,215.38	6,729.23	3,817.27	2,873.56	3,458.84
Oregon.....	10,000.00	6,000.00	3,789.60	2,098.37	4,112.04
California.....	23,349.70	14,009.82	8,090.37	9,998.25	5,264.07

<sup>1</sup> Provisional figures subject to final auditing of State accounts.

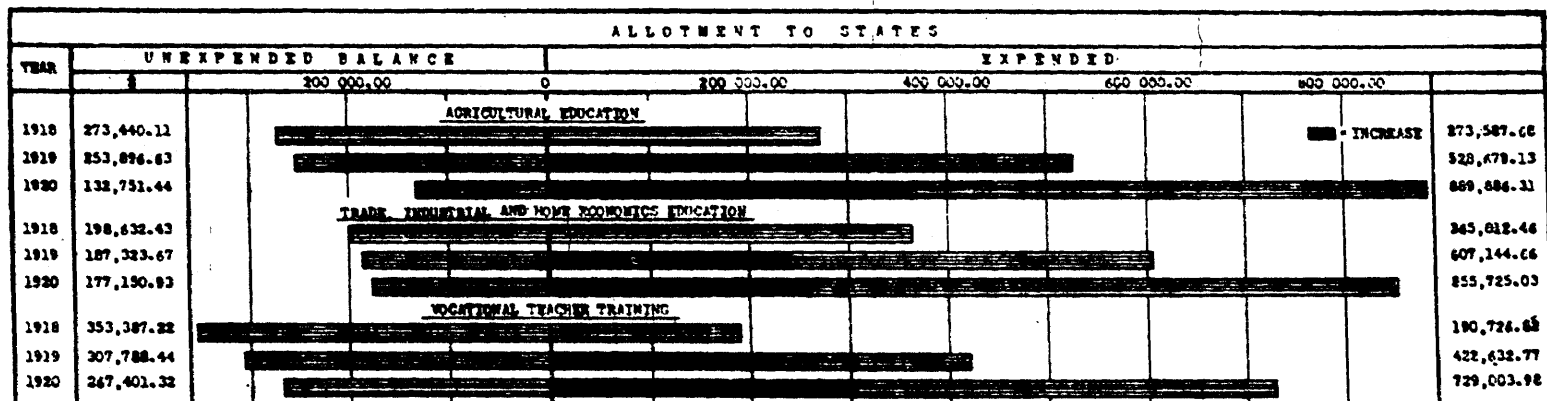


DIAGRAM V.—Federal grants to States for specified types of vocational education and for vocational teacher training, and amount expended and unexpended: Years ended June 30, 1918, 1919, and 1920.

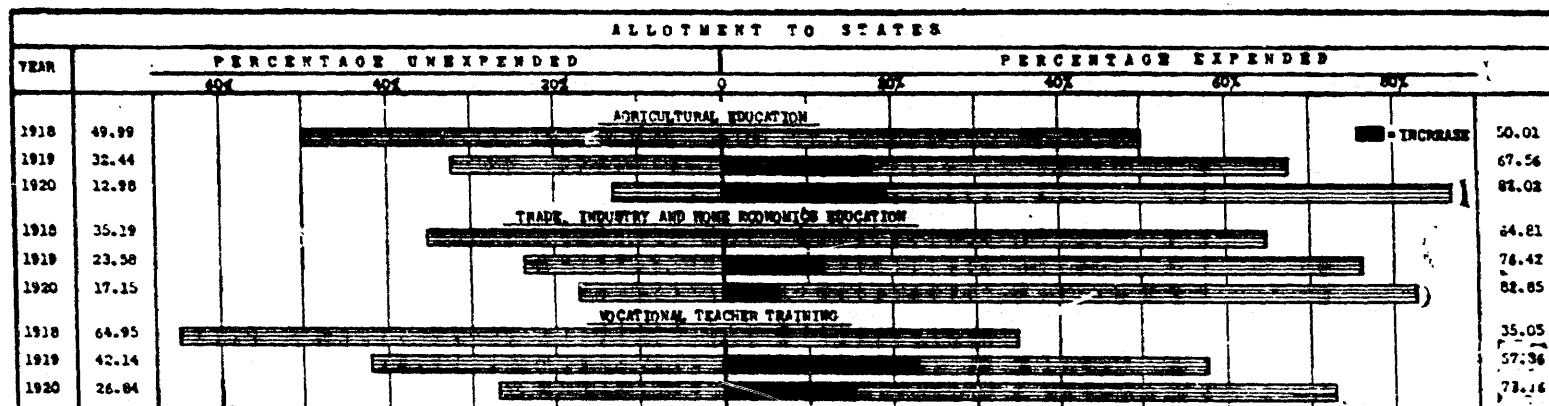


DIAGRAM VI.—Percentage expended and unexpended of Federal grants to States for specified type of vocational education, and for vocational teacher training: Years ended June 30, 1918, 1919, and 1920.

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TABLE 40.—Unexpended balance and amount to be sent to State for vocational agriculture, by States—Amount sent to State during the year ended June 30, 1920, amount expended during the year, and unexpended balance in State treasury June 30, together with allotment and amount to be sent during the year ending June 30, 1921.

Region or State.	1920			1921	
	Sent to State.	Expended by State. <sup>1</sup>	Unexpended balance in State treasury June 30 (a-b). <sup>1</sup>	Allotment to State.	To be sent to State (d-c). <sup>1</sup>
	a	b	c	d	e
United States.....	\$1,022,637.75	\$899,886.31	\$132,751.44	\$1,206,875.30	\$1,134,122.86
REGION.					
I. North Atlantic.....	163,551.17	139,063.78	24,487.39	198,044.70	173,557.31
II. Southern.....	363,914.23	305,570.29	58,343.94	454,802.80	396,458.86
III. East Central.....	324,735.60	289,819.88	34,915.72	405,919.50	371,003.78
IV. West Central.....	113,578.24	99,322.76	14,255.48	140,618.62	126,363.14
V. Pacific.....	56,838.51	56,109.60	748.91	67,399.68	66,650.77
I. NORTH ATLANTIC.					
Maine.....	7,313.80	7,290.16	23.64	9,142.25	9,118.61
New Hampshire.....	5,000.00	5,000.00	.....	5,000.00	5,000.00
Vermont.....	5,000.00	4,999.96	.04	5,000.00	4,999.96
Massachusetts.....	5,000.00	5,000.00	.....	6,105.73	6,105.73
Rhode Island.....	5,000.00	1,892.54	3,107.46	5,000.00	1,892.54
Connecticut.....	5,000.00	4,439.03	560.97	5,000.00	4,439.03
New York.....	39,071.20	31,511.54	7,559.66	48,839.00	41,279.34
New Jersey.....	12,765.38	12,765.38	.....	15,966.72	15,966.72
Pennsylvania.....	61,489.58	53,373.16	8,116.42	76,861.98	68,745.56
Delaware.....	5,000.00	5,000.00	.....	5,000.00	5,000.00
Maryland.....	12,911.21	7,792.01	5,119.20	16,139.02	11,019.82
II. SOUTHERN.					
Virginia.....	32,119.94	32,119.94	.....	40,149.93	40,149.93
North Carolina.....	38,254.42	26,456.24	11,798.18	47,818.02	36,019.84
South Carolina.....	26,151.92	26,151.92	.....	32,689.90	32,689.90
Georgia.....	41,955.78	37,148.81	4,806.97	52,444.73	47,637.76
Florida.....	10,811.57	10,077.10	734.47	13,514.47	12,780.00
Tennessee.....	35,335.02	21,179.16	14,155.86	44,168.78	30,012.92
Alabama.....	35,819.70	29,415.80	6,403.90	44,774.62	38,370.72
Mississippi.....	32,215.58	32,215.58	.....	40,269.48	40,269.48
Arkansas.....	27,797.35	27,797.35	.....	34,746.67	34,746.67
Louisiana.....	23,503.51	22,442.87	1,060.64	29,379.40	28,318.76
Texas.....	59,949.44	40,565.62	19,383.82	74,936.80	55,552.98
III. EAST CENTRAL.					
West Virginia.....	20,119.54	18,335.41	1,784.13	25,149.42	23,365.29
Ohio.....	42,594.24	36,594.71	5,999.53	53,242.80	47,243.27
Kentucky.....	35,146.06	29,175.98	5,970.08	43,933.70	37,962.72
Michigan.....	30,053.95	30,053.11	.84	37,567.45	37,566.61
Indiana.....	31,551.70	31,551.70	.....	39,439.63	39,439.63
Wisconsin.....	26,941.64	26,841.54	100.10	33,677.06	33,576.95
Illinois.....	43,803.67	43,803.67	.....	54,754.57	54,754.57
Minnesota.....	24,831.65	24,831.65	.....	31,039.55	31,039.55
Iowa.....	31,301.96	23,180.24	8,121.72	39,127.45	31,005.73
Missouri.....	39,390.29	25,451.87	12,938.42	47,987.88	35,049.46
IV. WEST CENTRAL.					
North Dakota.....	10,411.09	7,798.73	2,612.36	13,014.97	10,401.71
South Dakota.....	10,278.15	5,230.00	5,048.15	12,847.68	7,799.53
Nebraska.....	17,859.82	17,859.82	.....	22,324.77	22,324.77
Kansas.....	24,259.09	22,198.41	2,060.68	30,323.85	28,263.17
Oklahoma.....	27,062.81	23,354.10	3,708.71	33,866.03	30,157.32
Montana.....	5,000.00	5,000.00	.....	6,145.85	6,145.85
Wyoming.....	5,000.00	4,789.08	210.92	5,000.00	4,789.08
Colorado.....	7,987.70	7,403.94	583.76	9,984.62	9,400.86
New Mexico.....	5,686.68	5,686.68	.....	7,110.85	7,110.85
V. PACIFIC.					
Idaho.....	5,181.39	5,181.39	.....	6,476.75	6,476.75
Utah.....	5,000.00	5,000.00	.....	5,076.53	5,076.53
Arizona.....	5,000.00	4,999.91	.09	5,000.00	4,999.91
Nevada.....	5,000.00	4,251.18	748.82	5,000.00	4,251.18
Washington.....	10,870.76	10,870.76	.....	13,569.45	13,569.45
Oregon.....	7,410.60	7,410.60	.....	9,283.25	9,283.25
California.....	18,395.76	18,395.76	.....	22,994.70	22,994.70

<sup>1</sup> Provisional figures subject to final auditing of State account.

**TABLE 41.—Unexpended balance and amount to be sent to State for trade, industry, and home economics, by States—Amount sent to State during the year ended June 30, 1920, amount expended during the year; and unexpended balance in State Treasury June 30, together with allotments and amounts to be sent during the year ending June 30, 1921.**

Region or State.	1920			1921	
	Sent to State.	Expended by State. <sup>1</sup>	Unexpended balance in State treasury June 30 (a-b). <sup>1</sup>	Allotment to State.	To be sent to State. <sup>1</sup>
	a	b	c	d	e
United States.....	\$1,032,875.06	\$855,725.03	\$177,150.03	\$1,277,073.90	\$1,099,923.06
<b>REGION.</b>					
I. North Atlantic.....	475,048.26	305,730.99	169,317.27	591,310.32	481,993.05
II. Southern.....	105,139.30	78,333.10	26,806.20	131,041.00	104,235.70
III. East Central.....	315,190.13	298,420.28	16,769.85	393,987.65	377,217.80
IV. West Central.....	61,168.20	43,187.12	17,981.08	70,210.25	52,629.17
V. Pacific.....	70,330.07	69,753.54	5,576.53	90,623.87	85,947.34
<b>I. NORTH ATLANTIC.</b>					
Maine.....	9,019.20	5,388.41	3,630.79	11,274.00	7,643.21
New Hampshire.....	6,031.81	3,307.09	2,724.72	7,539.75	4,815.03
Vermont.....	5,000.00	4,749.41	250.59	5,000.00	4,749.41
Massachusetts.....	73,879.17	73,809.17	.....	92,373.97	92,373.97
Rhode Island.....	12,405.42	12,405.42	.....	15,606.78	15,606.78
Connecticut.....	23,641.15	23,641.15	.....	29,551.45	29,551.45
New York.....	169,900.71	83,911.57	85,989.14	212,375.87	128,886.73
New Jersey.....	45,095.90	31,667.84	13,428.06	56,369.88	42,841.82
Pennsylvania.....	109,491.98	103,491.98	.....	126,864.97	136,864.97
Delaware.....	5,000.00	4,492.35	507.65	5,000.00	4,492.35
Maryland.....	15,662.92	12,876.60	2,686.32	19,454.65	16,767.33
<b>II. SOUTHERN.</b>					
Virginia.....	11,267.51	10,384.22	883.29	14,084.37	13,201.08
North Carolina.....	7,530.30	2,207.51	5,322.79	9,412.88	4,090.09
South Carolina.....	5,316.14	3,217.72	2,098.42	6,645.17	4,546.75
Georgia.....	12,736.36	11,972.01	764.35	15,920.45	15,156.10
Florida.....	5,180.14	4,110.39	1,069.75	6,475.18	5,405.40
Tennessee.....	10,428.49	8,827.62	1,600.87	13,035.62	11,434.75
Alabama.....	8,758.83	6,776.28	1,982.55	10,948.53	8,965.98
Mississippi.....	5,000.00	2,335.70	2,664.30	6,127.32	3,463.02
Arkansas.....	5,000.00	4,569.08	400.92	5,990.48	5,589.66
Louisiana.....	11,740.10	7,826.71	3,913.39	11,675.13	10,761.77
Texas.....	22,181.43	16,076.89	6,105.57	27,726.77	21,621.20
<b>III. EAST CENTRAL.</b>					
West Virginia.....	5,396.77	4,127.85	1,268.92	6,745.98	5,477.06
Ohio.....	63,017.20	55,308.50	7,708.70	78,771.50	71,062.80
Kentucky.....	13,133.40	8,905.25	4,228.15	16,416.75	12,188.60
Michigan.....	31,377.00	29,286.10	2,090.90	39,222.37	37,130.57
Indiana.....	27,045.93	27,045.93	.....	33,807.42	33,807.42
Wisconsin.....	23,747.10	22,280.06	1,467.04	29,683.88	28,216.84
Illinois.....	82,211.84	82,211.84	.....	102,764.80	102,764.80
Minnesota.....	20,105.17	20,105.17	.....	25,131.45	25,131.45
Iowa.....	16,079.85	16,079.85	.....	20,090.80	20,090.80
Missouri.....	33,074.07	33,069.73	5.24	41,343.70	41,338.46
<b>IV. WEST CENTRAL.</b>					
North Dakota.....	5,000.00	4,519.86	480.14	5,000.00	4,519.86
South Dakota.....	5,000.00	972.03	4,027.97	5,000.00	972.03
Nebraska.....	7,350.08	4,748.65	2,601.43	9,187.60	6,586.07
Kansas.....	11,676.04	7,719.24	3,956.80	14,594.55	10,638.15
Oklahoma.....	7,670.05	6,200.25	1,469.80	9,462.58	8,022.78
Montana.....	5,000.00	5,000.00	.....	5,000.00	5,000.00
Wyoming.....	5,000.00	2,667.38	2,332.62	5,000.00	2,667.38
Colorado.....	9,572.43	8,204.98	1,367.45	11,965.52	10,598.07
New Mexico.....	5,000.00	3,454.83	1,545.17	5,000.00	3,454.83
<b>V. PACIFIC.</b>					
Idaho.....	5,000.00	5,000.00	.....	5,000.00	5,000.00
Utah.....	5,000.00	4,995.76	3.25	5,111.27	5,106.02
Arizona.....	5,000.00	4,945.96	54.04	5,000.00	4,995.96
Nevada.....	5,000.00	5,000.00	.....	5,000.00	5,000.00
Washington.....	14,317.73	13,926.42	391.31	17,907.17	17,506.86
Oregon.....	7,260.42	7,113.03	147.39	9,075.53	8,928.14
California.....	34,751.92	28,731.38	6,020.54	43,439.90	37,419.36

<sup>1</sup> Provisional figures subject to final auditing of State account.

## 250 ANNUAL REPORT FEDERAL BOARD FOR VOCATIONAL EDUCATION.

TABLE 42.—*Unexpended balance and amount to be sent to State for teacher training, by States—Amount sent to State during year ended June 30, 1920, amount expended during the year, and unexpended balance in State treasury June 30, together with allotment and amount to be sent during the year ending June 30, 1920.*

Region or State.	1920			1921	
	Sent to State.	Expended by State. <sup>1</sup>	Unexpended balance in State treasury June 30 (a-b). <sup>1</sup>	Allotment to State.	To be sent to State (d-c). <sup>1</sup>
	a	b	c	d	e
United States.....	\$996,405.30	\$729,003.78	\$267,399.52	\$1,088,228.08	\$820,828.56
REGION.					
I. North Atlantic.....	290,430.32	200,176.42	96,253.90	323,811.48	227,557.58
II. Southern.....	222,522.50	187,171.52	33,350.98	246,136.08	212,785.10
III. East Central.....	288,297.34	193,491.06	94,806.28	320,330.38	225,524.10
IV. West Central.....	101,590.06	70,058.55	21,531.51	109,544.50	75,012.99
V. Pacific.....	81,565.08	76,108.23	8,456.85	88,405.64	79,948.79
I. NORTH ATLANTIC.					
Maine.....	10,000.00	86,993.25	83,006.75	10,000.00	6,993.25
New Hampshire.....	10,000.00	2,606.05	7,393.95	10,000.00	2,606.05
Vermont.....	10,000.00	8,143.45	1,856.55	10,000.00	8,143.45
Massachusetts.....	33,061.27	22,097.81	10,963.46	36,734.71	25,771.28
Rhode Island.....	10,000.00	6,429.74	3,570.26	10,000.00	6,429.74
Connecticut.....	10,917.02	10,917.02	.....	12,161.36	12,161.36
New York.....	89,503.99	75,637.83	13,866.16	99,448.88	85,582.72
New Jersey.....	24,917.29	18,678.57	6,238.72	27,685.88	21,447.16
Pennsylvania.....	75,278.37	33,849.12	41,429.25	83,642.64	42,213.39
Delaware.....	10,000.00	8,119.92	1,880.08	10,000.00	8,119.92
Maryland.....	12,721.48	6,672.76	6,048.72	14,134.98	8,086.26
II. SOUTHERN.					
Virginia.....	20,246.91	20,246.91	.....	22,496.56	22,496.56
North Carolina.....	21,667.75	10,521.72	5,146.03	24,075.28	18,929.25
South Carolina.....	14,882.61	14,882.60	.01	16,536.24	16,536.23
Georgia.....	25,623.94	20,291.21	5,332.70	28,471.04	23,138.34
Florida.....	10,000.00	9,999.42	.58	10,000.00	9,999.42
Tennessee.....	21,456.62	15,470.38	5,986.24	23,840.68	17,854.44
Alabama.....	20,998.02	18,480.30	2,517.72	23,331.14	20,813.42
Mississippi.....	17,649.30	11,842.00	2,807.30	19,610.32	16,803.02
Arkansas.....	15,462.52	11,218.38	4,244.14	17,180.58	12,936.44
Louisiana.....	16,267.24	13,120.05	3,147.19	18,074.70	14,927.51
Texas.....	28,267.50	34,098.52	4,169.07	42,519.54	38,350.47
III. EAST CENTRAL.					
West Virginia.....	11,992.50	6,045.83	5,946.67	13,325.00	7,378.33
Ohio.....	46,817.47	39,474.87	7,342.60	52,019.40	44,676.80
Kentucky.....	22,488.95	14,099.81	8,389.14	24,987.72	16,598.58
Michigan.....	27,598.46	21,318.75	6,279.71	30,664.96	24,385.25
Indiana.....	26,525.06	15,608.02	10,917.04	29,472.30	18,555.26
Wisconsin.....	22,920.63	10,791.40	12,129.23	25,467.36	13,338.13
Illinois.....	55,376.10	33,982.41	21,393.69	61,529.00	40,135.31
Minnesota.....	20,385.34	20,385.34	.....	22,650.38	22,650.38
Iowa.....	21,849.28	15,680.07	6,169.21	24,276.98	18,107.77
Missouri.....	32,813.55	16,104.56	16,238.99	35,937.28	19,698.29
IV. WEST CENTRAL.					
North Dakota.....	10,000.00	7,412.50	2,587.50	10,000.00	7,412.50
South Dakota.....	10,000.00	4,811.53	5,188.42	10,000.00	4,811.53
Nebraska.....	11,708.63	10,683.71	1,024.92	13,009.58	11,984.66
Kansas.....	10,606.06	5,588.79	11,017.87	18,451.84	7,433.97
Oklahoma.....	16,274.77	9,797.10	6,477.67	18,083.08	11,605.41
Montana.....	10,000.00	8,990.05	1,009.95	10,000.00	8,990.05
Wyoming.....	10,000.00	5,926.20	4,073.80	10,000.00	5,926.20
Colorado.....	10,000.00	6,848.62	3,151.38	10,000.00	6,848.62
New Mexico.....	10,000.00	10,000.00	.....	10,000.00	10,000.00
V. PACIFIC.					
Idaho.....	10,000.00	10,000.00	.....	10,000.00	10,000.00
Utah.....	10,000.00	10,000.00	.....	10,000.00	10,000.00
Arizona.....	10,000.00	8,011.37	1,988.63	10,000.00	8,011.37
Nevada.....	10,000.00	4,597.80	5,402.20	10,000.00	4,597.80
Washington.....	11,215.38	10,149.37	1,066.01	12,461.54	11,395.53
Oregon.....	10,000.00	10,000.00	.....	10,000.00	10,000.00
California.....	23,349.70	23,349.69	.01	25,944.10	25,944.09

<sup>1</sup> Provisional figures subject to final auditing of State accounts.



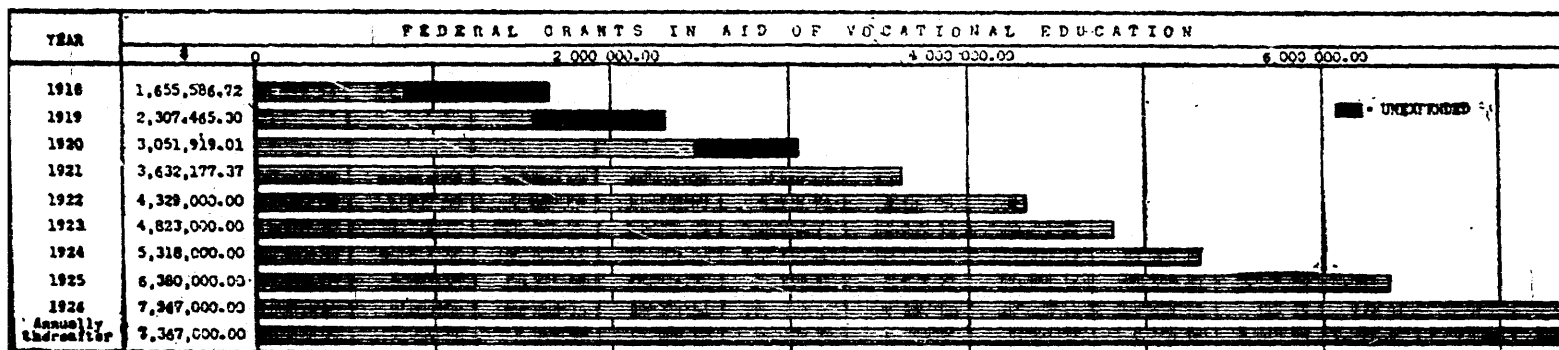


DIAGRAM VII.—Federal grants in aid of vocational education and for training vocational teachers: Years ending June 30.

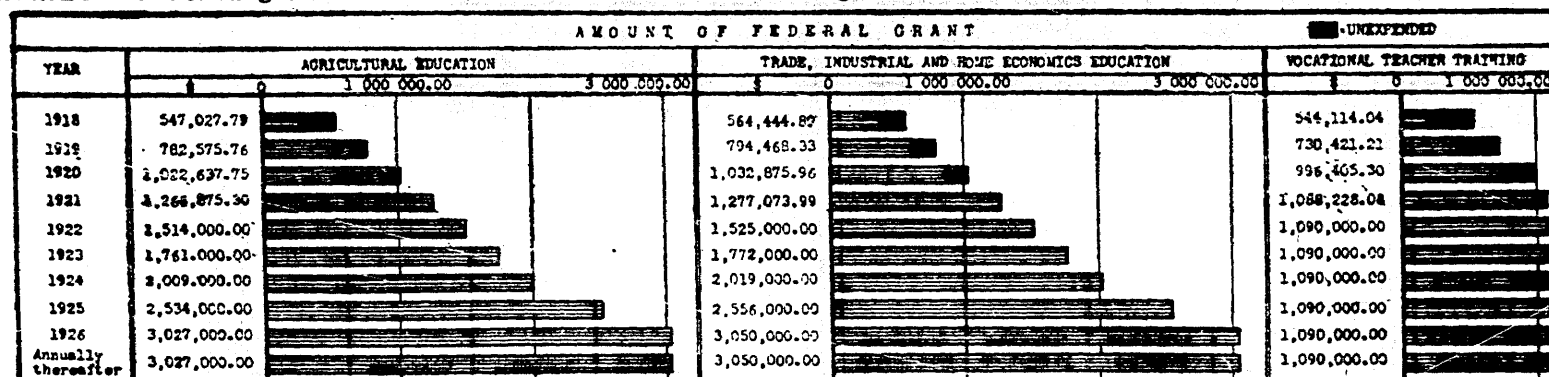


DIAGRAM VIII.—Federal grants in aid of specified types of vocational education and for training vocational teachers: Years ending June 30.

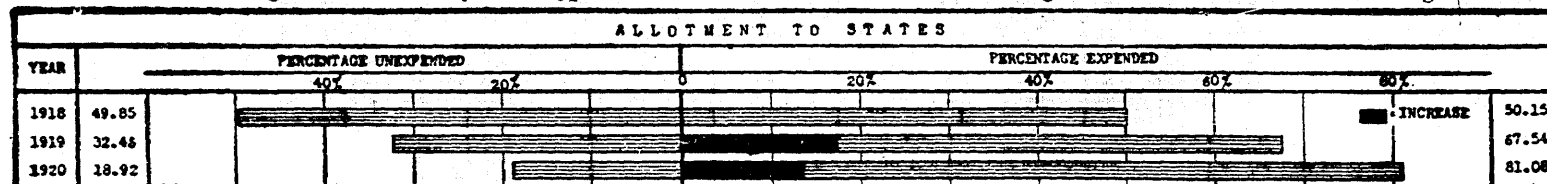


DIAGRAM IX.—Percentage expended and unexpended of Federal grants to States for vocational education and for training vocational teachers: years ended June 30, 1918, 1919, and 1920.

TABLE 43.—Allotment of vocation educational Federal funds to States for the year ending June 30, 1920.

Region or State.	Total.	Agriculture: For salaries of teachers, super- visors, and directors.	Trade, in- dustry, and home eco- nomics: For salaries of teachers.	Teacher training: For salaries of teachers and main- tenance of teacher training.	Allotted on the basis of population.				Special allotment to guarantee minimum.			
					Total.	Agriculture: For salaries of teachers, super- visors, and directors.	Trade, in- dustry, and home eco- nomics: For salaries of teachers.	Teacher training: For salaries of teachers and main- tenance of teacher training.	Total.	Agriculture: For sala- ries of teachers, super- visors, and di- rectors— To guar- antee minimum of \$5,000.	Trade, industry, and home econom- ics: For salaries of teach- ers—To guaran- tee mini- mum of \$5,000.	Teacher training: For sala- ries of teachers and main- tenance of teacher training— To guar- antee minimum of \$10,000.
United States.....	\$3,051,919.01	\$1,022,637.73	\$1,032,875.96	\$996,405.30	\$2,900,000.00	\$1,000,000.00	\$1,000,000.00	\$900,000.00	\$151,919.01	\$22,637.73	\$32,875.96	\$96,405.30
REGION.												
I. North Atlantic.....	935,029.75	163,551.17	475,048.26	296,430.32	890,706.05	150,606.16	471,338.48	268,761.41	44,323.70	12,945.01	3,709.78	27,668.91
II. Southern.....	691,576.03	363,914.23	105,139.30	222,522.50	688,661.67	363,914.23	104,833.54	219,913.90	2,914.36		305.76	2,608.60
III. East Central.....	928,223.07	324,735.60	315,190.13	288,297.34	928,223.07	324,735.60	315,190.13	288,297.34				
IV. West Central.....	279,336.50	113,578.24	61,168.20	104,590.06	227,510.90	110,576.92	44,754.18	72,179.80	51,825.60	3,001.32	16,414.02	32,410.26
V. Pacific.....	217,753.66	56,858.51	76,330.07	84,565.08	164,898.31	50,167.09	63,883.67	50,847.55	52,855.35	6,691.42	12,446.40	33,717.53
I. NORTH ATLANTIC.												
Maine.....	26,333.00	7,313.80	9,019.20	10,000.00	23,623.76	7,313.80	9,019.20	7,290.76	2,709.24			2,709.24
New Hampshire.....	21,031.81	5,000.00	6,031.81	10,000.00	13,816.18	3,555.76	6,031.81	4,228.61	7,215.63	1,444.24		5,771.39
Vermont.....	20,000.00	5,000.00	5,000.00	10,000.00	11,280.07	3,789.61	3,964.65	3,495.81	8,719.93	1,210.39	1,005.35	6,504.19
Massachusetts.....	111,960.44	5,000.00	73,899.17	33,061.27	111,945.03	4,884.59	73,899.17	33,061.27	115.41			
Rhode Island.....	27,405.42	5,000.00	12,405.42	10,000.00	18,068.20	363.86	12,405.42	5,328.92	9,307.22	4,636.14		4,671.08
Connecticut.....	39,589.07	5,000.00	23,641.15	10,947.92	36,917.73	2,328.66	23,641.15	10,947.92	2,671.34	2,671.34		
New York.....	298,475.90	39,071.20	169,900.71	298,475.90	298,475.90	39,071.20	169,900.71	298,475.90				
New Jersey.....	82,778.57	12,765.38	45,065.90	24,917.29	82,778.57	12,765.38	45,065.90	24,917.29				
Pennsylvania.....	246,259.93	61,489.58	109,491.98	75,278.37	246,259.93	61,489.58	109,491.98	75,278.37				
Delaware.....	20,000.00	5,000.00	5,000.00	10,000.00	6,415.07	2,132.51		2,295.57	13,584.93	2,867.49	2,704.43	8,013.01
Maryland.....	41,195.61	12,911.21	15,562.92	12,721.48	41,195.61	12,911.21	15,562.92	12,721.48				
II. SOUTHERN.												
Virginia.....	63,634.36	32,119.94	11,267.51	20,246.91	63,634.36	32,119.94	11,267.51	20,246.91				
North Carolina.....	67,452.47	38,254.42	7,530.30	21,667.75	67,452.47	38,254.42	7,530.30	21,667.75				

South Carolina.....	46,350.67	26,151.92	5,316.14	14,882.61	46,350.67	26,151.92	5,316.14	14,882.61				
Georgia.....	80,316.08	41,955.78	12,736.36	25,623.94	80,316.08	41,955.78	12,736.36	25,623.94				
Florida.....	25,991.71	10,811.57	5,180.14	10,000.00	23,383.11	10,811.57	5,180.14	7,391.40	2,608.00			2,608.60
Tennessee.....	67,220.13	35,335.02	10,428.49	21,456.62	67,220.13	35,335.02	10,428.49	21,456.62				
Alabama.....	65,576.55	35,819.70	8,758.83	20,998.02	65,576.55	35,819.70	8,758.83	20,998.02				
Mississippi.....	54,864.88	32,215.58	5,000.00	17,649.30	54,766.74	32,215.58	4,901.86	17,649.30	98.14		98.14	
Arkansas.....	48,259.87	27,797.35	5,000.00	15,462.52	48,052.25	27,797.35	4,792.38	15,462.52	207.62		207.62	
Louisiana.....	51,510.85	23,503.51	11,740.10	16,267.24	51,510.85	23,503.51	11,740.10	16,267.24				
Texas.....	120,398.46	59,949.44	22,181.43	38,267.59	120,398.46	59,949.44	22,181.43	38,267.59				
III. EAST CENTRAL.												
West Virginia.....	37,508.81	20,119.54	5,396.77	11,992.50	37,508.81	20,119.54	5,396.77	11,992.50				
Ohio.....	152,428.91	42,594.24	63,017.20	46,817.47	152,428.91	42,594.24	63,017.20	46,817.47				
Kentucky.....	70,769.31	35,146.96	13,133.40	22,488.95	70,769.31	35,146.96	13,133.40	22,488.95				
Michigan.....	89,030.31	30,053.95	31,377.90	27,598.46	89,030.31	30,053.95	31,377.90	27,598.46				
Indiana.....	85,122.69	31,551.70	27,045.93	26,525.06	85,122.69	31,551.70	27,045.93	26,525.06				
Wisconsin.....	73,609.37	26,941.64	23,747.10	22,920.63	73,609.37	26,941.64	23,747.10	22,920.63				
Illinois.....	181,391.61	43,803.67	82,211.84	55,376.10	181,391.61	43,803.67	82,211.84	55,376.10				
Minnesota.....	65,322.16	24,831.65	20,105.17	20,385.34	65,322.16	24,831.65	20,105.17	20,385.34				
Iowa.....	69,231.09	31,301.96	16,079.85	21,849.28	69,231.09	31,301.96	16,079.85	21,849.28				
Missouri.....	103,908.81	38,390.29	33,074.97	32,343.55	103,908.81	38,390.29	33,074.97	32,343.55				
IV. WEST CENTRAL.												
North Dakota.....	25,411.99	10,411.99	5,000.00	10,000.00	17,574.41	10,411.99	1,495.21	5,667.21	7,837.58		3,504.79	4,332.79
South Dakota.....	25,278.15	10,278.15	5,000.00	10,000.00	17,825.39	10,278.15	1,812.93	5,734.31	7,452.76		3,187.07	4,263.69
Nebraska.....	36,918.53	17,859.82	7,350.08	11,708.63	36,918.53	17,859.82	7,350.08	11,708.63				
Kansas.....	52,541.39	24,259.09	11,675.64	16,606.66	52,541.39	24,259.09	11,675.64	16,606.66				
Oklahoma.....	50,937.63	27,092.81	7,570.05	16,274.77	50,937.63	27,092.81	7,570.05	16,274.77				
Montana.....	20,000.00	5,000.00	5,000.00	10,000.00	11,764.58	4,916.69	3,154.71	3,683.18	8,235.42	83.31	1,845.29	6,306.82
Wyoming.....	20,000.00	5,000.00	5,000.00	10,000.00	4,537.46	2,081.99	1,021.96	1,433.51	15,462.54	2,918.01	3,978.04	8,586.49
Colorado.....	27,560.13	7,987.70	9,572.43	10,000.00	25,467.27	7,987.70	9,572.43	7,847.14	2,152.86			2,152.86
New Mexico.....	20,688.68	5,688.68	5,000.00	10,000.00	10,004.24	5,688.68	1,101.17	3,214.39	10,684.44		3,898.83	6,785.61
V. PACIFIC.												
Idaho.....	20,181.39	5,181.39	5,000.00	10,000.00	10,031.76	5,181.39	1,652.74	3,197.63	10,149.83		3,347.26	6,802.37
Utah.....	20,000.00	5,000.00	5,000.00	10,000.00	11,816.90	4,061.23	4,089.02	3,666.65	8,183.10	938.77	910.98	6,333.35
Arizona.....	20,000.00	5,000.00	5,000.00	10,000.00	6,361.83	2,859.11	1,495.78	2,006.94	13,638.17	2,140.89	3,504.22	7,993.06
Nevada.....	20,000.00	5,000.00	5,000.00	10,000.00	2,508.39	1,388.24	316.06	804.09	17,491.61	3,611.76	4,683.94	9,195.91
Washington.....	36,403.87	10,870.76	14,317.73	11,215.38	36,403.87	10,870.76	14,317.73	11,215.38				
Oregon.....	24,671.02	7,410.60	7,260.42	10,000.00	21,278.18	7,410.60	7,260.42	6,607.16	3,392.84			3,392.84
California.....	76,497.38	18,385.76	34,751.92	23,349.70	76,497.38	18,385.76	34,751.92	23,349.70				

TABLE 44.—Allotment of Federal vocational education funds to the States for the year ending June 30, 1921.

Region or State.	Total.	Agriculture: For salaries of teachers, super- visors and directors.	Trade, in- dustry, and home eco- nomics: For salaries of teachers.	Teacher training: For salaries of teachers and main- tenance of teacher training.	Allotted on the basis of population.				Special allotment to guarantee minimum			
					Total.	Agriculture: For salaries of teachers, super- visors, and directors.	Trade, in- dustry, and home eco- nomics: For salaries of teachers.	Teacher training: For salaries of teachers and main- tenance of teacher training.	Total.	Agriculture: For sala- ries of teachers, super- visors, and di- rectors— to guar- antee minimum of \$5,000.	Trade, industry, and home econom- ics: For salaries of teach- ers—to guaran- tee mini- mum of \$5,000.	Teacher training: For sala- ries of teachers and main- tenance of teacher training— to guar- antee minimum of \$10,000.
United States.....	\$3,632,177.37	\$1,266,875.30	\$1,277,073.99	\$1,088,228.08	\$3,500,000.00	\$1,250,000.00	\$1,250,000.00	\$1,000,000.00	\$132,177.37	\$10,875.30	\$27,073.99	\$88,228.08
REGION.												
I. North Atlantic.....	1,113,166.50	198,044.70	591,310.32	323,811.48	1,078,054.60	188,257.70	589,173.10	298,623.80	37,111.90	9,787.00	2,137.22	25,187.68
II. Southern.....	832,070.78	454,892.80	131,041.90	246,136.08	830,283.46	454,892.80	131,041.90	244,348.76	1,787.32			1,787.32
III. East Central.....	1,120,237.53	405,919.50	393,987.65	320,330.38	1,120,237.53	405,919.50	393,987.65	320,330.38				
IV. West Central.....	320,373.37	140,618.62	70,210.25	109,544.50	274,363.63	138,221.12	55,942.75	80,199.76	46,000.74	2,397.50	14,267.50	29,344.74
V. Pacific.....	246,329.19	67,399.68	90,523.87	88,405.64	199,000.78	62,708.88	79,854.60	56,497.30	47,208.41	4,090.90	10,669.27	31,908.34
I. NORTH ATLANTIC.												
Maine.....	30,416.25	9,142.25	11,274.00	10,000.00	28,517.09	9,142.25	11,274.00	8,100.84	1,899.16			1,899.16
New Hampshire.....	22,539.75	5,000.00	7,539.75	10,000.00	16,682.91	4,444.70	7,539.75	4,039.46	5,856.84	555.30		5,301.54
Vermont.....	20,000.00	5,000.00	5,000.00	10,000.00	13,614.54	4,737.00	4,993.30	3,884.24	6,385.46	263.00	6.70	0,115.76
Massachusetts.....	135,214.44	6,105.73	92,373.97	36,734.74	135,214.44	6,105.73	92,373.97	36,734.74				
Rhode Island.....	30,506.78	5,000.00	15,506.78	10,000.00	21,882.62	454.82	15,506.78	5,921.02	8,624.16	4,545.18		4,078.98
Connecticut.....	46,715.81	5,000.00	29,551.45	12,164.36	44,626.64	2,910.83	29,551.45	12,164.36	2,089.17	2,089.17		
New York.....	360,663.75	48,839.00	212,375.87	99,448.88	360,663.75	48,839.00	212,375.87	99,448.88				
New Jersey.....	100,012.48	15,956.72	56,369.88	27,685.88	100,012.48	15,956.72	56,369.88	27,685.88				
Pennsylvania.....	297,369.59	76,861.98	136,864.97	83,642.64	297,369.59	76,861.98	136,864.97	83,642.64				
Delaware.....	20,000.00	5,000.00	5,000.00	10,000.00	7,742.89	2,665.65	2,869.48	2,207.76	12,257.11	2,334.35	2,130.52	7,792.24
Maryland.....	49,727.65	16,139.02	19,453.65	14,134.98	49,727.65	16,139.02	19,453.65	14,134.98				
II. SOUTHERN.												
Virginia.....	76,730.86	40,149.93	14,084.37	22,496.56	76,730.86	40,149.93	14,084.37	22,496.56				
North Carolina.....	81,306.18	47,818.02	9,412.88	24,075.28	81,306.18	47,818.02	9,412.88	24,075.28				

South Carolina.....	55,871.31	32,689.90	6,645.17	16,536.24	55,871.31	32,689.90	6,645.17	16,536.24	.....	.....	.....	.....
Georgia.....	96,836.22	52,444.73	15,920.45	28,471.04	96,836.22	52,444.73	15,920.45	28,471.04	.....	.....	.....	.....
Florida.....	29,989.65	13,514.47	6,475.18	10,000.00	28,202.33	13,514.47	6,475.18	8,212.68	1,787.32	.....	.....	1,787.32
Tennessee.....	81,045.08	44,168.78	13,035.62	23,840.68	81,045.08	44,168.78	13,035.62	23,840.68	.....	.....	.....	.....
Alabama.....	79,054.29	44,774.62	10,948.53	23,331.14	79,054.29	44,774.62	10,948.53	23,331.14	.....	.....	.....	.....
Mississippi.....	66,007.12	40,269.48	6,127.32	19,610.32	66,007.12	40,269.48	6,127.32	19,610.32	.....	.....	.....	.....
Arkansas.....	57,917.73	34,746.67	5,990.48	17,180.58	57,917.73	34,746.67	5,990.48	17,180.58	.....	.....	.....	.....
Louisiana.....	62,129.23	29,379.40	14,675.13	18,074.70	62,129.23	29,379.40	14,675.13	18,074.70	.....	.....	.....	.....
Texas.....	145,183.11	74,936.80	27,726.77	42,519.54	145,183.11	74,936.80	27,726.77	42,519.54	.....	.....	.....	.....
III. EAST CENTRAL.												
West Virginia.....	45,220.40	25,149.42	6,745.98	13,325.00	45,220.40	25,149.42	6,745.98	13,325.00	.....	.....	.....	.....
Ohio.....	184,033.70	53,242.80	78,771.50	52,019.40	184,033.70	53,242.80	78,771.50	52,019.40	.....	.....	.....	.....
Kentucky.....	85,338.17	43,933.70	16,416.75	24,987.72	85,338.17	43,933.70	16,416.75	24,987.72	.....	.....	.....	.....
Michigan.....	107,454.78	37,567.45	39,222.37	30,664.96	107,454.78	37,567.45	39,222.37	30,664.96	.....	.....	.....	.....
Indiana.....	102,719.35	39,439.63	33,807.42	29,472.30	102,719.35	39,439.63	33,807.42	29,472.30	.....	.....	.....	.....
Wisconsin.....	88,828.29	33,677.05	29,683.88	25,467.36	88,828.29	33,677.05	29,683.88	25,467.36	.....	.....	.....	.....
Illinois.....	219,048.37	54,754.57	102,764.80	61,529.00	219,048.37	54,754.57	102,764.80	61,529.00	.....	.....	.....	.....
Minnesota.....	78,821.38	31,039.55	25,131.45	22,650.38	78,821.38	31,039.55	25,131.45	22,650.38	.....	.....	.....	.....
Iowa.....	83,504.23	39,127.45	20,099.80	24,276.98	83,504.23	39,127.45	20,099.80	24,276.98	.....	.....	.....	.....
Missouri.....	125,268.86	47,987.88	41,343.70	35,937.28	125,268.86	47,987.88	41,343.70	35,937.28	.....	.....	.....	.....
IV. WEST CENTRAL.												
North Dakota.....	28,014.97	13,014.97	5,000.00	10,000.00	21,180.90	13,014.97	1,869.03	6,296.90	6,834.07	.....	3,130.97	3,793.10
South Dakota.....	27,847.68	12,847.68	5,000.00	10,000.00	21,485.31	12,847.68	2,266.17	6,371.46	6,362.37	.....	2,733.83	3,628.54
Nebraska.....	44,521.95	22,324.77	9,187.60	13,009.58	44,521.95	22,324.77	9,187.60	13,009.58	.....	.....	.....	.....
Kansas.....	63,370.24	30,323.85	14,594.55	18,451.84	63,370.24	30,323.85	14,594.55	18,451.84	.....	.....	.....	.....
Oklahoma.....	61,411.69	33,866.03	9,462.58	18,083.08	61,411.69	33,866.03	9,462.58	18,083.08	.....	.....	.....	.....
Montana.....	21,145.85	6,145.85	5,000.00	10,000.00	14,192.79	6,145.85	3,943.40	4,103.54	6,953.06	.....	1,056.60	5,896.46
Wyoming.....	20,000.00	5,000.00	5,000.00	10,000.00	5,472.73	2,062.50	1,277.45	1,592.78	14,527.27	2,397.50	3,722.55	8,407.22
Colorado.....	31,950.14	9,934.62	11,965.52	10,000.00	30,669.18	9,984.62	11,965.52	8,719.04	1,280.96	.....	.....	1,280.96
New Mexico.....	22,110.85	7,110.85	5,000.00	10,000.00	12,058.84	7,110.85	1,376.45	3,571.54	10,032.01	.....	3,623.55	6,428.46
V. PACIFIC.												
Idaho.....	21,476.75	6,476.75	5,000.00	10,000.00	12,095.60	6,476.75	2,065.93	3,532.92	9,381.15	.....	2,934.07	6,447.08
Utah.....	20,187.80	5,076.53	5,111.27	10,000.00	14,261.86	5,076.53	5,111.27	4,074.06	5,925.94	.....	.....	5,925.94
Arizona.....	20,000.00	5,000.00	5,000.00	10,000.00	7,673.56	3,573.90	1,863.72	2,229.94	12,326.44	1,426.10	3,130.28	7,770.06
Nevada.....	20,000.00	5,000.00	5,000.00	10,000.00	3,023.82	1,735.30	395.08	893.44	16,976.18	3,264.70	4,604.92	9,106.56
Washington.....	43,947.16	13,588.45	17,897.17	12,461.54	43,947.16	13,588.45	17,897.17	12,461.54	.....	.....	.....	.....
Oregon.....	28,338.78	9,263.25	9,075.53	10,000.00	25,680.08	9,263.25	9,075.53	7,341.30	2,658.70	.....	.....	2,658.70
California.....	92,378.70	22,994.70	43,439.90	25,944.10	92,378.70	22,994.70	43,439.90	25,944.10	.....	.....	.....	.....

TABLE 45.—Increase in the total of allotments of Federal funds for the promotion of vocational education, by States, for years ending June 30, 1918, 1919, 1920, and 1921.

Region or State.	1921	1920	1919	1918	Increase—		
					1921 over 1920.	1920 over 1919.	1919 over 1918.
	a	b	c	d	e	f	g
United States.....	\$3,632,177.37	\$3,051,019.01	\$2,307,465.30	\$1,635,586.72	\$580,258.36	\$744,453.71	\$651,878.58
REGION.							
I. North Atlantic.....	1,113,166.50	935,029.75	706,764.17	505,023.06	178,136.75	228,265.58	201,741.11
II. Southern.....	832,070.78	691,576.03	527,467.07	369,202.10	140,494.75	164,108.96	158,264.97
III. East Central.....	1,120,237.53	928,223.07	705,127.99	482,429.66	192,014.46	223,095.08	222,698.33
IV. West Central.....	320,373.37	279,336.50	206,327.81	165,500.99	41,036.87	73,008.69	40,766.83
V. Pacific.....	246,329.19	217,753.66	161,778.26	133,370.91	28,575.53	55,975.40	28,407.35
I. NORTH ATLANTIC.							
Maine.....	30,416.25	26,533.00	17,929.34	15,000.00	4,083.25	8,412.66	2,920.34
New Hampshire.....	22,539.75	21,031.81	15,000.00	15,000.00	1,507.94	6,031.81	
Vermont.....	20,000.00	20,000.00	15,000.00	15,000.00		5,000.00	
Massachusetts.....	135,214.44	111,960.44	86,138.70	60,316.96	23,254.00	25,821.74	25,821.74
Rhode Island.....	30,506.78	27,405.42	19,304.07	16,202.71	3,101.36	8,191.35	3,101.36
Connecticut.....	46,715.81	39,589.07	31,245.91	22,902.76	7,126.74	8,343.16	8,343.15
New York.....	360,663.75	298,475.90	226,343.14	154,210.39	62,187.85	72,132.76	72,132.75
New Jersey.....	100,012.48	82,778.57	62,775.93	42,773.53	17,233.91	20,002.64	20,002.35
Pennsylvania.....	297,369.59	246,259.93	186,786.09	127,312.10	51,109.66	59,473.93	59,473.90
Delaware.....	20,000.00	20,000.00	15,000.00	15,000.00		5,000.00	
Maryland.....	49,727.65	41,195.61	31,250.08	21,204.56	8,532.04	9,945.53	9,945.52
II. SOUTHERN.							
Virginia.....	76,730.86	63,634.36	48,268.17	32,942.00	13,096.50	15,346.19	15,346.17
North Carolina.....	81,306.18	67,452.47	51,191.24	36,164.85	13,853.71	16,261.23	15,026.39
South Carolina.....	55,871.31	46,350.67	36,189.30	26,344.08	9,520.64	10,161.37	9,845.22
Georgia.....	96,836.22	80,316.06	60,948.84	41,531.59	16,520.14	19,367.24	19,367.25
Florida.....	29,989.65	25,991.71	18,857.55	15,405.79	3,997.94	7,134.16	3,451.76
Tennessee.....	81,045.06	67,220.13	51,011.12	34,802.10	13,824.95	16,209.01	16,209.02
Alabama.....	79,054.29	65,576.55	49,765.68	34,575.42	13,477.74	15,810.87	15,190.26
Mississippi.....	66,007.12	54,864.88	42,888.92	30,912.85	11,142.24	11,975.96	11,975.97
Arkansas.....	57,917.73	48,259.87	37,874.42	27,483.96	9,657.86	10,385.45	10,385.46
Louisiana.....	62,129.23	51,510.85	39,090.00	26,659.16	10,618.38	12,420.85	12,420.84
Texas.....	145,183.11	120,398.46	91,361.83	62,325.20	24,784.65	29,036.63	29,036.63

## III. EAST CENTRAL.

West Virginia.....	45,220.40	37,508.81	29,417.16	21,722.27	7,711.59	8,091.65	7,694.59
Ohio.....	184,033.70	162,486.91	115,622.17	78,815.42	31,604.79	36,806.74	36,806.73
Kentucky.....	85,338.17	70,769.31	53,701.68	36,634.04	14,568.86	17,067.63	17,067.64
Michigan.....	107,454.78	89,030.31	67,539.35	46,048.41	18,424.47	21,490.96	21,490.94
Indiana.....	102,719.35	85,122.69	64,578.82	44,034.97	17,596.66	20,543.87	20,543.85
Wisconsin.....	88,828.29	73,609.37	55,843.72	38,078.05	15,218.92	17,765.65	17,765.67
Illinois.....	219,048.37	181,391.61	137,581.93	93,772.25	37,656.76	43,806.68	43,806.68
Minnesota.....	78,821.38	65,322.16	49,557.88	33,793.59	13,499.22	15,764.28	15,764.20
Iowa.....	83,504.23	69,231.09	52,530.24	35,829.39	14,273.14	16,700.85	16,700.85
Missouri.....	125,268.86	103,808.81	78,755.04	53,701.27	21,460.05	25,053.77	25,053.77

## IV. WEST CENTRAL.

North Dakota.....	28,014.97	25,411.99	17,808.99	15,235.99	2,602.98	7,608.00	2,603.00
South Dakota.....	27,847.68	25,278.15	17,708.61	15,139.07	2,569.53	7,569.54	2,569.54
Nebraska.....	44,521.95	36,918.53	28,014.13	20,434.70	7,603.42	8,904.40	7,579.43
Kansas.....	63,370.24	52,541.39	39,867.34	27,193.28	10,828.85	12,674.05	12,674.06
Oklahoma.....	81,411.69	50,937.63	38,655.31	27,587.95	10,474.06	12,282.32	11,067.36
Montana.....	21,145.85	20,000.00	15,000.00	15,000.00	1,145.85	5,000.00	.....
Wyoming.....	20,000.00	20,000.00	15,000.00	15,000.00	.....	5,000.00	.....
Colorado.....	31,950.14	27,560.13	19,273.43	15,000.00	4,390.01	8,286.70	4,273.13
New Mexico.....	22,110.85	20,688.68	15,000.00	15,000.00	1,422.17	5,688.68	.....

## V. PACIFIC.

Idaho.....	21,476.75	20,181.39	15,000.00	15,000.00	1,295.36	5,181.39	.....
Utah.....	20,187.80	20,000.00	15,000.00	15,000.00	187.80	5,000.00	.....
Arizona.....	20,000.00	20,000.00	15,000.00	15,000.00	.....	5,000.00	.....
Nevada.....	20,000.00	20,000.00	15,000.00	15,000.00	.....	5,000.00	.....
Washington.....	43,947.16	36,403.87	27,614.44	18,825.02	7,543.29	8,789.43	8,789.42
Oregon.....	28,338.78	24,671.02	16,142.18	15,000.00	3,667.76	8,528.84	1,142.18
California.....	92,378.70	76,497.38	58,021.64	39,545.89	15,881.32	18,475.74	18,475.75

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TABLE 46.—*Interest earned on Federal funds deposited with State treasurers for the year ended June 30, 1920.*

## NOTE.

The Secretary of the Treasury has rendered a decision in effect that the funds deposited with the State treasurers under the provisions of the vocational education act are United States funds. The title to the funds remains in the United States until disbursements are made in accordance with the requirements of the act. Since title is still in the United States during the period in which the State treasurer is custodian of the funds, it follows that any interest earned on the funds belongs to the United States, and should be covered into the Treasury as miscellaneous funds.

It is the duty of the Federal board and the various State boards to check up the interest received on the funds allotted to the State through the State treasurer as custodian. The Federal board, therefore, requires the State board, on or before September 1, as a part of its annual report to the Federal board, to include an affidavit from the custodian concerning the amount of funds received by him during the current fiscal year and also the amount of interest, if any, earned on these funds.

The following States have filed through the State treasurer an affidavit to the effect that the amount of the interest set opposite each State was earned on Federal funds for vocational education for the fiscal year ended June 30, 1920:

Alabama.....	( <sup>1</sup> )	Nebraska.....	\$219. 51
Arizona.....	( <sup>2</sup> )	Nevada.....	( <sup>1</sup> )
Arkansas.....	\$518. 05	New Hampshire.....	201. 05
California.....	( <sup>1</sup> )	New Jersey.....	844. 91
Colorado.....	( <sup>1</sup> )	New Mexico.....	92. 10
Connecticut.....	188. 06	New York.....	3, 842. 12
Delaware.....	15. 15	North Carolina.....	518. 07
Florida.....	193. 48	North Dakota.....	251. 02
Georgia.....	287. 27	Ohio.....	922. 84
Idaho.....	177. 14	Oklahoma.....	605. 24
Illinois.....	1, 775. 26	Oregon.....	( <sup>1</sup> )
Indiana.....	638. 91	Pennsylvania.....	3, 455. 13
Iowa.....	603. 20	Rhode Island.....	182. 90
Kansas.....	745. 12	South Carolina.....	( <sup>1</sup> )
Kentucky.....	470. 29	South Dakota.....	271. 10
Louisiana.....	( <sup>1</sup> )	Tennessee.....	( <sup>1</sup> )
Maine.....	405. 39	Texas.....	( <sup>1</sup> )
Maryland.....	506. 40	Utah.....	159. 53
Massachusetts.....	1, 029. 66	Vermont.....	( <sup>1</sup> )
Michigan.....	( <sup>1</sup> )	Virginia.....	269. 69
Minnesota.....	376. 36	Washington.....	260. 00
Mississippi.....	261. 40	West Virginia.....	258. 09
Missouri.....	1, 529. 72	Wisconsin.....	602. 24
Montana.....	267. 01	Wyoming.....	231. 73

<sup>1</sup> No interest earned.

<sup>2</sup> Interest earned, but not yet remitted.



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## **SECTION II.**

### **Report of the Rehabilitation Division.—Vocational Rehabilitation and Return to Civil Employment of Disabled Soldiers, Sailors, and Marines.**

**PART I.** Brief Historical Sketch.

**PART II.** Skeleton Outline of Organization and Statement of Functions in Brief.

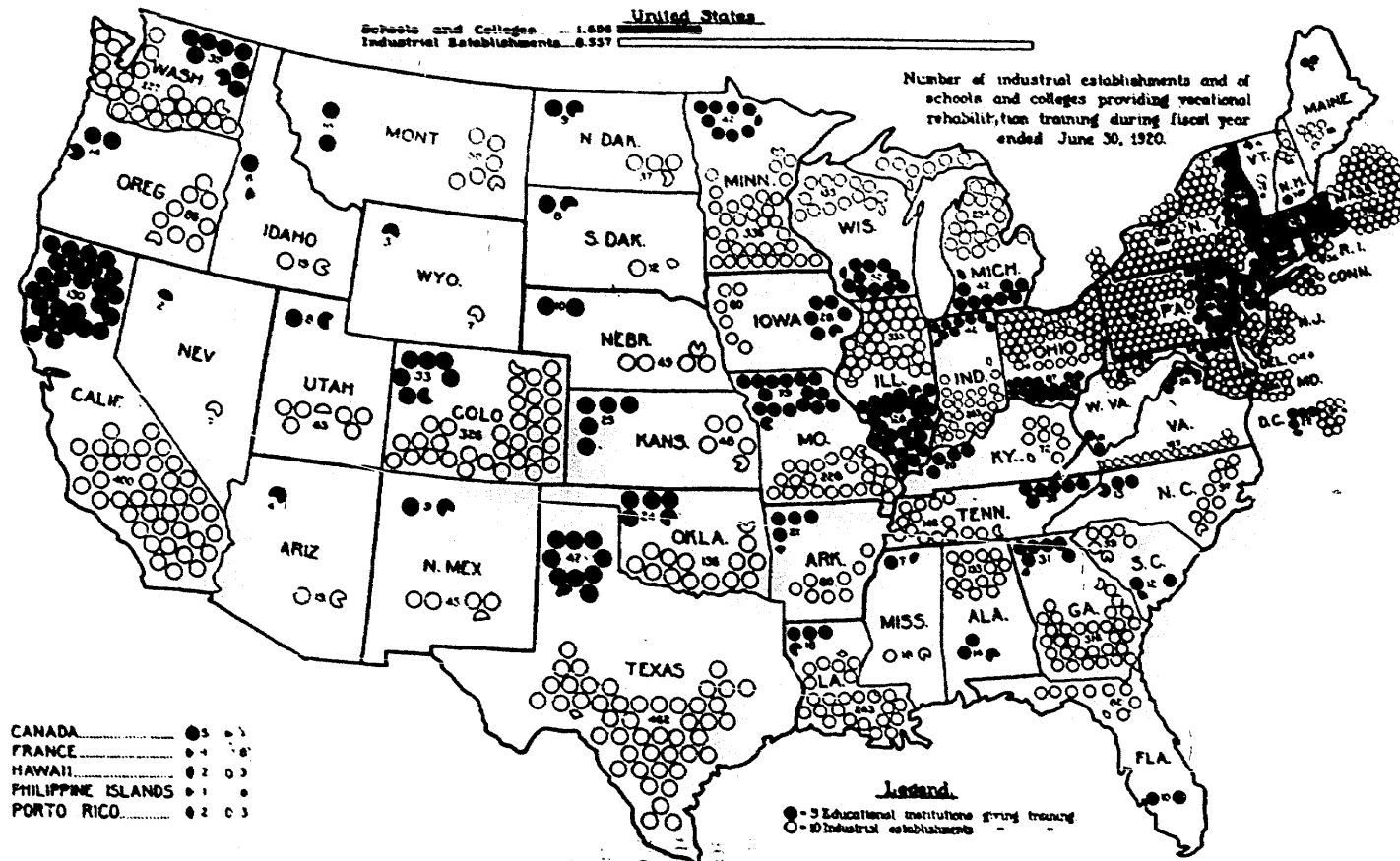
**PART III.** General Survey of the Work.

**PART IV.** District Office Studies.

**PART V.** A Group of Studies in Central Office, Washington.

**PART VI.** Statistical Tables and Studies.

# Training Agencies.



## PART I.

### BRIEF HISTORICAL SKETCH.

From the day of its organization, July 21, 1917, the Federal Board for Vocational Education has taken an active interest and a leading part in the promotion of vocational rehabilitation, both as it concerns the men disabled in such large numbers in the World War and as it relates to the thousands of men and women injured every day in the pursuits of peace. Created in the midst of the recent conflict with the Central Powers, the Board embraced the opportunity of performing additional service in that stupendous enterprise. Therefore, while organizing its staff and beginning to establish relations with the States concerning the definite work prescribed by the law, the Board made a study also of the directions in which it could be of special use in the many problems arising from the war. Two services stood out as being peculiarly within the province of an organization appointed to deal with vocational education—the industrial rehabilitation for military or civilian service of men disabled in battle, and the preparation of the vast numbers of mechanics and technicians needed in modern warfare for service in the field and for the supplying of the instruments and munitions of war, including ships. In regard to the latter service see Second Annual Report of the Board, pages 27-37.

In pursuance of the former objective, the Board almost immediately after organization established informal relations with the office of the Surgeon General of the Army, proffering its services in arranging the projected military hospitals for the giving of prevocational and vocational education therein and in conducting or in advising concerning this special type of training. At the same time representations were made to the authors of the proposed war-risk insurance measure that section 305 of that bill, while holding out the promise of vocational training to men disabled in the service of their country, made provision neither for the money nor for the personnel required to make that promise good. To remedy this defect the Federal Board, in October, 1917, proposed an amendment to section 305 of House bill 5723, under which the President would be empowered to appoint a commission to train, under military authority, men disabled in the service, and funds necessary to do the work would be placed in the hands of that commission. The reasons against imme-

mediate action presented by the authors of the bill and by the Members of Congress responsible for its passage were so cogent as to cause the Federal Board to refrain from urging this amendment, especially in view of the promise made that separate legislation covering vocational rehabilitation would be pressed at an early date. Meanwhile, however, it sought every opportunity to interest in the problem such responsible organizations of employers and employees as must eventually cooperate in making the projected legislation a success.

Nothing substantial growing out of informal discussions with the Office of the Surgeon General of the Army, the matter was brought to the attention of the President, who authorized the Secretary of War to call a conference of representatives of the bodies interested. This conference, beginning on January 14, 1918, was presided over by the Surgeon General. It remained in session for a number of days and appointed a subcommittee to draw up a suitable bill for presentation to the Congress. That committee represented the Office of the Surgeon General of the Army, the Bureau of Medicine and Surgery of the Navy, the hospitals for the insane under the jurisdiction of the Department of the Interior, the Council of National Defense, the United States Bureau of Education, the Department of Labor, the Bureau of War Risk Insurance, the United States Employees' Compensation Commission, the United States Public Health Service, the Federal Board for Vocational Education, the American Red Cross, the Chamber of Commerce of the United States, the National Association of Manufacturers, the American Federation of Labor, and the medical profession. After due deliberation it presented a report embodying a bill substantially similar to that subsequently passed by the Congress in June, 1918, except that the rehabilitation work was to be administered by a commission of five persons representing the Surgeon General of the Army, the Bureau of Medicine and Surgery of the Navy, the Department of Labor, the Bureau of War Risk Insurance, and the Federal Board for Vocational Education.

Three months elapsing without definite action, the matter was taken up by the Council of National Defense, which urged upon the President the calling of this proposed legislation to the attention of Congress, advising, however, that the administration of the work be placed with an existing body, the Federal Board for Vocational Education, rather than with a special commission. As soon as the matter came to the Congress action concerning it was begun, and a two days' hearing before the Joint Committee on Education brought out important testimony as to the immediate necessity for this kind of legislation and the general lines along which such an act of Congress could be made most effective. The required legislation was passed practically unanimously by both houses of Congress, and was

signed by the President on June 28, 1918. A section of the original bill, extending the benefits of rehabilitation to disabled civilians, was not pressed at that time but later was expanded into the industrial rehabilitation act, which became law on June 2, 1920.

Meanwhile, the Federal board had published during the winter and spring of 1918 three bulletins entitled, respectively, "Vocational Rehabilitation of Disabled Soldiers and Sailors," "Training of Teachers for Occupational Therapy for the Rehabilitation of Disabled Soldiers and Sailors," and "The Evolution of National Systems of Vocational Reeducation for Disabled Soldiers and Sailors." The last was prepared by the American Red Cross Institute for the Disabled, which body also generously financed a trip to Canada for the inspection of the rehabilitation work there by a group of persons selected by the Federal board to the end that, should the proposed bill become a law, no time would be lost in starting the enterprise with the nucleus of a staff familiar with similar work in Canada.

On June 29, 1918, the day after the bill became law, the Federal board called the attention of the Office of the Surgeon General of the Army and of the Bureau of Medicine and Surgery of the Navy to the section in the law enjoining such cooperation between those officers and the Federal board "as may be necessary to effect a continuous process of vocational training" and asked permission to enter the Army and Navy hospitals, under suitable regulations, for the purpose of explaining the benefits of the new law to the disabled soldiers, sailors, and marines. At the same time it brought to the attention of the Department of Labor the section requiring cooperation between that department and the Federal board for the purpose of securing employment for rehabilitated veterans. Satisfactory arrangements were almost immediately completed with the Bureau of Medicine and Surgery and with the Department of Labor; but formal admission to the Army hospitals was withheld until December 11, 1918, more than five months after the passage of the act, on the reasonable ground that injured men, when physically rehabilitated, would be needed for noncombative service and should not be brought into contact with civilians seeking their ultimate restoration to industrial life.

In order to discharge its responsibility for bringing the rehabilitation plans of the Government before every disabled man, the board sent three agents in August, 1918, to France. They were hospitably received by the military authorities there, and with Gen. Pershing's sanction and the active cooperation of the Red Cross, it was possible to bring the benefits of the rehabilitation law to practically every American in hospital on the other side. Like information was given on the returning transports and, altogether, the board distributed

through many sources over 5,000,000 leaflets and bulletins concerning rehabilitation. Nevertheless, thousands of disabled men returned to civilian life without any knowledge whatever of the rehabilitation law. These may be divided into two main groups: Men discharged with disabilities during the 14 months before the rehabilitation law was passed—that is, between April, 1917, and June, 1918—and a very much larger number of disabled men sent out from the Army hospitals between June 28 and December 11, 1918. The seeking out all over the United States of these tens of thousands of men in order to make them aware of their rights under the law has been a difficult and expensive task.

After admission to the Army hospitals was granted, new difficulties arose from the fact that after the armistice the pressure for discharges was so great that, instead of having a total of 15 or 20 discharge points, as the War Department had at first expected, the number rose to over 300, there being at one time 120 in the State of New York alone. To secure contact at so many discharge points with every individual when the men were thus flooding out of the hospitals, often on 24 hours' notice, was an impossible task. Thousands were therefore added to the great number already out in civilian life without knowledge of the rehabilitation act. Moreover, so many men, in order to secure discharge, swore that they had no disability that the Federal Board frequently finds itself in the difficult position of having to counteract the affidavit of a disabled man before it can admit him under the law to the benefits of training.

The situation would not have been so bad had the rehabilitation law functioned as its authors intended that it should. Unfortunately that law was framed upon the basis of making the Bureau of War Risk Insurance wholly responsible for financing the disabled man whether or not he should elect training, and it was expected that the Federal Board for Vocational Education would act simply as the educational agent for such trainees as were turned over to it by the bureau. Largely because of the conditions cited above, the bureau found itself unable to keep up with the task of determining the compensability of disabled men.

The Federal Board attempted, through unofficial channels of the bureau and through a straining of certain sections of the law, to get men into training before their compensation status was formerly arrived at; it enlisted the cooperation of the Benevolent and Protective Order of Elks in providing a loan fund to tide disabled men over until their compensability should be determined; and it established so-called "receiving stations" into which it took penniless disabled boys and supported them on the ground that they needed observation and preliminary training before their real vocational education could be begun. As one means of expediting matters, the

board helped thousands of boys to make out their applications for compensation and to secure decisions.

The difficult situation arising from a law requiring a dual administration, in which the War Risk Bureau had to consider the man's life-long status while the Federal Board needed to look only at his immediate eligibility for training, led finally to an agreement by the bureau and the board jointly to ask an amendment to the rehabilitation act. A hearing upon this proposed amendment was given by the Senate Committee on Education and Labor on May 29, 1919, and on July 11, 1919, it became law. This amendment placed the whole responsibility for determining the eligibility of disabled men for training and for maintaining them while in training upon the Federal Board, thus enabling that body to proceed promptly with the work of rehabilitation without awaiting the decisions of the Bureau of War Risk Insurance.

This change in the rehabilitation law necessitated, of course, great increase in the funds to be expended by the Federal Board, the major part of that increase being merely a transfer from the Bureau of War Risk Insurance to the Board. The fact that this amendment and the sundry civil bill carrying the 1920 appropriation for the rehabilitation work of the Federal Board were under consideration at the same time, and that there was being discussed also a large appropriation for vocational education in the Army, led to a serious, though very natural confusion, in the Congress, requiring time to straighten out. It was not, therefore, until July 19, 1919, 13 months after the passage of the rehabilitation law, and 27 months after the United States entered the World War, that the Federal Board was at last in a position to carry out freely and fully the great work of making vocational rehabilitation available to every man, as phrased in the July 11, 1919, amendment:

"Enlisted, enrolled, drafted, inducted or appointed in the military or naval forces of the United States, including member of training camps authorized by law, who, since April 7, 1917, has resigned or has been furloughed therefrom under honorable conditions, having a disability incurred, increased, or aggravated while a member of such forces, or later developing a disability traceable in the opinion of the board to service with such forces, and who, in the opinion of the Federal Board for Vocational Education, is in need of vocational rehabilitation to overcome the handicap of such disability."

Physical difficulties arising from lack of proper space in which to administer the work of vocational rehabilitation were happily removed, in February, 1920, by a fourth moving of this service to the temporary building at 1901 D Street NW., formerly occupied by the Food Administration.

## PART II.

### SKELETON OUTLINE OF ORGANIZATION AND STATEMENT OF FUNCTIONS IN BRIEF.

The Federal Board for Vocational Education under the law creating it, and the various amendments thereto, determines policies for each one of the three divisions of the Board. The three divisions are: Vocational Education, Vocational Rehabilitation, and Industrial Rehabilitation.

The Director executes the policies of the Board, is its executive head, and is responsible only to the Board.

The head of each Division is called Assistant Director. Each Assistant Director is in executive charge of his particular Division, under the supervision of the Director.

The Vocational Rehabilitation Division is subdivided as follows:

1. Central Office, at Washington.
2. District Offices, of which there are 14.
3. Local Offices, of which there are over 100.

#### I. CENTRAL OFFICE ORGANIZATION.

—Aside from general administrative duties, central office is responsible for the organization of special work in the field, for the supervision of the work in district and local offices, and for the standardization of methods.

1. *Assistant director in charge of the division.*
2. *Assistants in administration.*—These officers assist in the general administration of the division at central office, and in the administration of the division in the field.
3. *Chief of training relations.*—This officer has general supervision of all training throughout the 14 districts.
4. *Chief of industrial relations.*—This officer has the duty of establishing sound industrial relations incident to training and employment; he also has general oversight of local offices.
5. *Superintendent of cooperation.*—This section is in charge of liaison service with cooperating agencies, and is responsible for the supervision of personal service contacts in the field.
6. *Chief of medical relations.*—The medical officer has general supervision, under the assistant director, of district medical officers. The personnel is supplied by the Public Health Service. This officer is also responsible for the liaison work between the Board and the Public Health Service.
7. *Eligibility office.*—The chief eligibility officer assigns eligibility officers to districts, is responsible for their general supervision, checks and standardizes their work.



8. *Legal office.*—The attorney in charge is responsible for the approval of all contracts as regards legal forms; he passes on all regulations involving legal questions before issued, and renders the necessary legal opinions.

9. *Statistical section.*—The statistician collects, arranges, summarizes, and issues the statistics required of the districts.

10. *Allowance section.*—The superintendent of this section segregates certain information relative to each trainee, such as subsistence and dependency pay, tuition, and other costs.

11. *Chief clerk.*—Usual duties pertaining to this office.

12. *Records and files.*—The superintendent of this section is the custodian of the folders of trainees and applicants for training and of the files.

13. *Superintendent of accounts.*—This officer is responsible for accounting methods and the audit of vouchers submitted for payment.

14. *Disbursing officer.*—The disbursing officer makes all disbursements except in the case of the two districts on the Pacific coast, of which he has general supervision.

## II. DISTRICT OFFICE ORGANIZATION.

Each district is composed of two or more States. Each district has two or more local offices, dependent upon density of population and the size of the district.

The executive head of the district is called the district vocational officer. He is in complete charge of the district and local offices in his territory, under the executive supervision of the assistant director of the Division of Rehabilitation.

In each district there are three or more assistant district vocational officers and heads of certain sections:

1. *Assistant district vocational officer in charge of all training under the district vocational officer.*—This officer has a corps of training experts who, under his direction, have charge of the expert supervision of all training in local office territory.

2. *Assistant district vocational officer in charge of industrial relations and local offices.*—This officer has charge, under the district vocational officer, of the industrial relations incident to training and employment in the district, and general administrative supervision of local offices.

3. *Assistant district vocational officer in charge of cooperation.*—This officer is in charge of all the liaison service with ex-service men's organizations and other cooperating agencies in the district. He is responsible for the preparation of all pending cases in the district for the determination of eligibility, the follow-up of men not in training, the rendering of personal, social, and recreational service to men in training, and the handling of publicity in the district.

4. *Records office.*—The officer in charge is the custodian of the folders of trainees and applicants for training and of the files. He is responsible for collecting from local offices certain statistical facts, summarizing them and forwarding them to central office.

5. *Chief clerk.*—The chief clerk handles the soldiers' pay roll, is the district purchasing agent, and performs other duties usual to this position.

6. *Medical section.*—The medical officer and his staff, under the direction of the district vocational officer, are responsible for examinations to determine (a) eligibility, (b) feasibility of training, and (c) physical condition of trainees.

7. *Eligibility officer.*—The eligibility officer passes on evidence with particular reference to section 2 or section 3 training. His immediate superior is the chief eligibility officer.

8. *Adjustment board.*—This board is composed of the district vocational officer or assistant district vocational officer, the district medical officer or assistant district medical officer, and the eligibility officer.

All applicants for training whose cases have been decided upon adversely are encouraged to present fresh evidence and have their cases reviewed by this board.

The applicant may, if not satisfied with the decision, have the adjustment board send the evidence to central office for further review.

### III. LOCAL OFFICE ORGANIZATION.

Very nearly every State is represented by a local office, and certain densely populated States have five or six local offices. The local office has distinct territorial limits; it receives all cases eligible for training who are resident within its limits.

The local office is responsible for the induction of these eligibles into training, for getting their subsistence pay to them, for the necessary supervision and control of their training, and finally for their training into employment.

The personnel of the local office is responsible for the proper cooperation with district officers sent to the local offices through the district vocational officer to assist in the work.

1. *Local supervisor.*—This officer as head of the local office is responsible for the successful conduct of the office as outlined above.

2. *Status clerk.*—This clerk is in charge of the folders, files, and other records under the direction of the local supervisor.

3. *Stenographer.*

NOTE.—In some offices the staff may consist of simply a local supervisor and a clerk-stenographer. In large offices the local supervisor may have one or more staff officers, additional clerks and stenographers, the number of personnel depending upon the volume of work.

### DISTRICT AND LOCAL OFFICES.

#### DISTRICT No. 1.

District Office: Boston, Mass., 101 Milk Street.

Portland, Me., 324-326 Masonic Temple, 415 Congress Street.

Providence, R. I., 214 Jackson Building, 511 Westminster Street.

Springfield, Mass., 406 Massasoit Building, 214 Main Street.

#### DISTRICT No. 2.

District Office: New York, N. Y., 23 West Forty-third Street.

Bridgeport, Conn., 309 Liberty Building, 945 Main Street.

Buffalo, N. Y., 213 Mutual Life Building, Pearl Street.

Jersey City, N. J., 571 Jersey Avenue.

Hartford, Conn., Municipal Building, 370 Main Street.

Newark, N. J., No. 9 Franklin Street.

New Haven, Conn., 740 Chapel Street.  
Poughkeepsie, N. Y., 35 Market Street, Taylor Building.  
Rochester, N. Y., 75 State Street.  
Syracuse, N. Y., 327 Montgomery Street, Red Cross Building.  
Troy, N. Y., 32 Post-Office Building.  
Utica, N. Y., 47 Mann Building, Genesee and Broad Streets.

DISTRICT No. 3.

District Office: Philadelphia, Pa., 140 North Broad Street.

Allentown, Pa., room 24, B. and B. Building, Sixth and Hamilton Streets.  
Erie, Pa., 419 Marine National Bank Building, Ninth and State Streets.  
Harrisburg, Pa., Spooner Building, 9 North Second Street.  
Johnstown, Pa., Chamber of Commerce, Fort Stanwix Hotel, Main Street.  
Pittsburgh, Pa., 491 Union Arcade Building.  
Scranton, Pa., 320 Connel Building, 319 Washington Avenue.  
Williamsport, Pa., 29 Federal Building, Fourth Street.

DISTRICT No. 4.

District Office: Baltimore, Md., 450 Lexington Building.

Charleston, W. Va., 2A Masonic Temple Building.  
Clarksburg, W. Va., 303 Union Bank Building.  
Norfolk, Va., 400 Flatiron Building.  
Richmond, Va., 601 Times-Dispatch Building.  
Roanoke, Va., First National Bank Building.  
Washington, D. C., 1410 Pennsylvania Avenue NW.  
Bluefield, W. Va.

DISTRICT No. 5.

District Office: Atlanta, Ga., 312 Majestic Building.

Charlotte, N. C., United States Assay Office.  
Chattanooga, Tenn., Y. M. C. A. Building.  
Columbia, S. C., 500 Loan and Exchange Bank Building.  
Jacksonville, Fla., Bell Telephone Building.  
Savannah, Ga., rooms 6-7, Congress Building, Barnard and Congress Streets.

DISTRICT No. 6.

District Office: New Orleans, La., Washington Artillery Hall, 736 Carondelet Street.

Birmingham, Ala., 708 Chamber of Commerce Building.  
Jackson, Miss., McRae Building.  
Lafayette, La., Post-Office Building.  
Mobile, Ala., 208 Masonic Temple.  
Montgomery, Ala., Marks Building, 5½ Perry Street.  
Shreveport, La., Calvin Building.

DISTRICT No. 7.

District Office: Cincinnati, Ohio, 505-512 Lyric Theater Building, Vine Street.  
Cleveland, Ohio, room 610, Standard Parts Building, Eleventh and Walnut Streets.

## **270 ANNUAL REPORT FEDERAL BOARD FOR VOCATIONAL EDUCATION.**

Columbus, Ohio, room 211, Columbus Guarantee Mortgage Co. Building, 38 West Gay Street.

Evansville, Ind., 213 Federal Building.

Hopkinsville, Ky., rooms 5, 6, 7, Phoenix Building, corner Ninth and Main Streets.

Indianapolis, Ind., room 320, Meridian Life Building.

Louisville, Ky., 303 Starks Building, Fourth and Walnut Streets.

South Bend, Ind., Chamber of Commerce Building.

Toledo, Ohio, 705 Nashy Building, southwest corner Madison and Huron Avenues.

Winchester, Ky., Clark County National Bank Building.

### **DISTRICT No. 8.**

District Office: Chicago, Ill., Lelter Stores Building.

Batavia, Ill., 104 South Batavia Street.

Centralla, Ill., suite 5, Pfeiffer Building, 306 East Broadway.

Champlain, Ill., First National Bank Building.

Detroit, Mich., 207 Henry Street, Absopure Building.

Eau Claire, Wis., 37 City Hall.

Grand Rapids, Mich., 217 Fourth National Bank Building.

Green Bay, Wis., south room, second floor, Federal Building.

Jackson, Mich., rooms 306-307 Rogers Building, 117 Main Street.

Milwaukee, Wis., 1312 First National Bank Building.

Peoria, Ill., 401 Federal Building.

Rockford, Ill., 200 Warren Building, 214 South Main Street.

Saginaw, Mich., 310 Eddy Building.

### **DISTRICT No. 9.**

District Office: St. Louis, Mo., Chemical Building, Eighth and Locust Streets.

Des Moines, Iowa, 208 Polk County Courthouse.

Kansas City, Mo., room 306, McMillen Building, Locust and Eleventh Streets.

Lincoln, Nebr., fourth floor, city hall.

Omaha, Nebr., 202 Nickel Building.

Wichita, Kans., 218 Union National Bank Building.

### **DISTRICT No. 10.**

District Office: Minneapolis, Minn., 1700 Hennepin Avenue.

Duluth, Minn., 614 Manhattan Building.

Fargo, N. Dak., 55 Edwards Building.

Helena, Mont., 3 Montana Building.

St. Paul, Minn., 607 Hamm Building.

Sioux Falls, S. Dak., 203 Western Surety Building.

### **DISTRICT No. 11.**

District Office: Denver, Colo., Railroad Building.

Albuquerque, N. Mex., Commerce Building, Fourth and Gold Streets.

Casper, Wyo., 328 East Second Street.

Cheyenne, Wyo., 527 Hynds Building.

Grand Junction, Colo.

Pueblo, Colo., room 4, County Courthouse.

Salt Lake City, Utah, 212 Boston Building.

DISTRICT No. 12.

District Office: San Francisco, Calif., 548 Flood Building.

Fresno, Calif., 302 Griffith-McKenzie Building, J and Mariposa Streets.  
Los Angeles, Calif., 613 Merchants' Trust Building, 207 South Broadway.  
Phoenix, Ariz., Chamber of Commerce.  
Reno, Nev., Washoe County Bank Building.  
Sacramento, Calif., 428 Ochsner Building.  
San Diego, Calif., 512 Spreckels Building.  
Tucson, Ariz., Room 25, Red Cloud Lodge, Zuni Court.

DISTRICT No. 13.

District Office: Seattle, Wash., Securities Building, basement.

Pocatello, Idaho, 220 First National Bank Building.  
Portland, Oreg., 209 Medical Building.  
Spokane, Wash., 309 Hutton Building.  
Tacoma, Wash.

DISTRICT No. 14.

District Office: Dallas, Tex., Akard and Pacific Avenues.

Beaumont, Tex., 509 Kyle Building.  
El Paso, Tex., 9 Chamber of Commerce Building.  
Fort Smith, Ark., 212 First National Bank Building.  
Fort Worth, Tex., 111½ East Tenth Street.  
Houston, Tex., 507 Prince Theater Building.  
Little Rock, Ark., 16 Bathurst Building, 215 West Second Street.  
San Antonio, Tex., 511 Calcasieu Building.  
Oklahoma City, Okla., 210 Magnolia Petroleum Building, Seventh and Broadway.  
Paris, Tex., Scott Building.  
Tulsa, Okla., 203 Lynch Building.  
Tyler, Tex.  
Waco, Tex., 1708 Amicable Life Building.

### PART III.

## GENERAL SURVEY OF THE WORK.

As regards the formulation of the Federal Government's program of vocational rehabilitation of our disabled soldiers, sailors, and marines under the law of June 27, 1918, it is to be noted that at the outset in the nature of the case no body of reliable data could be furnished by either the Army or the Navy or by any other agency upon which to base an accurate forecast of administrative requirements for effective realization of the program as defined by Congress. The experience of European countries furnished no authoritative data for this country, because conditions in the United States, our political organization, our industrial development, differed essentially from conditions obtaining in European countries. The American soldier and sailor also differed as regards training and experience from the soldier or sailor of European military services. He presented a unique problem. Canada, with great magnanimity, loaned the Federal Board men who had been occupied with rehabilitation problems as presented by the disabled men of the Canadian overseas forces and made available such experience as had been acquired in the work there. It became immediately apparent, however, that America could not go very far in imitation of other countries and that it must develop its own program with reference specifically to conditions in this country. Nevertheless, surveys were made of foreign methods and achievements, and information relative to the work of rehabilitation in every foreign country was collected and made available for guidance of the Board in proceeding to carry out the intentions of Congress that our disabled men should be vocationally retrained and liberally provided for.

From November, 1918, until April, 1919, about 25,000 men per month were discharged with disabilities from Army posts, cantonments, and hospitals. After arrangements were effected with the War and Navy Departments which permitted the Board to send its agents into the hospitals to make surveys of the men before discharge, demobilization was taking place so rapidly that individual surveys of men disabled had to be hastily made in order to complete them before the men got away. Men with disabilities were discharged in very considerable numbers before a survey was permitted to be

made. These men were scattered over the country and their addresses were unknown. Through the War Risk Bureau, the Red Cross, and other organizations, as well as by direct application of the men themselves to the Board, and by various other means, contact was established with thousands of these men during the first months of the Board's activities. Every agency of publicity was utilized by the Board.

It soon became clear that the task imposed upon the Board was to be one of great magnitude, but no accurate estimate could be made in the first few months of the work of the number who would eventually be discharged with disabilities of varying degrees, or of the number among those disabled who would elect to take training under the direction of the Board. It is conclusive evidence of the value of the rehabilitation service provided under the rehabilitation act that the number of men voluntarily electing to take training greatly exceeds every estimate made in the earlier period of the work and that the pressure upon the Board to provide training for all men eligible under the act has been cumulative, increasing in proportion as the practical benefits derived from training by men electing to take courses have become apparent to their disabled comrades. The Board has attempted to respond to this increasing demand to the full measure of its authority and resources.

To find and register the disabled men, whose addresses in many cases were unknown, has been in itself a difficult undertaking, although, of course, the difficulties inherent in the work itself and originating in the character of the disabilities encountered have been principally absorbing of the administrative effort of the Federal Board. The blind, strongly appealing to the popular imagination and sympathy, represent a particularly difficult training problem, although, fortunately, they constitute a relatively small group. This is also true of the deaf. There are about 5,000 amputation cases, each one of whom has been offered training. Each of these cases represents an individual training problem to be solved. A much larger problem, however, has been found in providing for the large number of ex-service men who contracted tuberculosis in the service or as an effect traceable to service, and for the very large group of men suffering from mental and nervous diseases, for a large percentage of whom, because of their physical and mental condition, training is not feasible. These numerically large groups do not represent in the popular imagination spectacular cases, such as the blinded and those who have suffered amputations; but in reality all the resources that the Board can command are and will be taxed to handle them wisely.

The dragnet of the draft gathered in all men of draft age who were found physically fit for service. Among those were many of little or no schooling, who had in some cases worked only intermittently at any occupation. The Army and Navy included men of every grade of education, from those who had few early advantages to the type represented by those who were the product of the best moral and intellectual training that the country afforded. An honorable discharge is the only introduction required by the Board, but, nevertheless, the inherent training difficulties presented by certain classes of men have been manifest from the start. One appallingly large group requires very special consideration in providing for their rehabilitation—namely, the illiterate. There are also many foreign born who have had an elementary education and some trade training who, nevertheless, require prevocational training in English as an essential prerequisite to any sort of vocational training. Each of these large groups presents its own peculiar problems for solution in providing rehabilitation service.

To make clear the nature of the duty imposed upon the Board by law relative to the determination of eligibility, it is necessary to state what, as provided in the law, constitutes the essential evidence of eligibility for section 2 training, which carries with it maintenance and subsistence pay. To determine eligibility under section 2 the following facts must be established: (a) That the man's disability is due to or traceable to military service; (b) that he was discharged under honorable conditions subsequent to April 7, 1917; (c) that his disability constitutes a vocational handicap; and (d) that training is feasible. The records of the War and Navy Departments will usually provide the evidence required under (a) and (b). Determination of the vocational handicap and of feasibility of training in each individual case requires most careful consideration.

Every man who is awarded compensation is entitled to at least section 3 training if his case has not already been examined by the Board. The evidence must be sifted to determine his eligibility for section 2 training. He may at any time present new evidence, and whenever he does so his case is reopened for review. No case is finally closed while the man is alive. In the event that the representatives of the Board are satisfied from the evidence that the man is not entitled to section 2 training, he is interviewed to find out if his circumstances permit him to take up any course of vocational training, devoting whole or part time, day or evening, to this training.

It will be evident that no wholesale method of providing training can be adopted. The Board has dealt and must deal with the individual. It must take account of individual industrial and educational background and of individual mental and moral qualities. All of these must be weighed in order that the man may be wisely guided



and trained into employment. Other Government departments deal with the individual in a formal way. A correct understanding and appraisal of the work of the Board must give proper significance to the fact that the Board's problems are all individual problems, each one presenting its own peculiar complications.

#### ORGANIZATION.

It was necessary for the Board to organize overnight to begin meeting its obligations to the disabled ex-service men, as set forth in the law of June 27, 1918. The pressure of numbers was felt almost immediately, and this pressure has grown in intensity, and is still felt. The history of a great business enterprise is usually that of small beginnings, gradually increasing business, and an expanding organization keeping pace with its growth. This is not the history of the Federal Board, which was under the necessity of organizing on an emergency basis in every section of the country to assume at the outset tremendous and baffling responsibilities. As has been noted, the work in Canada and in Europe was suggestive, but no clear trail had been blazed. Canada loaned men as she was able to do, but it was necessary for the Board to build anew, and above all, as was done in the case of the Army, the Navy, and the welfare societies in the Great War, to build rapidly under the pressure of urgent requirements of providing extensive service in an absolutely new field of activity. While an organization of its own must be effected hastily, it was very necessary for the Board at the same time to realize its dependence upon the War and Navy Departments and upon the Bureau of War Risk Insurance and to build up working relations at points of dependence.

Legal evidence relative to honorable discharge had to be collected for each man, evidence connecting his disability with service, and medical evidence relative to his disability. As a basis for determining upon individual training, facts as to previous education and employment had to be set down. In the very beginning the policy was adopted of decentralization by establishing districts and later by opening branch offices in the several districts. These district offices were opened in the fall of 1918 for registration and survey of the disabled men. To find men of executive ability capable of administering these important offices efficiently constituted one difficult aspect of the Board's problem on the administrative side.

Also men had to be found for appointment in the central office competent to supervise the work of districts and establish sound interoffice relationships.

To find men capable of studying the relationship of a soldier's disability to his former occupation, and to one or more suggested possible employment objectives, and of determining upon a course of

training which would salvage as much previous industrial experience as possible was the most difficult single undertaking of all. It was necessary for the Board's vocational advisers to have a wide knowledge of the requirements of various occupations and the employment possibilities of each, to give due heed to the candidate's wishes, but in the interest of the man himself to analyze his selection of an employment objective with just regard to his previous industrial and educational background and ability to succeed. Tactful questioning of the soldier to get adequate knowledge of his mental and moral make-up was necessary as a preliminary to wise guidance. Many of the men were "shot to pieces" nervously and had to be handled with the utmost tact and sympathy. In each case it took time to get the story. The men themselves were uncertain as to what election of training to make; many had no defined preference and no particular end in view; many had decided preferences which were out of line with previous education or experience or natural aptitude.

There were very few vocational experts in the country competent to undertake this work. It was necessary to recruit men from trades, industry, business, and the professions wherever they could be found. The work was regarded as emergency work; it did not offer a life career, and the salary that could be offered was relatively inconsiderable. The remarkable thing about this recruiting campaign is that a number of very exceptional men were in fact found, and many more who proved on the whole to be entirely satisfactory. The appeal that influenced nearly all the strong men was the character of the work and not the salary. Scattered through the organization from its inception there have been men—in the aggregate a numerically large group—who have given themselves to the work without regard to health considerations or to any other consideration than that of rendering service to disabled men. It is because of these men, who have stood their ground courageously and with loyalty to the best interests of the disabled men, that the organization so hastily put together has been gradually perfected to the point of present efficiency in spite of an enormous labor turnover which would have wrecked any private business enterprise.

Early in the fall of 1918 the central office and the district offices began to function, and a few branch offices were started. By February, 1919, over 25,000 cases had been registered. By June 30, 1919, over 100,000 cases had been registered. A system of "case boards" was set up in district offices and in central office to pass on evidence relative to eligibility for training under the law. The approvals of the district case boards were sent to central office for review prior to final approval. To the end of June, 1919, approximately 3,000 men approved for training had been awarded compensation

by the Bureau of War Risk Insurance. These men were thus legally eligible for training and had been inducted into training; 3,213 men were in training June 30, 1919, and approximately 10,000 had been approved for training by the central office case board. Under the terms of the law then in effect these men could not enter training until their award of compensation had been made. This condition was one requiring constant explanations to the men by a staff already overwhelmed with the pressure of new applications and new surveys.

The relative advantages of organizing special schools to train disabled men and of utilizing existing educational institutions were carefully considered at the outset, and it was decided to utilize existing educational institutions. The Board believed, and experience has justified this belief, that the training in established schools would not only be better on the whole but that it would be one means of facilitating the reabsorption of disabled men in civil life. Other things being equal, moreover, it was believed to be in the public interest that the Federal Government should follow a policy which would strengthen existing educational institutions rather than one involving competition with them.

The organization first set up continued to function without important change for the first few months of the past fiscal year. It is now entering upon a period of greater decentralization. The plan in operation prior to December of last year was probably less centralized in Washington than that of any other Federal department dealing with individuals. But the number of trained personnel was small, and in the interest of standardized practice a considerable group of trained workers had to be segregated at one point. To have the law interpreted in individual cases with something approaching uniformity, it was necessary for this central group to render the great bulk of important decisions. As the organization expanded, in spite of the large labor turnover, through intensive training the group of experienced officer and clerical personnel increased.

Serious discussions began early last fall relative to the advisability of delegating to the district offices the necessary power to settle many of the questions which under the regulations of the Board had up to that time been settled in Washington. The disposition of the Board was to grant greater responsibility and the power that goes with it to district offices as rapidly as it was safe to do so.

Clearly it was good business policy to first test out the district organizations. The most important test applied occurred December 9, 1919, with the issuance of instructions empowering the district office to place all persons declared eligible for training by central office or its representative eligibility officer in courses which looked

forward to not more than two years of training. Instructions provided that advisement should be concurrent with training, that the district vocational officer could arrange for changes from one employment objective to another, provided the total cost of training for the year, outside of subsistence pay, was not in excess of \$500. Central office still retained power to pass on training objectives which contemplated more than two years of training or which necessitated an expenditure in excess of \$500 for instruction and supplies.

In order that this grant of power to the districts might result in the utmost benefit to disabled soldiers who were applicants for training, by reducing the period between the application and the decision as to eligibility, central-office squads were sent from district to district to review all pending cases, mark all eligible where the evidence was complete, and mark all eligible that could be marked eligible after specific items of evidence were secured by the district office. Through this plan the training of thousands of men was expedited.

Neither the district offices nor the central office itself prior to this date had an organization and a trained personnel strong enough to carry through successfully such a plan. The history of the district-office case board which had passed on the eligibility of candidates for training and having approved them submitted them to central office, would seem to indicate that the district offices were not prepared to exercise efficiently any larger powers than were conferred upon them. A large percentage of district-office approvals had in fact to be disapproved by the more experienced personnel in the central-office case board, because of lack of evidence or misinterpretations of the law.

Early in the spring of 1920 one or more eligibility officers were installed in each district office, and the work of inducting men into training, or changing their courses without prior reference to central office, was being accomplished with good results. It became evident that the district offices would soon be ready for more extensive grants of power, and that the work would be better done as a consequence of making these grants. Plans for decentralization crystallized early in May, 1920.

The resulting modified plan of organization has therefore been a natural growth, the result of necessary experiment. The plan evolved includes a simplification and curtailment of functions performed by the central office on the one side and on the other an increase of responsibility in the number of functions performed by the district offices. There has also been a redivision of the work of the 14 districts and the imposition of new duties and the granting of more power to the hundred and more local offices which spread as a network over the country.

To distribute powers of decision to many people scattered all over the country was to run the danger of great lack of uniformity in the administration of the law. To avoid this danger and to assist in the standardization of decisions and practices, so that all disabled soldiers shall be treated alike, a new working manual of law and rulings has been prepared and distributed.

Under the director, who is in executive charge of the three divisions of the Board, the assistant director has executive supervision of central office, the 14 districts, and the hundred and more local offices. Aside from the assistant director, with his assistants in administration and field organizers, there is a chief of training service at central office who has general supervision of all training, and a chief of industrial relations service who has certain supervisory duties relative to local offices. Inasmuch as the functions of central office have been reduced in substance to the audit and payment of accounts, the organization of special work in the field, the general supervision of district and local offices to secure uniformity of practice, there is going on rapidly a process of curtailment and readjustment both as to personnel and functions.

The executive head of the district office is called the district vocational officer. He is in complete charge of the district and local offices in his territory. There are two or more assistant district vocational officers in each district, the number depending upon the size of the load. One assistant, among other duties, has a corps of training experts who, under his direction, give the necessary expert training supervision in local offices of the district. The other assistant has charge, under the district vocational officer, of the industrial relations incident to training and employment in the district, and general administrative supervision of local offices. The work of the district office is further subdivided into sections. The records section, the head of which is custodian of folders and files, is also responsible for collecting from local offices certain statistical facts, summarizing them, and forwarding them to central office. The chief clerk's office is responsible for the soldiers' pay roll, purchases, and for the performance of other duties usually incidental to such office. The medical section is responsible for all examinations either at the district office or at the Public Health Service offices to determine (a) eligibility, (b) feasibility of training, and (c) the physical condition of trainees at periodic intervals. The contact office is responsible for securing legal evidence, in conjunction with the medical section, and preparing all pending cases in the district for the determination of eligibility. The eligibility office, under the supervision of central office, passes on evidence with particular reference to eligibility of candidates for section 2 or section 3 training. The adjustment board, composed of the district vocational officer or his assistant, the district

medical officer or his assistant, and the eligibility officer, reviews cases where a rating has already been made, if the candidate for training is not satisfied with the prior decision of the eligibility officer. The psychiatric board in some districts, composed of the district vocational officer or his assistant, the district medical officer or his representative, a psychiatric specialist connected with the district medical staff, a psychiatric specialist connected with the Public Health Service, and a training specialist, pass on such difficult mental and nervous cases as are recommended for special attention to determine kind and feasibility of training.

The local office has defined territorial limits. It is directly responsible to its district office; it receives all cases eligible for training who are resident within its boundaries. It is responsible for the induction of these eligibles into training, for getting their subsistence pay to them, for the necessary supervision and control of their training, and, finally, for their training into employment.

The personnel of the local offices are responsible for the proper cooperation with district officers sent to the local offices by the district vocational officer to assist in the work. The organization of a local office includes a local supervisor, a status clerk, and a stenographer. In the smaller local offices the status clerk may also do the stenographic work. The larger local offices may have one or more training officers and advisers and such clerks as are necessary. The local supervisor, as head of the office, is responsible for the successful conduct of the office as outlined above. The status clerk is in charge of the folders, files, and other records under the direction of the local supervisor.

The district office, with its local office organization, has in effect full power to solve every problem of the work as presented, except the authority to incur certain unusual expenses. Practically very little has to be referred to central office. There is very nearly absolute local autonomy. This would be carrying decentralization to the danger point, as has already been stated, if provision had not been made by central office, through a careful revision of the regulations, for standardized action, and if provision had not been made by central office for sympathetic, constructive supervision. Local offices under this decentralization plan will not be multiplied unduly. A local office is installed only when it is made clear that the number of registrations in a given territory is sufficient to justify a new office.

In the foregoing statements an attempt has been made to make ~~clear the rehabilitation~~ problem, and the magnitude and inherent difficulties of it. The pioneer organization of the work has been sketched through its various stages of centralization and decentralization to the present organization, which is believed to be strong

enough to complete the work successfully. This report would not be complete without discussing in more detail the part played by the medical section, certain training problems, necessary supervision of training, the question of feasibility for training, the industrial relations involved in the attitude of unions and employers, legislation enacted during the year, recommendations for new legislation, the plan of administration of the Darrow law, and certain observations in connection with the cost of the work from the beginning to June 30, 1920.

#### IMPORTANT PART PLAYED BY THE MEDICAL DEPARTMENTS.

Very soon after the districts were organized medical men were secured, usually on part time, and were paid as a rule on a basis of individual examinations. The Board depended largely, during the first few months, on transcripts of medical examinations from the files of the War and Navy Departments and the Bureau of War-Risk Insurance. The evidence was required particularly to determine the presence of vocational handicaps, inasmuch as under the original law training could not be given prior to a determination of handicap and an award of compensation. These transcripts of medical records were found to be in many cases not sufficiently recent to be of value. It became increasingly evident that each district office should have a staff competent to make independent examinations where such were necessary. After the passage of the law of July 11, 1919, it became a matter of first importance to build up these district medical staffs, because in numerous cases reexaminations were necessary. Considerable headway was made, but, on account of the limited number of salaries at \$2,500 and above at the disposal of the Board, it was very difficult to secure good doctors on full time. By an arrangement with the Public Health Service early in the fall of 1919, and through the efforts of the chief medical officer, every district office was gradually strengthened. The Public Health Service assigned officers to the Board. The bulk of examinations are now being made by Public Health Service doctors at Public Health Service offices. The district medical staffs make few examinations to determine eligibility and feasibility of training. They review the medical evidence submitted by the Public Health Service for this purpose. The fundamental importance of this work is apparent. Another function performed by the medical staff, which is growing rapidly in importance, is the follow-up or after-care work. Each trainee is under observation in order to make sure that his work is being performed without injury to himself. The doctor in charge of this work is assisted in each district by a corps of nurses, called follow-up workers, who visit the men in their homes when they are reported absent. These workers not only assist the doctor in discharging his special responsibilities,

but, incidentally, through personal contact with the men at a time when they need friendliness and sympathy, receive confidences and secure intimate knowledge of home conditions which not infrequently makes adjustment of certain difficulties possible with a correspondingly beneficial effect upon the man's training.

#### TRAINING INTO EMPLOYMENT.

The Board possesses no schools of its own, but it has utilized during the fiscal year nearly 1,700 educational institutions, representing the best in the country, to train its students; in addition arrangements have been made in more than 8,000 shops, mills, factories, and business places of all sorts for training men in and on the job. The question of building large schools and equipping and managing them was forced upon the attention of the Board and came up for decision quite early in its history. To do this it was found, even after a superficial investigation, that it would be expensive, cause delay, and bring the Government into competition with existing institutions. On the other hand, it was found that existing schools, with assistance here and there in the matter of educational equipment, could furnish the necessary amount and variety of training facilities to meet the requirements of the work. As a by-product to the adoption of this plan, the Government strengthened existing institutions by its patronage, and at the same time made no concessions unless it received an equivalent. It was agreed that the charge made the Government by the schools for the service rendered should be the same charge regularly made by the schools. Definite agreements covering a memorandum of arrangements have been made with all schools and establishments prior to the induction of the man into training.

In the early development of the work, men were placed in educational institutions rather than in training on the job for three principal reasons: First, such institutions could expand with sufficient rapidity to meet the requirements; second, in the days of greatest pressure it was much easier to place men in educational institutions than to find suitable places for job training; third, placement training for the first year was practically impossible because of the wage situation. The relatively small number placed in job training were in difficulties all the time with the Bureau of War Risk Insurance in regard to the reduction in their compensation payments on account of the small wage which many employers gave in addition to training. Some weeks subsequent to the enactment of the amendment of July 11, the Board decided that it was not good policy to take cognizance of the wage paid by an employer in cases of training on the job, provided due emphasis was placed on the training itself.



The districts have always been encouraged, however, to adequately emphasize the development of placement training. Approximately 10,000 men were being trained on the job on June 30, 1920. It is the settled policy of the Board to train every man into employment by such means as seem necessary and expedient, to the end that he may become firmly attached to and keep steadily before him his employment objective. The plan includes institutional training, placement training, supplementary training to training on the job, together with proper supervision in the early stages of employment to make certain that rehabilitation has been made effective.

At no time during the fiscal year has it been impossible to give a man appropriate training for a selected occupation, provided he would go to the place where the training was available. The desire of many men to be trained near their homes has made it difficult to effect satisfactory training arrangements in some instances. To encourage this very wholesome desire to be trained near home, the Board has made generous allotments of money for the expansion of certain training facilities. In addition to these allotments, about 30 institutions and certain training centers have been furnished with equipment. It is estimated, in round numbers, that the value of this equipment loaned is in the neighborhood of \$300,000.

With the natural expansion of the work for the coming year, even under the present law, the question of equipment is an important one. There is a large amount held by the War Department which has not yet been declared surplus, but there is no legal provision at present which would permit the Board to requisition such equipment from the War Department, even after it has been declared surplus.

The human side of the work is being brought to the attention of training officers and advisers constantly, in the hope that the everyday task, whatever it may be, will never become mechanical. Take, for example, the Foreword in Miscellaneous No. 186, which is a compilation of various letters showing training opportunities, one of the handbooks, in fact, for training officers and advisers. To quote: "In a Government undertaking of the kind in which the Federal Board is engaged, every effort must be made to train the men as human beings with feelings, hopes, and aspirations, and not as impersonal 'cases.'" Again, "the human element must enter into all training."

The counselor in the school is reminded that he must be "the guide, counselor, and friend" to the men in training. A letter of introduction is furnished the trainee to the counselor, who then begins his friendly ministrations, which are directed toward everything that concerns the young men. The value of a good counselor is beyond estimate, for his opportunity to be of genuine service is a constant one.

The four great tasks of the Board are to secure the evidence in every case and pass upon it as rapidly as possible, to induct those eligible into training without delay, to supervise their training, and to complete the process of rehabilitation by training them into employment. This does not mean merely finding a job. A person properly trained, properly rehabilitated, is made fit for employment. In other words, under normal industrial conditions there is a market value for the skill that he has acquired, just in the same way that there is a market value for the productive skill of the young man who of his own volition has secured the necessary preliminary training for a particular occupation or employment objective. There is, however, this difference, all other things being equal: To secure and hold employment the trainee of the Federal Board should be in a better position than the young man trained through his own initiative, since the Federal Board trainee has had particular practical guidance with special reference to a definite employment objective.

The work of passing on eligibility and inducting all the men into training who care to accept it is going on rapidly. There are comparatively few days. As a matter of fact, this part of the work is no longer giving the Board grave concern. The question of adequate supervision is without doubt the most important part of the work for the coming year. The Board has never had sufficient personnel. At the beginning of the fiscal year 1919 there were 430 men on the staff. During the year ending June 30, 1920, there were 475 resignations. The major cause for these resignations has been low salaries. A great many men have stated quite frankly that they were particularly sorry to leave the work, but that they were forced to do so because they could not live on the salary paid by the Government. These facts have been stated elsewhere in more detail, but they have an important application at this point and will bear repeating. To secure and retain the class of men necessary for wise supervision is essential if the work of rehabilitation is to be well done. It has been estimated that there should be at least 1 follow-up man for every 50 men in training. Merely to try to inspire each one of the 50 with sustained interest in his training will consume the greater part of his time; to adjust training difficulties, change courses where necessary, and exercise wise control in especially difficult cases will tax the resources of even a very talented man every minute of the day. And yet just this kind of work must be done if rehabilitation is to be thorough. Fortunately the multiplication of local offices, which are being properly manned, will strengthen this work of supervision by providing more resident supervisors widely distributed. There will still be need, however, of more men and better men for this important work if it is to be well done.

## TRAINING WITH REFERENCE TO SPECIAL GROUPS.

The major amputation cases, the blind, the deaf, and the tubercular cases have been covered in special studies printed elsewhere in this report. The policy of the board in training these groups is very simple: To give the men the training they are capable of receiving, to fit them for an occupation in which there is a strong probability that they can succeed. The ability of the man to carry on in a given field is measured more by his mental capacity than by a handicap resulting from the loss of a member or the partial or complete loss of any of the special senses. Specialized appropriate training will overcome such loss if a man has the mental capacity and qualities of character necessary to make training successful. Very little reliance has been placed upon mechanical devices or special tools or machinery in overcoming the handicaps of amputations. Experience in foreign countries—for example, Canada and France—demonstrates that most men will not permanently rely upon such devices, which are constantly getting out of order and interrupt employment. In general, it is better to seek an employment objective and train the man for one in which special devices are not required.

A man who has had active tuberculosis in the service, or who after discharge develops active tuberculosis traceable to service, is adjudged eligible for section 2 training. He is also adjudged eligible for treatment and care by the Bureau of War Risk Insurance. It is the policy of the board to establish training centers in Public Health Service hospitals and begin vocational advice and guidance with such preliminary or prevocational training as can be given therein. It is the further policy to place such men, when their disease becomes arrested, in vocational training courses without delay. Notable experiments in training the tuberculous disabled ex-service man are going on at Rutland, Mass., and at the Reco Manufacturing Co., Brooklyn, under the direction of the New York Tuberculosis Association. The board has not tried to pick out three or four occupations and train all tuberculous ex-service men for those. If a tuberculous man can be trained to live as a tuberculous man ought to live, there are few occupations which are closed to him. Provided the place of employment, for example, is sanitary, well lighted, well ventilated, and free from dust, it has been demonstrated that men with arrested tuberculosis can perform their work without injury anywhere.

The rehabilitation problem presented by nervous and mental cases dwarfs any other training problem that confronts the Board, both in size and difficulty. In the very early days it was appreciated that the reports and advice of the ordinary medical man were of

doubtful value. It called for specialists, and specialists were secured. Some progress has been made. The training centers established by the board in hospitals and sanatoria supplement treatment and medical care with judicious preliminary vocational training. A number of "mental cases" are in training on the job with encouraging results, cases that did not do at all well in a school environment. Gradually a plan is being developed to supplement the specialist with a medical man who has a good general understanding of nervous and mental diseases, and also a particularly good understanding of training methods and aims, so that he may become a training adviser. There are some men on the staff now who answer to this requirement—others are being coached. Some of the training officers and advisers are accumulating valuable experience in wisely meeting the needs of these men. Certain districts have a "psychiatric board" composed of the specialist of the board, the Public Health Service specialist, and one or two training officers or advisers who have developed skill in dealing with mental cases. The specialist, medical "adviser," and training officer who has developed a talent for this difficult work can handle most of these mental and nervous cases in the usual way without a formal meeting of the psychiatric board. Nevertheless, such a board as described can be very useful in the consideration of special cases that are very puzzling and should be retained.

All district vocational officers have with great unanimity, in discussing training methods for mental and nervous cases, united in saying that the greatest need was "more hospitals and sanatoria for the treatment of acute remediable cases." There is apparently a great dearth of institutions of this kind in every State.

#### FEASIBILITY FOR TRAINING—THE RIGHT POINT OF VIEW.

Feasibility for training is a phrase used almost as frequently as eligibility for training. It is, however, a much-abused expression. The need of a correct definition or a correct point of view is of fundamental importance to a proper conception of the philosophy of rehabilitation. Feasibility for training has two aspects: First, the group of physical and mental conditions of those technically eligible for training; second, the possibility of a favorable reaction through sound methods of rehabilitation (training) on the physical or mental handicap of the person eligible for training in a given case.

Certain training arrangements may not be suitable for certain classes of men technically eligible for training, but other arrangements for training may be invented adapted to this group which will make their training practicable and profitable. Medical men have pronounced on feasibility for training with little or no knowledge of training arrangements. This analysis points the way for the future.

A man, for instance, who can take only one hour or two hours a day of a certain sort of work which will have a favorable mental and physical reaction and assist him to clarify his mind relative to an employment objective at which he can work more vigorously later on will be undergoing a process of rehabilitation. It is the business of the Board to furnish this sort of training. Training adapted to any sort of disability of a man which brings a favorable reaction on his physical or mental condition should be construed as a process of rehabilitation. Such training which looks toward or is a stimulus or preparation for an employment objective, however distant the goal, is in the estimation of the Board a step toward the fulfillment of its obligation to rehabilitate as far as possible all its disabled men.

Public Health Service doctors should still make examinations to determine eligibility for training and for the follow-up and "after-care" work during training, but there is vast need of a corps of medical men in each district office familiar with all sorts of processes of rehabilitation (training arrangements). In this way, and in this way alone, will we be able to reduce the number of men who have been too promptly classified by medical men as cases not feasible for training, to a group the number of which will be constantly diminishing with the invention and progress of new training arrangements.

#### THE ATTITUDE OF LABOR ASSOCIATIONS.

The attitude of trade-unions, particularly for those men who are training for occupations which are unionized, is of grave importance. If there had been antagonism on the part of the unions, it would have been doubtful wisdom to have selected certain employment objectives for our trainees. The policy of the Board in this matter has been very simple. Trade-unions have been classified in the group of cooperating organizations, along with such organizations as the Red Cross, the Elks, the manufacturers' associations, chambers of commerce, and other recognized organizations in the community. To these and other organizations the Board has appealed for cooperation in its great work. There are two sides to cooperation. It is not a case of receiving alone; recognition of the position, relationships, and aims of the other party to the cooperative compact has to be taken into consideration and respected at all times. The attitude of the American Federation of Labor and trade-unions quite generally has been one of genuine cooperation, as evidenced not only by resolutions at conventions but by practical forms of cooperation in the course of the day's work. This does not mean that vexing questions have not come up for settlement. They have; and not infrequently special problems have had to be solved which were not altogether easy to solve. But nothing has occurred which it was not logical to

expect. The important thing is that the American Federation of Labor and unions representing special trades and industries have given to the Board substantial cooperation.

#### THE ATTITUDE OF EMPLOYERS AND OF EMPLOYING INDUSTRIAL CONCERNS.

On the side of the employers the spirit of cooperation has been equally in evidence. In practically no single case has an employer or an employing concern refused to cooperate with the Board in providing facilities for training in the shop, the office, or the factory. The conclusive evidence of this universal interest and desire to help on the part of employers is found in the fact that men have been placed in training in more than 8,000 industrial establishments under agreements insuring that the men shall receive individual attention and instruction and that their individual needs shall be in every way completely safeguarded.

#### PART PLAYED BY COOPERATING AGENCIES.

Section 5 of the act of June 27, 1918, states that the "Board in its discretion may cooperate with such public or private agencies as are deemed advisable in performing duties imposed upon it by this act."

The American Legion has taken a lively interest in the work of the Board. Its announced belief that "a constructive program for intelligent cooperation is the means best adapted to obtain the greatest amount of good" is made clear from the quoted passages of a bulletin issued March 15, 1920, given below:

In order that this program may be carried out and in order that the legion may render to the disabled men the greatest possible service, it is urgently requested that each local post appoint a vocational training officer, whose particular duty will be to familiarize himself with the question of vocational training and make available to every member of the post complete information concerning it.

It is also believed that it will be advisable for each department to call a vocational training conference, which will be attended by the vocational officer from each post in the department.

In order to make this plan more successful, a Manual of Procedure was issued by the Board with the approval of the legion, which contained the important provisions of the law and certain regulations of the Board in the administration of the law, the proper understanding of which it was thought would make it possible for the legion vocational officers to assist disabled ex-service men effectively. As a matter of fact, this Manual of Procedure was reduced to such simple terms that it became very useful in carrying out this plan. In certain States the success which attended the efforts of legion vocational officers was very marked. Men were found by them who had previously not applied for training, and practical assistance was given. Some post vocational officers were active in using lists furnished by

the Board of men approved for training but not in training. By getting into contact with these men and by persuading some of them to take up training, they were of great assistance. These legion vocational officers were also very helpful in adjusting difficulties and clearing up misunderstandings with a number of trainees. It was a case of buddy talking with buddy. The Board received help at these points of difficulty and control where antagonism would have been distinctly serious. By assisting the Board to discover new cases of disabled men, by giving them personal counsel and encouragement to take up training, by aiding the Board in establishing proper control, and most particularly through its network of posts, getting into personal contact with men approved for training but not in training, the American Legion can do a piece of work great enough alone to justify its existence.

The Veterans of Foreign Wars Association is cooperating in the same spirit and in the same way as the American Legion. Their commander stated recently that "reports from the various posts of the Veterans of Foreign Wars Association throughout the country emphasize the value of personal contact and indicate that when a disabled veteran is reached and placed in training he becomes a valuable aid in persuading other veterans in his vicinity of the advantages offered under the rehabilitation act."

The War Camp Community Service has cooperated with the Federal Board and the American Legion in providing suitable recreation for Federal Board students. The amusement program has included, among other things, the organization of vacation camps, the arrangement of gymnasium privileges for students in certain schools, the organization of bands and orchestras, and the donation of the necessary equipment.

The American Red Cross has a liaison officer in every district office. Through this office all the home chapters throughout the district are made available and render all sorts of practical aid, such as locating men, interesting men to take up training, and following up cases of those who become ill. The Red Cross has also taken a special interest in following up all nurses disabled in the service who are in training. A fund has been supplied by this organization in each district office, through the liaison officer, from which loans may be made to applicants for training. Another loan fund was established on April 12, 1920, to supplement the Elks fund for men in training. From April 12, 1920, to June 30, 1920, \$71,922.08 has been loaned. Of this amount \$25,349.34 has been repaid. This represents 4,912 loans made and 2,705 borrowers.

The Benevolent and Protective Order of Elks has provided two funds to be administered by the Federal Board, one to be used for making loans to men in training prior to the receipt of their pay

checks; the other to pay training expenses to men technically ineligible under the vocational rehabilitation act, such as an American citizen who enlisted in the allied armies or in the American forces for the period prior to October 6, 1917, and was discharged some time between April 6, 1917, and the date of the passage of the war-risk insurance act, October 6, 1917. The number of loans made from March 9, 1919, to June 30, 1920, was 29,442; the number of borrowers, 12,248. The amount loaned aggregated \$519,054.20. Of this amount \$411,210.32 has been repaid.

The National Tuberculosis Association appointed an advisory committee to assist the Federal Board in working out a training policy for tuberculous ex-service men. This committee has been very active and the cooperation has been of special value. The National Catholic War Council, the National Manufacturers' Association, the United States Chamber of Commerce, the American Federation of Labor, individual labor unions, rotary clubs, and thousands of public and private agencies have assisted the Board in all sorts of way.

Working relations have been established at points of dependence with Government departments. The Bureau of War Risk Insurance and the Public Health Service have established cooperative plans of great practical value. The details of these plans have been given elsewhere. The Department of State assists the Board in the preparation of trainees for consular positions and by transmitting dependency claims to dependents residing in foreign countries. The Postmaster General has appointed a representative to confer with an officer of the Board relative to the training and qualifications of disabled men for positions in the Postal Service. A similar arrangement has been made with the United States Civil Service Commission. The commission's regulations have been amended by Executive order, permitting it to exempt disabled ex-service men from the usual physical requirements, provided they are certified by the Federal Board. The commission has from the first given the fullest cooperation and has done everything for the disabled men which the amended civil-service regulations have permitted. Representatives have also been appointed to perform the same duties as the representatives of the Post Office Department and the Civil Service Commission by the following departments: Department of Labor, Department of Commerce, Department of the Interior, and the War and Navy Departments. The War Department has also removed many restrictions for men disabled in the service. Both the War and Navy Departments further cooperate with the Board by giving it full access to the records of all disabled men.

On July 11, 1919, the new law amending section 2 of the former law became effective. The law empowered the Board to decide in compliance with its terms the question of eligibility for section 2 training, which before depended upon the award of compensation, and to pay



trainees in full directly out of its appropriation for maintenance and support. On June 4, 1920, an appropriation of \$90,000,000 was made for the rehabilitation of ex-service men for the fiscal year beginning July 1, 1920. This is within three hundred and three thousand dollars of the estimate submitted and requested. While the Board is in no doubt of the very evident intention of the Congress to generously support the program of rehabilitation for ex-service men, nevertheless the amount appropriated, which practically equals the estimate submitted, will permit the board to plan the work of the year with greater certainty inasmuch as sufficient funds are already made available, with the possible exception of the million or more which will be required to meet the change of increased maintenance and support pay to certain classes of disabled men.

Following is the text of the act authorizing increased payments to trainees of the Federal Board:

An act making appropriations to supply deficiencies in appropriations for the fiscal year ending June 30, 1920, and prior fiscal years, and for other purposes. Page 17, line 16, amendment No. 7: *Provided further*, That the Board may, after June 30, 1920, pay, subject to the conditions and limitations prescribed by section 3 of the vocational rehabilitation act as amended, to all trainees undergoing training under said section residing where maintenance and support is above the average and comparatively high, in lieu of the monthly payments for maintenance and support prescribed by section 2, as amended, such sum as in the judgment of the said Board is necessary for his maintenance and support, and for the maintenance and support of persons dependent upon him, if any: *Provided, however*, That in no event shall the sum so paid such person while pursuing such course be more than \$100 per month for a single man without dependents, or for a man with dependents \$120 per month, plus the several sums prescribed as family allowances under section 204 of Article II of the war-risk insurance act.

The terms of this act left it to the Board to discover what amount was due each trainee, and the merits of all sorts of plans have been discussed and compared. The various officers who have been called upon to devise a satisfactory plan of administration of the act have come to one conclusion from which there is no sign even of dissent---namely, that no plan can be devised that will give perfect satisfaction, with the possible exception of a plan that would include every trainee in the class that received the maximum per month.

The plan which has been adopted is in strict accordance with the spirit and letter of the law. All trainees will be included within one of the following classifications:

(a) Men residing in localities where the average cost for lodging and table board for an individual is less than \$40 per month will be carried at the rates prevailing prior to July 1, 1920; that is, \$80 per month for a man without dependents.

(b) Men residing in localities where the average cost for lodging and table board is \$40 or more but less than \$45 per month will receive an increase in payments of \$10 per month.

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(c) Men residing in localities where the average cost for lodging and table board is \$45 or more will receive the maximum increase of \$20 per month.

To fix the boundaries of localities and then to determine in which of these classifications a particular locality is to be included is the main difficulty under the plan. Food and lodging facts are the determining factors. The attempt is being made to get a very large body of facts from unprejudiced sources, particularly in doubtful localities. "Changes of cost of living," issued in the form of bulletins by the Department of Labor, and other public documents, cost schedules published in university, college, and school catalogues are being freely consulted. Information is being sought from the American Legion, Veterans of Foreign Wars Association, American Red Cross, Benevolent and Protective Order of Elks, chambers of commerce, boards of trade, various local organizations, and from all other reliable sources.

It is clearly recognized that the success of the plan depends in large measure upon getting a complete and authoritative body of facts in regard to board and lodging in the different localities. No effort will be spared to accomplish this result. In case a decision is made and new facts are brought to the attention of the board that call for the reversal of a decision in regard to a particular locality there will be no hesitation in making the adjustment.

### EXPENDITURES JUNE 27, 1918, TO JUNE 30, 1920.

From June 27, 1918, the effective date of the law passed providing vocational rehabilitation for disabled ex-service men, to June 30, 1920, the total expenditures were as follows:

Salaries .....	\$5, 598, 454. 57
Travel and subsistence.....	414, 398. 40
Printing and stationery.....	349, 597. 11
Furniture and office equipment.....	444, 005. 86
Rent .....	188, 527. 71
Communication .....	70, 992. 29
Miscellaneous and emergency.....	178, 086. 31
Total indirect .....	<u>7, 244, 062. 25</u>
Allowance to men in training.....	23, 653, 503. 71
Tuition.....	2, 309, 233. 26
Travel and subsistence of trainees.....	800, 407. 60
Books and training supply.....	480, 127. 22
Medical attention.....	97, 757. 30
Miscellaneous.....	55, 161. 14
Special fund.....	06, 952. 75
Total direct.....	<u>27, 475, 134. 03</u>
Grand total.....	<u>34, 719, 196. 28</u>

It would be interesting to know with reasonable accuracy the percentage of the above total which represents in reality a transfer of accounts from the War Risk Insurance Bureau to the Federal Board. The obligation under the war-risk insurance act to compensate for disabilities which were incurred in the service or traceable to the service was a prior obligation to vocational education. Even if provision had not been made for training, compensation would have been an outstanding obligation. Those trainees of the Federal Board who are awarded compensation less than the amount of maintenance and subsistence pay provided by the Board, transfer their account in effect to the Board. In a final segregation of accounts this should be taken into consideration. The ultimate cost of vocational training for disabled ex-service men is the total amount expended minus the total amount of compensation which trainees would have received provided they had not taken training.

## **PART IV.**

### **DISTRICT OFFICE STUDIES.**

#### **INTRODUCTION.**

—Each district vocational officer was requested to furnish a list of subjects representing distinctive work in his district. From this list a selection was made and assignments given with the purpose in mind of collecting in this way a variety of informal studies, which, read as a whole, would present, it was hoped, a vivid picture of district activities, and would supplement the more formal studies in Part VI.

It is hardly necessary to add that these studies in a given case do not pretend to represent the best work in the particular district, but represent the accident of this method of selecting subjects, the principal aim of which was, as stated, to get a good general collection in order to represent special intimate sides of the work as a whole.

Keeping this fact in mind, the reader will not attempt to judge the work of any district by the degree of merit or interest of the article which that district was assigned to write.

#### **SUMMER SCHOOL AT ELLSWORTH, ME., FOR FEDERAL BOARD STUDENTS, DISTRICT NO. 1.**

Ellsworth, located some 20 miles from Bar Harbor, offers living conditions which are ideal. The climate is cool and pleasant, and such that the customary exertion of school life and study during the summer months is not distasteful. In this pleasant region the College of Business Administration of Boston University conducted a summer session for Federal Board trainees from July 7 to August 27, 1920. The experiment proved to be very successful, and might well be termed an innovation in summer-school work. Eighty-six ex-service men availed themselves of the opportunities offered, and the results obtained are of national interest.

The purpose of the school was to give good vocational training, and to give it under the most favorable conditions for study and the pursuit of health. This involved making special arrangements regarding living conditions, curriculum, instruction, and school facilities, medical attention, healthful recreation, personal service, and maintenance of scholarship standards.

The mess was conducted on a cooperative basis. Some of the men lived in Army tents, while others roomed with private families, in every case at a cost lower than the cost of lodging in any large city.

Instruction was given under the personal direction of a Federal Board counselor, assisted by instructors who were members of the regular college faculty. The curriculum embraced two courses in accounting, three in advertising, two in economics, and one each in finance, American literature, English, public speaking, and salesmanship. These were all intensive courses which required diligent application. In accountancy, economics, and advertisement writing the students covered a full year's work, and in other subjects a half year's work. Classes were held in the high-school building, with access to the school library.

A Public Health surgeon rendered necessary medical service. From the standpoint of building up the health of the men as well as from that of vocational training, the summer session achieved excellent results. No case of illness developed traceable to local conditions, and nearly all the men made a decided improvement in health and spirits.

In the matter of conduct, the students themselves deserve the highest praise. Ellsworth received them in the beginning somewhat coldly, and week-end trips to the lakes and the seashore were not arranged by townspeople until the strangers had fully established their good character under observation for two weeks. The outings as finally arranged, together with baseball games in the surrounding towns, afforded healthful recreation. The town is not a summer resort. It is an "old-home" town, devoid of the customary summer-resort attractions, but admirably adapted to the needs of men who require plenty of rest and sleep.

The counselor gave personal service to the men daily, and was assisted by a training officer of the commercial section of District No. 1 office, who made frequent trips to Ellsworth.

The scholarship records were excellent. At the college in Boston there were 139 men in attendance, and at Ellsworth 86. The Maine school registered a total of 186 A and B grade, as against 140 for the Boston school, although the latter enrolled 53 more men. More supervision, more favorable conditions under which to study, and fewer distractions were conditions favorable to the doing of good work at Ellsworth.

Perhaps the most significant result is found in the fact that school authorities, students, and residents of the town are enthusiastic over the proposition to conduct a summer school of the same sort in 1921.

**REPORT ON THE TRAINING AT RUTLAND, MASS., FOR EX-SERVICE MEN DISABLED BY TUBERCULOSIS, DISTRICT NO. 1.**

Among the special cases presented to the Board those disabled by tuberculosis, chronic bronchitis, and gassing give the most problematic concern. The results achieved in handling such cases by foreign countries were carefully studied. Visits were made to Canada for the purpose of observing their methods, advice was sought from leading specialists, and cooperative relations were established with the National Tuberculosis Association. Through advice of this association attention was called to the work carried on for tuberculous civilians at such centers as Rutland, Mass. There it had been recognized that the economic factor played an important part in the successful treatment of this disease. Training in various subjects had been given not only for its therapeutic value but also for its vocational use.

It was decided, therefore, in the summer of 1919 that the Board should use Rutland, Mass., as a training center. Two men were sent there to study the conditions, to make contact with the ex-service men already there in private sanatoria and the State hospital, and, finally, to recommend such training as was feasible under the conditions. The results of several months of effort brought about the establishment of the New England Vocational School in March, 1920. There are two types of men in training at Rutland—first, those who are suffering from active tuberculosis and who are undergoing treatment at the various sanatoria under the United States Public Health Service; and, second, those who have been discharged from the hospitals as arrested cases and are taking section 2 training.

In the organization of the school health is the first consideration. The amount of time each day and the degree of activity to which a man may engage in study is specified by the supervising physician, and a prescription card is filled out before work is allowed. All instructors in the school are thoroughly taught the characteristics of the disease. It is believed from experience that if the men undergoing training are placed under medical supervision at all times, have their living quarters adapted for the tuberculous, and if their meals are regular and suitable the percentage of breakdowns will be kept at the minimum. According to the present figures more than 25 per cent of the men of the arrested type undergoing training in the ordinary training institutions break down physically before they have completed their courses of training. More attention must be focused upon the safeguards of the health of these men if breakdowns are to be reduced.

For the men who are unable to leave, instruction is given in the sanatoria. For those who are able to attend the school, transporta-

tion is furnished from various sanatoria located within a radius of 3 miles. For all those not under section 2 training three types of work are given—occupational therapy, vocational therapy, and academic instruction. Occupational therapy consists of divertive work which will not only arouse the interest of a man in something other than his condition but will also instill in many the beginnings of the learning processes. The subjects are bedside weaving, toy making, wood carving, cord work, ivory carving, basketry, leather work, and woolwork. The vocational therapy subjects consist of mechanical drawing, type-writing, and comptometer operating. The academic instruction includes English, spelling, arithmetic, civics, and history. For those able to pursue the purely vocational course of training there are four departments—industrial, commercial, academic, and agricultural.

In the industrial department courses are offered in mechanical drawing, architectural drafting, chauffeuring, house carpentering, millwork, watch repairing, and auto mechanics. All the shops are thoroughly equipped with modern, up-to-date machinery furnished by the Board. The automobile-mechanics course is conducted in a separate building—a large, modern garage leased by the school. It is located in the center of the town. Commercial methods are used, and everything is arranged so that the men work under trained instructors. In the commercial department the men may learn type-writing, comptometer operating, stenography, bookkeeping, and mimeograph operating. This department is furnished with all appliances found in the average business offices of to-day. As all work is outlined and prescribed by short units, a man may select one subject, or he may take up general office practice and may become proficient in all branches. In the academic department the men who take up industrial subjects in any department are obliged to choose such academic courses as are suited to their needs.

The school is especially fortunate as regards agricultural work in having a farm of 100 acres, with its farm buildings and modern farm machinery. Short unit courses in poultry, dairying, farm mechanics, truck gardening, bee culture, and fruit raising are offered.

The problem of vocationally rehabilitating the tuberculous ex-service men is not yet solved, but the experiment at Rutland is an earnest attempt to reach a satisfactory solution. The results so far have justified the continuance of this work for another year. At the present time the accomplishments surpass any that have been attained by the foreign countries. With the large number of men whose disease becomes reactivated under the normal city conditions, it is obvious that other schools on the Rutland plan, with its medical supervision, will be organized on a large scale for training the large number of ex-service men discharged with the tubercular handicap,

who desire to avail themselves of the opportunity afforded by the Government.

This work, while thorough and necessary, is incomplete. When cured absolutely or potentially, many of the men ought to live permanently in such centers. To that end productive industries, factories, etc., should be established. Only in this way can the Board be certain that a complete plan of rehabilitation is insured.

#### BUREAU OF TRAINING FACILITIES IN DISTRICT NO. 2.

In January, 1919, the Federal Board for Vocational Education appointed a librarian for district No. 2, whose duty it was to keep a training file containing catalogues, reports, and other data regarding the schools approved for the training of ex-service men. This librarian was instructed to get the material in workable shape as quickly as possible. Since it was necessary to have the original file in such form that all courses of study of similar nature in a given locality be grouped, the main file became primarily a geographic one with a secondary division by courses. By this arrangement the material was useful even before being properly indexed. This geographic file has proved to be a valuable one and has been continued in its original form.

Next, each school catalogue and report was analyzed and a synopsis of courses, prerequisites, tuition, and all other important items placed on a card. This set of cards was filed alphabetically by names of schools. A separate card was also made for each course, giving the school, its location, and any important note as to quality of course, prerequisites, or class of students for whom prepared. This second set of cards was naturally filed alphabetically by courses. Each group on the same subject was filed alphabetically, first as to State, second as to city, third as to school.

This has been described very much in detail, because the problem is one which deals with library work from a very particular standpoint, and we believe our method of filing is the one most applicable to the material in any Federal Board library. Our cards, with the assistance of maps, can answer these questions in their logical order, "Is there a course in automechanics in New York City? If so, in what schools? Can a man with little knowledge of English and little or no knowledge of mathematics take the course in any one of these schools? Where can he get the necessary preliminary courses? Can he take them in the evening if he wishes? How long will it take? What is the tuition? What other expenses are there? When can he start? If there is nothing in New York City, is there something in New York State not too far from New York City? Then, is there one in New Jersey or Connecticut? Well, try Philadelphia and Boston. Then, where is there a course? If he can not get this



course, is there an allied course for him somewhere?" The subject cards will locate any particular course. The school cards will give condensed information on each particular school. The geographic file groups all schools in a certain locality. Each grouping has been found useful in the history of our "bureau of training facilities."

But our problem was not yet ended. Back in the first months one of the officers discovered the fact that he could not memorize all he needed to know about the schools, and as a result both he and his associates were asking the librarian in charge of the files the same question at least once a week, and many times oftener. He suggested a brief typed list containing certain information regarding a few of the schools most often desired. Later another officer was asked by the Washington office to compile a more complete list of all schools surveyed in district No. 2, with brief comments on each. From these two preliminary lists have developed the documents now known as "Statistics of Training Facilities." These documents are published several times each year, the aim being to have in the possession of each training and placement officer and his assistants information of an accurate and up-to-date character on each approved course of instruction in the district. As corrections arrive supplementary memoranda are issued until the new copy of "Statistics" is published. The "Statistics" are published under the four geographic divisions of "Greater New York," "New York State (not including New York City)," "New Jersey," and "Connecticut." In each document schools are roughly grouped as to general nature of courses given and are completely indexed both as to the name of the school and as to courses. In other words, we have used the same general principles in preparing these statistics as we did for our cards and files. We have material grouped geographically, by schools, and by courses. A complete study of one of these lists would give a much more comprehensive idea of the aim of our "bureau of training facilities" than could be gained otherwise except by a study of the files themselves. What these documents do for district No. 2 the complete file does for the whole country. Since New York City was one of the chief ports of debarkation, disabled men hurried from every ship that arrived making inquiries for courses "back home." We had anticipated these requests and already had such information on file.

Another division of the "bureau" is the file and index on civil-service examinations. It deserves special mention, because the demand is so great and because the material is voluminous. Even in the early history of the department men asked for information on all sorts of civil-service positions. At first there was little information to give, but now a sufficient number of announcements of examinations have been secured, so that in case there are no pending exami-

nations in certain subjects requirements can be obtained from circulars of past examinations. This department has always been a difficult one to handle, for requests have so often come for subjects not listed; sometimes because no such examinations are offered, positions being obtained through appointment or promotion; sometimes because the examinations are too far in the future for announcements to be ready for distribution; sometimes because the requests are for positions which existed only in war times, and for which no future examinations can be expected.

Correspondence courses also need particular mention. Many requests have been received by men in "placement training," by men who prefer to continue in some position they have themselves obtained and who wish Federal Board aid only for tuition and other expenses of instruction by correspondence, and by men in sanatoria and other public institutions where the required residence courses can not be obtained.

Requests have been made, however, for courses in almost every conceivable subject, from metallurgy and music to bookkeeping and plan reading. Some requests are absurd; some others appear to be at first, but on further discussion proved practical; and many are not only practical but apparently very profitable, if properly followed up.

Emphasis has been laid on the "bureau of training facilities," for it is the main reason for the existence of the library in district No. 2. The library, however, contains also the publications of the Federal Board, both in printed form and in the form of circular letters. These have been indexed not only as to exact title but, so far as practicable, by content as well. The index has proven itself very useful. The busy officers have often discovered that their memories could not retain all they wished them to retain. They would remember that they had seen material on a certain subject. The index in the library told them where to look for it. Among other publications in the library are some of the Red Cross Institute, a few editions of "The Annals," a few of the Labor Review, some very interesting publications by the Shipping Board on "Shipyard Occupations" and "Opportunities in Shipbuilding for the Physically Handicapped." In short, this department has become an information bureau of training facilities and a reference library containing most of the literature which might prove useful in the problems of rehabilitation.

#### MEDICAL FOLLOW-UP IN DISTRICT NO. 2.

The Federal Board for Vocational Education on January 1, 1920, established in district No. 2, which includes the States of New York, New Jersey, and Connecticut, a medical follow-up department for all students in training. The first step was to have the United States Public Health Service medical officers, or sick-call doctors, maintain

an office hour for the examination and treatment of disabled men. About May 1 a medical follow-up officer and 14 nurses were appointed to make the follow-up system more adequate and efficient to meet the needs of the men.

The counselor in each training school is requested to note all students who are absent from school for two or more days. On a card specially provided for the purpose he states whether the student has been absent from school from illness or for causes unknown. This card is sent to the follow-up department in a self-addressed envelope provided by the Federal Board.

On September 15, 1920, an additional sick call, such as is used in the United States Army, was instituted in each training school, so that the medical, training, and follow-up sections might know each day the names of the men who are absent and the record of the sick-call doctor concerning students whom he has excused on account of sickness. This arrangement is also utilized in the follow-up of our students. However, to make sure that each absentee is visited, the absentee card issued by the counselor is also utilized as a check.

On the receipt of this card by the follow-up section, should the report indicate that the man is ill, a nurse is sent to call on the student and provide such medical care and attention as the case requires. If the record card states that the man is away for unknown causes, the case is referred to the training department, which, through a welfare worker or an inspector, investigates the man's absence.

#### WORK OF COUNSELORS AND PUBLIC HEALTH DOCTORS.

If the counselor learns of an urgent case and is unable to get the Federal Board on the 'phone, he is instructed to call up the United States Public Health Service office and give the message direct to the Public Health Service, whose office is open until 8.30 p. m. It is the object of the Government, through the Federal Board and the United States Public Health Service, to give every student who is ill every possible medical attention. The cooperation on the part of the counselors is absolutely essential to accomplish this end and make the follow-up department a success.

The United States Public Health Service is also asked to cooperate with the Federal Board by providing sick-call doctors in each district. There are 10 sick-call districts in New York City. Each sick-call doctor maintains an office hour in his district. The sick students from a group of schools visit him in the mornings for advice, prescriptions, and the proper disposition of their cases. The sick-call doctor will visit a man in his home; but if he finds he is confined to his bed and likely to require his services for more than two days he recommends a transfer to a United States Public Health

Service hospital for treatment. If the disability is due to the war, his hospital expense is borne by the United States Public Health Service. If the disability is an intercurrent disease the hospital expense has been borne by the Federal Board. Negotiations are under way relative to the appropriate fund from which this shall be paid in future.

#### FOLLOW-UP WORKERS (NURSES).

For the purpose of distributing the follow-up workers New York City is divided into eight districts, with a nurse for each one. Workers have also been assigned to outside districts, including Saranac, N. Y., Syracuse, N. Y., Rochester, N. Y., Buffalo, N. Y. (2), and Newark, N. J. (1), New Haven Conn. (1), making a total of 15 follow-up workers in this district.

The following is a brief summary of the activities of these follow-up workers up to September 20, 1920, a period of about four and a half months:

(a) Forty-nine Federal Board students referred to United States Public Health Service doctors for treatment. Of course, this does not include hundreds of students who receive medical attention while in training.

(b) Two thousand and ninety calls have been made on Federal Board students in their homes.

(c) Six hundred and ninety-four Federal Board students have been interviewed at the New York office of the Federal Board and at places of training.

(d) Thirty-six cases have been referred to the Red Cross and other agencies for help to families of men in training.

(e) One hundred and fifty-three visits have been made at schools, counselors and students interviewed.

The follow-up workers and doctors of the Public Health Service are expected not only to call on all emergency cases, but at stated intervals to follow up all Federal Board students. Those suffering from tuberculosis, heart diseases, gas syndrome, chronic bronchitis, are to be followed up every 30 days; kidney diseases are to be followed up every 60 days; gun-shot wounds, high-explosive wounds, fractures, chronic rheumatism, other chronic diseases are to be followed up every 90 days; and others as often as the physical condition may require.

A report of the following Federal Board student is given somewhat in detail, as it is typical of some of the benefits obtained by a great many students from our follow-up system.

S. F.—Diagnosis—Gassed. In training in the Lincoln Institute, New York City.

This man was reported absent from school on account of illness. A follow-up nurse visited him and found him confined to his bed. She called a United States Public Health Service doctor, who

treated him. He returned to school but was not able to carry on and was granted a two weeks' vacation. Again he returned to school; but a nurse visited him in her regular follow-up and found he was very weak, coughed, and had insomnia. Two more weeks' sick leave was granted him, at the end of which time the man was very much discouraged and wanted to go to Italy to regain his health. He was again assigned to the United States Public Health Service for convalescent care and returned to training. Had the nurse not followed him up, he doubtless would have remained away from school and would have been dropped from training.

#### SICK-CALL DOCTORS IN THE FOLLOW UP.

From March, 1919, to August, 1920, the sick-call doctors of the United States Public Health Service have been making monthly follow-up reports at the approximate rate of 3,000 a month. During this period it is estimated that the Federal Board students have made about 18,000 visits to the sick-call doctors. This is making about a 5 per cent allowance for students who were unable or unwilling to appear. The monthly follow up made by the sick-call doctor is now superseded by the daily sick call, similar to that which obtains in the Army. However, by this latter method the number of calls will probably be reduced.

#### TRAINING ILLITERATE EX-SERVICE MEN AT THE COLLEGE OF THE CITY OF NEW YORK, DISTRICT NO. 2.

The College of the City of New York furnishes an excellent laboratory for the study of methods of rehabilitation, inasmuch as there have been 448 enrollments in the college since October 16, 1919. Many of these men while being taught trades are instructed in English conversation, reading, writing, and spelling, and also arithmetic. The following main trades are being taught with many subdivisions: Electrical work, steam engineering, building construction, photography, mechanical drawing, machine-shop work and practice. Instruction in the common branches of knowledge and English is given to many taking these courses, on the theory that without this knowledge a man will not easily receive vocational education.

The mathematical instruction is directed to the man's employment objective. While addition, subtraction, multiplication, etc., are taught systematically, there are various "drills" intended to make the men proficient in the mathematics essential to practical success in the practice of their trades. Problems are given out intended to make these adult students quick in figuring measurements, necessary quantities of material for particular pieces of work, labor costs, total costs, and enough arithmetic to permit keeping the simplest books.

To teach English to our foreign-born ex-service men, who in many instances are unable to make themselves easily understood, has been a more difficult task than to teach arithmetic. It is quite true also that among this group of foreign-born citizens there are many who have had the elements of an education in their European homes, but have not acquired the facility of speaking and writing ordinary English well. It is a curious fact that some of these men, who have never received any mental drill, grasp the concrete processes of arithmetic more easily than the English language. Presumably this is because even the simplest mathematical processes are fixed and definite with little variation of method.

Men who presented themselves for English in the New York City College, taken as a whole, were able to speak about every known language. A Russian would be the classmate of an Italian, a Brazilian the classmate of a Lithuanian. The traditional tower of Babel, with the diversified languages of its workers, was no more remarkable than this group seeking to learn the English language. Three grades were organized for foreign-born students, according to proficiency in the language. There was another class for those who were born in this country but who were deficient in the simplest elements of education. It was found that no book had been published which included the vocabulary of everyday life. A list was therefore composed of about 1,500 words. These were classified. Particular emphasis was given to those common words pertaining to the trades they had selected. These words were formed into sentences by the student with the teacher's help, and by constant reviewing these words were spelled and respelled until they were thoroughly learned. The English work for the native born who needed this instruction was simple grammar and spelling. They were also taught to write plainly, to express their thoughts clearly, in order that they might at least acquire ability to write a simple business letter.

The anxiety to learn, the patience, and the ambition of most of these men is amazing. All of this may not be technically vocational education, but it is so intimately connected with processes of rehabilitation that the board can easily afford to give this training. It is also true that this training in arithmetic and English should go hand in hand with the training in trades and industry and be given in the same institution, where each course will take its place as a part of the whole plan of training for this particular group of the disabled.

#### **ONE DEVELOPMENT OF TRAINING RESOURCES IN DISTRICT NO. 2.**

The amendment to the rehabilitation act, which was signed by the President July 11, 1919, placed upon district 3 in common with the other districts the responsibility of providing improved training op-

portunities for large numbers of men. It was soon found that the institutions hitherto prepared to admit students into classes under normal conditions were neither equipped nor prepared to adjust their courses to meet the varied requirements of prospective trainees. This situation necessitated an investigation of possibilities and a setting up of plans which would make possible the immediate induction of these men into training.

#### SPECIAL TYPE OF TRAINING RESOURCES NEEDED.

An analysis of the men to be trained brought out several important considerations. Among these considerations the first, and perhaps one of the most serious, was the impossibility of making a satisfactory recommendation for training for a considerable number of the men. That is to say, it was impossible to determine from the educational experience and history of the men for what lines of employment they would be best fitted. These men were even without vocational history leading to any specific goal. They were young men who had simply carried on in boys' jobs up to the time of entrance into the service of the Army, or who had been carrying on in the ordinary occupations of life which are classified in the census under the general head of laborers.

It was found, also, that there was inadequate knowledge in the United States as to what trades could be pursued by men possessing certain physical handicaps. The disabilities of these men were unusual, often very serious, often precluding any return to former occupations, and often of such nature that neither the adviser nor the man himself could determine what the disabled man could do successfully. The very fact that many of these men had no previous vocational background which could be capitalized, together with their disabilities, rendered it impossible to determine in advance whether or not the man had vocational fitness and aptitude.

The men were scattered widely throughout the State, some of them in communities where the educational opportunities were limited and where there was no opportunity to ascertain the thing for which the man could reasonably be trained to become a producing unit in industry. It was found necessary, therefore, to survey the educational opportunities in the larger communities to ascertain whether or not there were institutions which could be utilized for the purpose of determining the employment objective of the trainee.

It needs to be constantly borne in mind that the established institutions of this district, as well as those in other districts of the country, had certain definite set requirements for admission. These requirements, even for the technical institutions and often for the trade

schools, were of an academic nature. They often set up conditions which required a high-school education or its equivalent. Even though attempts were made by the Federal Board agents to have these established institutions modify their educational requirements, they were not always successful, as the institution had not in all cases gained through the war-training experience the idea that adults with broad knowledge of the world could be trained if they possessed less than the requirements (somewhat artificial) which had been set up as prerequisites for entrance. This again necessitated securing facilities where such prerequisites could be more elastic and more readily varied to meet the individual needs of the men for whom training was desired.

The experience in the training camps and in the Students' Army Training Corps in the various colleges, universities, and institutions in this district, as in others, brought out the fact that it was possible so to modify courses of study and so to shorten the time required for the completion of these courses of study that men could be taught directly to do specific things. When the war ceased and during the year 1919 when the institutions were beginning to get back to a prewar basis, for reasons of their own, they did not seem to be altogether willing to accept that idea as a general principle upon which to shape their instruction processes. For that reason, again, it became necessary to negotiate with the institutions which were willing to utilize the war experience and so to adapt it as to meet the needs of the men who were to become rehabilitated under the Federal Board.

Furthermore, due to tremendous pressure of work which came to the Federal Board, due to the wide distribution of the men in the various towns and cities throughout the district, due also to the retention of these men in the hospitals for varying periods and to their subsequent discharge at other varying intervals, it was impossible to reassemble these men instantly so that they could enter established institutions at the regular and set time for entrance to these institutions. This means that it was necessary for a training center to be willing to accept students even though courses had already begun and even though classes were in progress, so adapting its work as to make possible the admission at irregular intervals of trainees of the Federal Board.

#### TYPE OF TRAINING CENTER ORGANIZED.

An investigation of existing facilities in the district by Mr. G. W. Weaver, who was then the supervisor of training, brought out the fact that no institution, with possibly one exception, had been established which could or would be willing to adapt its courses and ar-



range its entrance limitations to meet the needs of these groups of men. It was found that it would require men of vision, practical experience, and willingness to be of service to disabled men. A man well qualified was found in Pittsburgh, and that city gladly opened the doors of one of its high schools for the use of these men during the summer of 1919. The city of Pittsburgh and surrounding communities had many prospective trainees from which this new school could recruit.

The first months of this school were planned in organizing courses and adapting these courses to the men in such a way that a trainee could be given an opportunity to try out several different occupations to ascertain his peculiar fitness for carrying on in any one of them. The men sent to this institution were sent for the purpose of determining their occupational objectives. When it is understood that many of these men spoke English only with great difficulty, if at all; that they had, as indicated above, no vocational background; that many of them had been merely laborers in the coal mines; that many of them had suffered severe disabilities, such as the loss of an arm, it can readily be seen that this so-called "try-out" or prevocational type of school was a necessity.

After a short period it was found that the city of Pittsburgh could no longer allow its building to be used for this purpose, because of the needs of the regular high-school students of the city of Pittsburgh. A large school building was found in the city of Pittsburgh which had been unoccupied for a considerable period of time. This building was secured, and the Allegheny Vocational School was established to carry on this try-out work.

It later developed that even after an employment objective had been determined through the try-out plan there was no institution suited to the needs of the men. It very naturally resulted, therefore, that the energetic principal of this institution again adapted the institution in such a way as to meet this need and to provide regular training courses for the men. As the work of the Board increased and as the educational institutions of the district opened in September with regular classes starting on a regular schedule, it was found that such institutions could not receive additional men unless at the beginning of school terms and regular classes. For that reason it became necessary to still further utilize this vocational school, so that it could receive men who naturally would have gone to established institutions had it been possible for them to be admitted. Thus Allegheny Vocational School became what is known in this district as an assembly depot, the purpose of the school from this standpoint being to provide training which would enable the men to fit into courses and classes which they had selected in the standard institutions they were to attend at a later date. The school func-

tioned in this regard most efficiently and made possible the progress of men in their subsequent studies, thereby saving them six months or a year actual time in training. This fact alone resulted in no little saving to the Federal Board, for otherwise it would have been necessary to continue men in training for considerably longer periods.

The moving of the school from the Schenley Park High School in Pittsburgh to the building secured, which was formerly known as the Allegheny Preparatory School, necessitated many changes in the whole building. Even though this building had been utilized for many years as a preparatory school, it lacked shop equipment and adequate facilities for carrying on the varied work desired. The director of the school, however, immediately set to work to provide the school with complete equipment for electric work, including storage battery, sheet-metal work, structural layout, shoe repair, mechanical drawing, and various academic classrooms. This was done at great expense to the school but, when completed, made it possible to offer in the school courses in machine-shop practice, electric work, carpentry, sheet-metal work, drawing, commercial work of a very elementary nature, typewriting—also elementary—shoe repairing, and such necessarily related subjects as English, arithmetic, civics, and penmanship.

The courses in this vocational school have been adapted to the needs of the trainee. The type of man assigned there is the man with limited education and with limited vocational experience. The mathematical work includes the simple mathematics required of men working about the mines, as checkers, timekeepers, and the like. Very complete and careful work at lesson plans has been arranged, so that one subject constantly supports and aids the other subjects, all tending toward the definite employment objective of the trainee.

Nor was the director of this school content with organizing a school with 30 or more instructors, including both the instructors for the trades and the so-called academic branches, but he prepared a complete plan for the educational supervision of the work, and the Federal Board provided for the medical supervision and follow up of the trainees. Again, it became necessary to make sure that the morale of the trainees was kept at a high standard. For that reason certain social agencies in the city of Pittsburgh were consulted and finally gladly cooperated with the director of the school in planning for social activities of a varied nature. Among these cooperating agencies are included the industries of the city of Pittsburgh, the Y. W. C. A., the Y. M. C. A., the Pittsburgh Rotary Club, and the American Red Cross.

There has been a total enrollment of approximately 1,000 students; never at any one time have there been more than 600. Those who

have left the school have either been rehabilitated or have gone into industrial establishments for the completion of their training on the job or have gone into other educational institutions into regularly established classes and courses. A small percentage have discontinued because of conditions over which neither the school, the Federal Board, nor the trainee had control.

This unique institution, organized for the specific purpose of caring for the disabled ex-service man, has rendered a very distinct service to the men and has met a real need confronting the Federal Board under the rehabilitation act. The instructors in the institution are very high-grade men and women, who have been secured with painstaking care, and who are devoted to the work which they have undertaken. The school is mobile in character and always ready to meet additional requirements which are necessitated by the needs of the men without reference to conventional programs of study.

#### TEMPLE UNIVERSITY.

The continuous demand upon District 3 for adaptable training facilities within a very few months nearly exhausted the resources of the Allegheny Vocational School. The need for this type of institution was particularly emphasized during the months of November and December, when the regularly established institutions had their courses well under way and very hesitatingly accepted any new students during those months. There was, however, an established institution in the city of Philadelphia which had been known for years for its willingness to forget traditions and to organize its educational facilities to meet the requirements of youth, who had limited resources as to both money and previous training. An interview with the president and the dean soon made the Federal Board aware of the fact that they were quite willing to render a very definite service to the disabled ex-service man.

Temple University proposed to organize classes for small numbers of students and so to adapt studies in those classes that they would be a very definite aid to the trainees when they entered upon regular training courses. This was made available not only for the use of the disabled ex-service men in District 3, but for other districts as well.

Temple University, unlike the Allegheny Vocational School, was not prepared to offer courses in trades and industries. It did, however, have courses for persons desiring commercial branches which were readily adaptable to the needs of those ex-service men who could profit most by such courses. As at the Allegheny Vocational School, the university opened new courses and made preparations to give intensive training to men with less than high-school qualifica-

tions, so that these men could quickly become qualified for regular courses. Many of the men who entered have been assimilated by the University into its regular and standard courses, and when their work has been completed will be able to reach their employment objective and compete with the normal worker.

Since this institution has been used by the Board there have passed through its doors approximately 750 students. The educational qualifications of the trainees at Temple University are of a higher grade than those of the students at the Allegheny Vocational School. This is true because the Allegheny Vocational School cares for a large number of men of foreign birth who have not had the educational advantages found in the American public school.

The courses offered at Temple University include the general academic courses, professional courses, certain engineering courses, courses in advanced commercial studies, and precollege courses. Its aim, as stated by its founder, is "to give any person at any time any subject he may have the ambition and ability to pursue." This means that the institution is prepared at all times to break away from the traditional and standard academic requirements for admission. In the institution itself are found students of all races, ages, and degrees of previous training. This makes it of peculiar value to the Federal Board, as the trainees readily fit into the organization and because of their war experience adapt readily the democratic ideals which prevail in the university.

Here, as well as at the Allegheny Vocational School, the Federal Board has a paid representative, whose function it is to render every assistance possible to the disabled man. These men are called coordinators. They interview the men, assist them with their courses and plans, and in selecting their employment objective, and direct their training quite generally. Coordinators have very close relations with the district office and make frequent reports regarding the progress of trainees. They see to it that the men pass over from the try-out or the assembly depot stage into the regular training stage in the shortest possible time. To assist them in their work and to make sure that every service is rendered that can be rendered, a physician spends a portion of each day at the university for the purpose of medical advice if needed. Further, these coordinators are assisted by follow-up workers, usually nurses who often visit the homes of the trainees to discover the cause of absences and to adjust various difficulties that arise. This arrangement has resulted in a very definite decrease in the number of absentees and in an improved morale among the students.

As in the case of the Allegheny Vocational School, Temple University has secured the cooperation of outside agencies in the city of Philadelphia. These include the Young Men's Christian Association,

the American Legion, and the City Welfare Bureau. It was stated in a previous paragraph that an effort was being made to assist the trainees in reestablishing themselves in civilian life. Therefore both institutions have arranged and carried out social and recreational programs.

Classroom work in Philadelphia during July and August, even for men in full physical vigor, is very trying. For men below par physically, unused to study, removed from home ties, and depressed by obvious handicaps for the game of life, classroom work in the heated humid atmosphere of Philadelphia becomes well-nigh intolerable.

A minimum of four hours' classroom work was set as a standard for each man unless his physical condition demanded that he take less. The school day begins at 8.30 and terminates for the great majority at 12.30, and for most of the others at 1.30 p. m. Classroom work, except in more advanced and specialized subjects, is not done in the afternoon.

For the leisure time of the men, we attempt as far as possible to utilize any attractive features in the line of social service and amusements that Philadelphia offers. A number of week-end excursions, giving Saturday trips to Valley Forge and other places of interest, have been organized. A list of week-end places interesting for the men to visit is kept on hand. Philadelphia school authorities have been good enough to give free of charge the school automobile busses for this purpose. The Temple Gymnasium, with its shower baths and full gymnastic equipment and a capable instructor, has been thrown open for the use of the students in the afternoon. For those volunteering, regular classes in gymnastic work have been organized.

A baseball team composed wholly of Federal Board students has been organized. Equipment has been furnished and suits bought from funds donated by private individuals, the Young Men's Christian Association, and other organizations. Regular practice periods are held, and two games weekly with outside teams are played. Each man taking part in this must be certified (as to his physical fitness) by the school physician. The two professional league clubs of Philadelphia have very kindly given free admission to all games to Federal Board men from Temple University, properly identified. This has been very popular with the men indeed.

One of Nixon's theaters (the Grand, almost opposite the Temple University) has kindly extended the admission privilege to our men on payment of the war tax only. This likewise gives men diverting and oftentimes instructive amusement. The Y. M. C. A. of the city has extended privileges of free membership to Temple men. The North Branch of the Y. M. C. A. extends the privilege of its swimming pool, the only charge being 5 cents for the towels used. The

First Regiment pool, at Broad and Callowhill Streets, gives a special rate of \$2 monthly. The Columbia Club swimming pool, at Broad and Oxford Streets, charges half price to the men for the privileges of their pool.

The nurse and the school physician keep careful watch over the physical condition of the men. Any man feeling below par is given a careful physical examination and rest or treatment prescribed, as indicated. We have been able, through the cooperation of the Salvation Army and certain private individuals, to keep on an average about 12 men at Atlantic City and other resorts for two-week rest periods. These men are carefully selected through conference with the physician, the nurse, and the instructors. The condition established for enjoyment of all these privileges is general good behavior and regular attendance at classes unless physically incapacitated. The classrooms at Temple are cool and comfortable for Philadelphia. Temple authorities have selected an exceptional staff of instructors for this summer work. They are mostly men and women of college and university education, supplemented by professional training, and all are professional teachers of very broad experience.

More important than the above program even in maintaining the physical vigor and morale of the men are the living conditions. The nurse is constantly on the lookout for comfortable, hygienic quarters for the men, and a list is constantly kept of desirable places for boarding and lodging. Any men found occupying undesirable or uncomfortable quarters are urged to accept more suitable ones. The results of the above efforts, as well as other minor ones not enumerated, have been that there has been absolutely no falling off in attendance or in the standard of work done during the past month. In fact, the testimony of the teachers indicates, and this is verified to some extent by the attendance reports of the men, that the application to and general standard of work among our Federal Board men have constantly improved as this present summer term has progressed. It is proposed in this district to extend this idea to other institutions in the city of Philadelphia, and negotiations are already under way with several outside agencies for cooperation and assistance.

At Allegheny Vocational School the program has included various trips for pleasure and trips to industrial establishments for information. Provision has been made for hikes, social evenings, educational evenings, musical evenings, and educational moving-picture shows.

One illustration is given to show in part the efficiency of the work which has been done and is being done at these institutions. A disabled ex-service man was placed in one of these institutions on a try-out basis. His previous experience had been that of mining. His English education was less than third grade. As a result of the try

out he was placed in a class for mechanical drafting. In nine months' time he was given an opportunity to try out his knowledge in a drafting room of a large steel construction concern. After he had been employed by this concern for less than one day he was offered a permanent position by them at \$150 per month. It developed, however, that he had not gained a sufficient knowledge of geometry and trigonometry to merit continuous promotions. It was arranged, therefore, that he be allowed to return to the school to equip himself in these subjects, after which time the firm agreed to take him into their employ at \$200 per month. This man is now able to converse readily in the English language with his associates without embarrassment.

#### ACTIVITIES OF THE FEDERAL BOARD OUTSIDE CONTINENTAL UNITED STATES, DISTRICT NO. 4.

1. District No. 4, Baltimore, Md., is designated as a clearing house for all prospective training cases where training is anticipated in one of the United States possessions or in a foreign country. The only exceptions to this rule are Hawaiian cases, which are handled by district 12, at San Francisco, and Canadian cases.

2. The Federal board has 75 Hawaiian cases on file and at this times is in touch with approximately 400 men in Porto Rico. In May, 1919, a special agent for the Federal board was sent to Porto Rico to investigate the conditions and ascertain the most logical procedure in which to offer the beneficiaries of the act the privileges of vocational training.

3. Mr. Herminio Rodriguez, a native Porto Rican, is now in full charge of the work on the island, and as his office is in the Public Health Hospital at San Juan, it is possible for him to meet all men who come to that institution for treatment and examination and to select from these the men who will benefit by training and to make arrangements for their placement.

4. At the College of Agriculture and Mechanic Arts, Mayaguez, Porto Rico, 21 men have been enrolled as Federal Board students, under the direct supervision of Mr. R. S. Garwood, dean of the college, and under the general supervision of the United States Commissioner of Education. Mr. Wallace C. Furbush has been acting as counselor for the students who are pursuing specialized agricultural courses under the direction of the board, and Mr. Juan C. Forestier has been appointed as a special instructor to give to these men the elementary education necessary to supplement their agricultural work and to perfect a well rounded training.

5. The agricultural work includes special training in truck gardening, hog raising, poultry raising, and beekeeping, and it has been found that this is the most satisfactory form of training which can

be given these men. Upon the completion of a course of instruction of this kind a peon is able to hold a position of a supervisory nature on a farm or plantation or is able to make a fairly satisfactory living from the 2-acre grant of land which is made him. There is a constant demand in the markets on the island for garden truck of all kinds, poultry, hogs, and eggs, and the men after a few months of training along practical lines are qualified to make a far better living than they did as plantation laborers.

6. In addition to agriculture it has been found advisable to offer other types of training. A great many of the prospective trainees are not in a physical condition to enter upon any course of instruction, but upon their improvement and discharge from the hospital their induction into training will be effected.

7. There are approximately 250 Filipino cases on file, the great majority of which are tuberculous and physically unable to undertake training. In establishing the eligibility of these men the Board is receiving the cooperation of the Public Health district supervisor at Manila, who furnishes all the medical reports necessary. Our individual surveys are completed by some one either in the Department of Education or the Red Cross. The Red Cross is well organized in the islands and has offered the fullest cooperation.

8. The Board has a few eligible trainees in foreign countries, for whom training arrangements have been completed through the assistance of the State Department.

9. Because of the difficulty of properly supervising the training of a man in a foreign country, the Board has not encouraged it or approved it except where the circumstances surrounding an exceptional and meritorious case justify it.

#### **ARRANGEMENTS WITH COUNTY AGRICULTURAL AGENTS TO PLACE AGRICULTURAL TRAINEES, DISTRICT NO. 5.**

The largest, as well as the most important, industry is agriculture. More persons are engaged, more capital is invested, larger quantities and greater variety of products result from it and the welfare, comfort, and progress of the country depend more upon this than upon any other industry. The fundamental products of agriculture, notably cotton, corn, and wheat, have come to constitute accepted measures of commercial and industrial stability. The national production of these determines in a large measure the value not only of other agricultural products but of products of industry.

The number of the Federal Board trainees in agriculture makes up the most important group in any one of the many vocations for which rehabilitation is carried on. The success of these trainees will depend largely upon how and where they are started to follow the vocation for which they are trained. Not all agricultural trainees possess in-



itial capital in the form of land or means with which it can be procured. Some of them lack experience in farming on their own account. Most of them are young men, born and reared on the farms belonging to their fathers, but comparatively few have means which enable them to undertake independent pursuits.

As a rule the training is provided in the State agricultural colleges. It is elementary rather than college grade. They are not pursuing the usual and regular college courses nor even to any great extent the type of short courses in agriculture provided in most of the agricultural and mechanical colleges. This class of men can not be regarded as completely trained at the time they have finished a prescribed course and are ready to leave the institution or other place of training. They must be advised and directed in order that the investment in their training may prove of value to them and be justified as a public expenditure.

The close relation which exists between the Federal Government and the State agricultural colleges, through county agents, makes the services of the latter important and useful, and, in fact, essential as a means of locating proper opportunities in farm pursuits. The county agents know the resources and the diversified farming conditions in the territory over which they have charge. They are trained and practical leaders. They have the confidence of the farmers and work in close relation with farmers' clubs and buying and selling associations. They understand and have in many cases helped develop proper market conditions. They know the demands in various communities and at important market centers for the leading agricultural products. Through them, more than through any other source, the prospective young farmer will find valuable and ready assistance in his vocational pursuit.

In the colleges of District No. 5 plans were worked out and followed during the fall of 1919 with directors and county agents operating from and through the agricultural colleges by which the county agents assist the disabled ex-service men who have completed a course of agricultural training in finding suitable opportunities. They will assist in locating each man according to his special ability, his adaptation, and the choice he has made as to the particular line he desires to follow. Those who are trained to become farm demonstrators will be placed in charge of men with this special preparation. Those whose training has been with a view of specializing in animal husbandry, dairying, poultry, or beekeeping will be offered suitable opportunities to follow these special pursuits.

Since it is the purpose of the rehabilitation act to make its beneficiaries independent and self-reliant, and to give them the foundation which will prepare them for useful citizenship and as leaders in community life, it becomes a fundamental problem so to arrange

for the agricultural trainees that they may come into ownership of farms and homes. In many cases this will require borrowed capital. To secure this, the county agents can be of much service. They have gained the confidence of bankers and other men of affairs. That class of business men in common with other leaders in trade and industry realize how much prosperity and the acquirement of wealth depend on energetic, independent, and successful rural constituents. It is highly important, therefore, to develop the cooperative relationship between the sources which possess capital, the specialist who has come to be recognized as a trained and skilled leader in the best processes pertaining to agricultural progress, and the prospective young farmer newly released from a course of training, whose capital consists mainly in energy, special training, and willingness to be advised and directed to adapt himself to the essential conditions which make for success.

#### REMOVING ILLITERACY WHILE GIVING VOCATIONAL TRAINING, DISTRICT NO. 6.

In planning training for disabled ex-service men in the New Orleans district the Federal Board found that in over 50 per cent of the cases the handicap of illiteracy was quite as serious as the handicap of physical disability, approximately 50 per cent of the men entering having found it necessary to supplement their scanty academic education by taking additional courses of an elementary nature to enable them to make the most of their vocational training and become vocationally rehabilitated. Of 1,300, approximately 600 had found it necessary to begin at the very beginning—that is to say, by entering first and second grades—and to get the very elementary schooling provided in these grades to enable them to begin trade vocational courses. The other 700 were far enough along to start their vocational courses at once, but before they could receive the full benefit from such training they also had to supplement their courses by additional elementary training.

In view of the fact that the vocational rehabilitation act did not authorize the Board to provide academic training, its problem has been a very serious one. This problem has been met and solved as follows:

1. A well-qualified woman has been employed as training officer in charge of elementary training.
2. Arrangements have been made with the schools (a) to do away with all entrance requirements for Federal Board men; (b) to organize special classes in various vocations in which instruction is given adapted to the needs of men who have had little school training; (c) to organize special classes of elementary grade in shop and farm mechanics, English, reading, and writing, closely related with shop training. This training offered in connection with agricultural, trade, and commercial courses has had splendid success.

3. Special Federal Board schools have been organized where difficult cases can be handled and where special elementary work can be given to men while they are trying various trades to determine which one is best suited to them. In both the special schools and the classes given in regularly established institutions the Federal Board has aided in the selection and supervision of teachers, and in the planning of courses adapted to Federal Board men and related in a very definite way to the vocational courses.

In all of the classes the work has been organized in short units and the men have been classified according to their varying abilities and allowed to progress as rapidly as possible. In every training center where there were men needing such work all the commercial, agricultural, and trade classes have been organized with the related elementary work. The effort has been made and is being made to bring every man to at least the equivalent of sixth-grade schooling by the time he completes his vocational course. The great interest taken by the men in this type of work has been one important factor in overcoming the handicap of illiteracy.

#### SAVINGS CLUBS AMONG NEGRO STUDENTS, DISTRICT NO. 6.

In the early days of its work the New Orleans office set out to encourage every man in training to save as much money as he possibly could during his period of training, from his bonus, from payments under the Sweet bill, and from his training pay allowance. Even small sums accumulated during this period, it was pointed out, would come in very handy later on when the men were setting up for themselves, and it was believed that the saving habit itself would give good assurance of permanent rehabilitation.

Along this line the work among the Negroes in training has been especially interesting, and it is felt that the results obtained have been highly satisfactory. The Negro institutions in which men have consistently practiced saving are Tuskegee Institute, Tuskegee, Ala.; Utica Normal Industrial Institute, Utica, Miss.; Southern University, Baton Rouge, La.; State Agricultural and Mechanical College, Normal, Ala. In these institutions in the past year approximately 275 men have been in training. They have saved over \$25,000. Reports indicate that the men are investing their money as follows: In banks pending an accumulation of an amount sufficient to buy shop equipment; in small homes; in regular lines of life insurance; in money for taxi cars.

By far the greater amount is at present deposited in savings. The Negroes who have families are, however, investing in homes through building and loan associations or purchasing homes outright, and are also accumulating small savings accounts.

The Negro of the South has not generally accustomed himself to systematic saving. He is not naturally thrifty, and he is not accus-

toned to having cash in sums of \$80 and \$100 per month which he can spend as he wishes. The tendency at first was for Negro trainees to collect their money and spend all of it wastefully, as quickly as possible, staying out of school for a day or two, and causing a disturbance in the community in which they were training.

The plan for stimulating saving in operation has developed in the Negro a spirit of thrift, has helped him to overcome any tendency to spend his money as soon as the Government check is received, and has further tended to create a desire on the part of many Negroes to purchase homes and to plan for the purchase of small shops in which they expect to work in the future. In brief, colored men in training under the Federal Board are preparing now to become property-owning citizens of the community, and thus to take pride in civic and economic development and feel the responsibility that is associated with the ownership of personal property.

From the standpoint of the Federal Board, the plan of encouraging Negroes to save their money, has aided in making the training problem more definite, and has helped to crystalize the training objective. For example, if it is known that a man is willing to sacrifice and lay aside regular savings, it is reasonably safe to assume that it is a good plan to train him in tailoring or in automechanics, or in shoemaking and repairing with a view to fitting him to open his own shop in one of these lines. A somewhat broader type of training and a longer course is necessary for the type of man who contemplates operating his own little shop than for the man who contemplates going into some shop where he will work under direction. The last information the district has on the point of the future intentions and training objective of the Negro is to the effect that fully 80 per cent of the men now in training have rather definitely decided to open their own shops, and fully 30 per cent of these have decided on the locality to which they are going to return.

#### DEVELOPMENT OF TRADE TRAINING IN DISTRICT NO. 6.

When the Federal Board for Vocational Education opened its district office in New Orleans in the fall of 1918, there was not to be found in any State in the district, composing Alabama, Louisiana, and Mississippi, any school giving real trade training. There was in fact only a passive interest taken in trade training throughout the district. The Delgado Trade School in New Orleans was in contemplation only, and only a few schools were giving any type of trade work, and this principally in auto mechanics. There was no school in the district in a position to offer trade courses suitable for rehabilitation of disabled ex-service men.

The colleges and universities had only the usual professional and engineering courses of college rank. The usual 15 units entrance requirements were adhered to strictly in most instances. The attitude of the school authorities toward trade training was that it was a good thing for some people, but it was clearly not their problem. Many of the institutions had opened their doors to the S. A. T. C. classes. Since the war was over the various faculties felt that they should return to the prewar basis immediately, and were frank to state that they could see no way of adjusting their classes for trade work or of offering their shop equipment for practical instruction. It was with considerable difficulty that any men were placed in any of the institutions for special training. The industrial plants took very much the same attitude as the institutions in the beginning months. Men desiring placement training had to be transferred to other districts for training opportunities.

In the face of these difficulties the district office launched a quiet campaign of education and persuasion, looking to the arranging for adequate trade-training facilities in each State in the district. After two years of work the attitude of both the institutions and industrial establishments has materially changed. At the present time there are 10 institutions offering practical trade training, and there are abundant opportunities for training in industrial establishments. It is interesting to note that the college entrance requirements for Federal Board men have been practically eliminated, and that practical trade training of the highest type is being offered by the institutions of higher learning. Institutions are in full sympathy with the work, and are making an earnest effort to adapt the courses to the individual needs of the trainees and to the larger needs of their several communities.

The Federal Board has thus been able to render very effective assistance to the schools in attaining this end. The entering wedge in most schools was made by securing the use of the shops and classrooms for Federal Board students, and the work was started by teachers in the employ of the Federal Board. The instruction was placed on a basis which commanded the respect of the school authorities. As soon as the feasibility and the value of such training was proved, most of the schools with which the Federal Board had been dealing agreed to take over the work entirely, and provide, under the supervision of the school, such special classes for trade instruction as the Federal Board desired. In making training arrangements and in aiding the establishment of trade classes, the Board has endeavored to build not only for the present need of our disabled men but for the permanent establishment of trade training in the district.

### TRAINING ON THE JOB ILLUSTRATED BY INDIVIDUAL CASES, DISTRICT NO. 7.

Training on the job, or placement training, as the term implies, is that form of training in which the trainee learns to do by doing, acquiring by practice the knack and skill of an efficient worker. Usually in training of this kind permanent employment also is provided for in advance, since when the training is completed and the trainee becomes efficient he is usually retained permanently by the employer. In such cases, which are the normal cases, training and placement is one process, and the question of permanent employment upon completion of training usually presents no difficulty. Training on the job embraces:

1. Job training following institutional training.
2. Part-time instruction, where the trainee spends part of his time in an industrial or commercial establishment, receiving practical instruction and part of his time in an educational institution receiving theoretical instruction.
3. Training on the job supplemented by evening instruction or correspondence courses.
4. Training on the job, where the trainee receives practical instructions.

With possible exception of professional courses, trainees after completing institutional training are given short periods of training on the job to ascertain if they can carry on successfully in the vocations that have been taught. If a trainee has acquired a sufficient knowledge of any vocation, he is usually retained by the employer who has provided the training. This sort of training is essentially individual, and can best be described in terms of individual experience, rather than by any general account of courses. All job-training courses are one-man courses. Conditions, experience, and progress vary from man to man. The following account, therefore, is largely made up from individual-case records.

W. B. H., private, United States Marine Corps, having received bullet wounds in his left hand and shoulder at St. Mihiel, entered training under the Federal Board in October, 1919. He was placed in a business course, developed rapidly, and received instruction in all phases of higher accountancy. On April 10, 1920, the Board placed him in training on the job as an auditor with a firm in Cleveland, Ohio. This firm thought so well of his ability to handle the work of the concern that he was taken off the Federal Board pay roll five days later and employed at a salary of \$200 per month. He has since been placed in charge of their auditing work.

Government offices, both State and Federal, have accepted Federal Board trainees for training on the job to determine their ability to carry on in the vocation taught. Such men, if found competent, are usually retained in the service of the Government agency giving the training. M. E. D. entered a commercial course in September, 1919,

and in March, 1920, he was entered in training on the job in the United States post office at Cleveland, Ohio, to ascertain if he could carry on in this office. In less than 30 days he demonstrated his ability to do so, and now holds a position as money-order clerk for the Post Office Department at a salary of \$1,680 per annum.

Gladys L., while in service in the Nurse Corps contracted influenza, which left her handicapped so that she could not carry on at general nursing. The Board entered her for training in the University of Cincinnati in September, 1919, for a course in dietetics, food chemistry, bacteriology, and related subjects. In June, 1920, Miss L. was entered in a course of training on the job with a Cincinnati company to ascertain if she could carry on. She remained here until August, demonstrating her ability, and now holds a position as assistant bacteriologist in the United States Public Health Service, Cincinnati, Ohio, at a salary of \$2,184 per annum.

With rare exceptions is a trainee in one of the trade or industrial schools able to accept a position in his vocation without a period of training on the job after he has completed his school instruction. He is in need of some practical instruction, and this is given to him until he is able to master his trade. Joseph G. was placed in the United Typothetae School of America in January, 1920, to learn cylinder press work. He acquired all the knowledge the school could give him on this subject by the end of March, and was placed in training on the job with a printing company at Connorsville, Ind. Here he received his practical instruction, and was taken off the Federal Board pay roll on April 15. He is now holding a position with this company as cylinder pressman at a salary of \$30 per week.

Walter W. started a course in an embalming school in September, 1919, and in April, 1920, was placed in training with an undertaking company in Troy, Ohio. He remained on the Federal Board pay roll until July, 1920, while he was receiving his practical instructions from this company. He is now holding a position as funeral director.

Many men when discharged from the Army with disabilities had a desire to become experienced in the automotive industry. The Federal Board arranged various courses in this industry in district No. 7 with the Dayton Engineering Laboratories Co., principal among them being courses providing ignition, starting, and lighting instructions. Courses were arranged so that men would work part of the week on various phases of the manufacture, repair, and maintenance of equipment in the industrial plant, and part of the time in the Stivers Cooperative School, of Dayton, in order that the trainees might obtain a better knowledge of shop mathematics, drawing, and related subjects. William H. F. was one of the first men to be entered in this course, in February, 1919, and in September, 1920, he

completed his work with the company and with the school. He now holds a position as ignition expert with a company in Columbus, Ohio.

Some trainees are able to profit by supplementing theoretical instruction with their training on the job. This was the case with Robert H., who entered training on the job, selling electrical supplies and taking a course in the Wharton School of Finance. Robert entered his training in September, 1919, and completed his course in January, 1920, shortly after accepting a position as security salesman with an Indianapolis banking house. He receives a salary of \$100 per month in addition to his commission. When this opportunity presented itself, Robert wrote, "My training has been of great benefit to me and I am ready to go for myself."

It is not infrequent that a short period of training on the job leads the trainees to lucrative employment. Archie B. H. was placed in training on the job in August, 1919, with a thrashing machine company, to become familiar with the parts and mechanism sold by this implement company. The following January Archie had become so familiar with the work that the company placed him in charge of their office in Peru, Ind., at a salary of \$115 per month and expenses. Under date of December 9 the manager of this company wrote: "Mr. H. has proven to be a man we feel we want in our organization. Of course, we feel that it will be some time before he is able to do his best as a salesman in our line, but, on the other hand, we feel that he has the right qualities, which after all will cause him to win out sooner or later. We assure you that it has been a pleasure to have had Mr. H. here during these months, and the fact that we are willing to take him in our organization must be proof to you that your efforts in his behalf have not been in vain."

Charles C. D., who was a veterinarian before his entrance into service, and whose disability in service was such that he could not carry on at this vocation, was placed in training on the job in the biological laboratories of the ——— Co. in October, 1919. Having acquired sufficient knowledge at the laboratory, he was placed in training on the job with the Indiana State veterinarian department in January, taken off the Federal Board pay roll in March, and now holds a position as field veterinarian in this department at a salary of \$125 per month and expenses. Upon completion of his course Charles wrote: "Since the termination of my training, March 15, 1920, it has been my intention to write the Vocational Board and you, personally, expressing my thanks for the manner in which my training has been conducted. The reason for this delay has been sickness in my family. At no time has there been lack of cooperation in my case. From the very first, which was in July, 1919, prior to my discharge, at Fort Benjamin Harrison, you gave me all the available



information at your disposal and requested me to inform any of my friends of your willingness to assist them in any way possible. For all these courtesies and the personal interest you have accorded me at all times I wish to thank you very, very much. To say the least, these things are vital to one who has returned from overseas and found himself unfit for the old line of work. They are keenly felt, if but feebly expressed. My best wishes go to the Vocational Board for its continued work in the future and success to you, with kindest personal regards," etc.

There are numerous vocations that can be so taught as to overcome handicaps and achieve complete rehabilitation by practical instruction or training on the job without any systematic school instruction of any kind. This was true in the case of Fred H., who learned the art or trade of cutter in a tailor's shop by training on the job in a period of six months, and who is now receiving a salary of \$50 per week as a cutter in the tailoring industry.

Arthur O. F——, Peru, Ind., was a locomotive engineer prior to his entrance into service. Upon his return he could not pass the physical examination of the railroad company because of his disability. He was placed in training for stationary engineering with the public-utilities company, and in a period of eight months was able to carry on as a stationary engineer. He now holds such a position with the Indianapolis Light & Heat Co.

Otis T. H.'s principal civil occupation was as teacher at the State Hospital, Dayton, Ohio. His disability acquired in the service made it necessary that he obtain an occupation that would not be so confining and through which he might get plenty of fresh air. He was placed in training with a multigraph company in April, 1919, and became familiar with the parts, assembling, and repairing multigraph printing machines. He now holds a position with the company as salesman at a salary of \$350 per month.

It is not every community that has educational institutional facilities that may be used for the rehabilitation of disabled soldiers, sailors, and marines, and there are numerous cases of men living in such communities who can not leave their homes for training elsewhere because of family ties or for other reasons. Ben G. McL., whose prewar occupation was shoe cutter and whose parents died during his infancy, was reared by his grandfather, now more than 70 years of age. Ben and his grandfather live together, and he felt he could not take a course in any other city, that he had a duty to discharge toward his grandfather, and should remain with him. Ben had an eighth-grade education and lost his left arm in the service. There are practically no facilities for training in the community in which he resides, and he was therefore placed in training with the county auditor and is learning to keep public records. His pleasing

personality will undoubtedly win for him the office itself in time to come.

The morale of men in training on the job is, indeed, much higher than in any other form of training. This probably is due to the fact that the trainee determines for himself whether or not he will be successful in his course, and the relationship between himself and the establishment providing the training has been fixed, and he is reasonably certain that he has employment for the vocation he is learning when his training is completed.

More than 1,500 industrial or commercial establishments have been utilized in this District No. 7 alone, and more than 8,000 in the country as a whole, in providing training on the job for disabled soldiers, sailors, and marines eligible for training under the vocational rehabilitation act. Wherever there is opportunity for employment there is opportunity for training on the job. Every industry, with the exception of those presenting occupational hazards or hazardous employment has, in fact, been utilized. There are practically no instances of employers having facilities for training on the job, who have declined to accept men eligible for training under the law. With exception of the professions, job training has been provided for every vocation. Of the men under supervision in District No. 7, 40 per cent are now in training on the job, either through original inductions in this type of training or by way of supplementing school courses with training on the job for a period to determine whether the man can carry on, and to give him such further training by practical instruction as was not supplied by a theoretical course. So that with rare exception all men will receive practical instruction in their vocation by training on the job, and this is the final step in accomplishing rehabilitation in practically all cases.

During the period of training on the job as a result of the relationship created by virtue of this training under the Board, the question arises of whether or not the trainee should enjoy the same rights under the State workmen's compensation laws as are enjoyed by employees. If a trainee is injured during the course of his training, the question of the employer's liability under the workmen's compensation law is one that has not presented itself as an actual case, but one about which employers giving this form of training have made inquiry. It seems that while the trainee is in training under the jurisdiction of the Federal Board, he is not an employee, and the relationship of master and servant does not exist, and if a State workmen's compensation commission in the State in which the man is taking training should hold to this view, the trainee probably would be without recourse, though he might have suffered a disability causing a vocational handicap. It seems that his rehabilitation being a duty of the Federal Government, the Government should provide

training pay to accomplish his rehabilitation, if a handicap results because of the industrial accident occurring during the period of training. In some instances employers have regarded trainees as employees, as far as liability under workmen's compensation laws apply, in order to avoid liability under the employers' liability acts or negligence laws, and to provide the trainee with compensation should he receive an injury during the period of training.

Numerous strikes and labor difficulties have occurred in industrial establishments in this district where men have been in training on the job. In instances where these difficulties have arisen the rights of the trainee have been protected and have not been permitted to be exploited by either the employees' associations or the employers. The trainee and his course have been under the jurisdiction and supervision of the Federal Board. When an employer, by reason of a strike or for other reasons, has been unable to afford the proper training, the trainee has been withdrawn and placed in an establishment where the proper training could be given. Employees' associations have manifested a fine spirit of cooperation, in many instances reducing their membership fees or granting gratis membership in their associations to the trainee. They have also assisted in the trainee's instructions and have generally aided in arranging proper courses of instructions. Employers' and employees' associations, though not always acting concurrently or jointly with respect to the training of disabled soldiers, sailors, and marines, have materially aided the Federal Board in its work, and the spirit of cooperation manifested on both sides is highly commendable.

So general has become effective cooperation with the Federal Board in training on the job in commercial and industrial establishments, that this form of training can no longer be regarded as experimental or its ultimate results in respect to results as of uncertain benefit. No better form of training can be devised to achieve the vocational reestablishment of our war disabled.

The effort of the Government, of society, and of industry in discharging our obligations to these men by a method which enables trainees to take their station in society, overcoming the handicaps of their war disabilities and becoming self-reliant, self-sustaining, and productive units in their communities is indeed rehabilitation.

#### **COOPERATION WITH OTHER AGENCIES IN SOLVING REHABILITATION PROBLEMS IN DISTRICT NO. 8.**

From inception of the rehabilitation work in district No. 8 many important problems have been successfully solved through the untiring and willing efforts of several cooperating agencies. The central division of the American Red Cross and their constituent chapters have from the outset worked with representatives of the Federal

Board from early morning until late at night, week in and week out, for the purpose of assisting the Federal Board to satisfactorily and completely carry through its program of vocational rehabilitation. The American Legion, Departments of Illinois, Wisconsin, and Michigan, through their State headquarters and numerous local posts, have been ever alert and ready to go to the front in this great work. The Veterans of Foreign Wars, Buck Privates' Society, chambers of commerce, community service organizations, Y. M. C. A., Jewish associations, the Knights of Columbus, and other organizations have been equally ready to render assistance to the utmost of their ability.

Several organizations, particularly the American Red Cross and the American Legion, after making intensive study of our problems, made very definite plans and have developed close cooperative procedure with district No. 8 office in order that there should be a minimum of lost motion. Standardized service on the part of these organizations has done much to develop efficient work and to bring valuable results to the disabled ex-service man and woman.

#### AMERICAN LEGION WELFARE WORK.

One of the most helpful auxiliary organizations which district No. 8 has dealt with has been, as noted above, the American Legion, Departments of Illinois, Michigan, and Wisconsin. During the past year the work of these departments of the Legion has so developed as to reach practically every disabled ex-service man in the three States, with the result that the Board has had means whereby a great many men could be reached in instances where it was heretofore impossible.

#### ESTABLISHMENT OF SERVICE DEPARTMENTS BY THE LEGION.

Service departments have been established by the various departments mentioned with a view to acting as intermediaries between disabled men and the various Government agencies administering their claims. It has developed in the working out of various schemes of cooperation between the Board and the Legion that the cumbersome method of procedure which had been adopted was not feasible. This district therefore prepared for the use of the Legion two very simple forms which the local post service officers could use in their contact with the men. Copies of these forms are herewith attached as Exhibits A and B. These forms were used in place of the so-called official "Manual of procedure," and immediate improvement was noted.

#### COOPERATIVE PROCEDURE OF THE LEGION.

The method which the legion uses in its contact with the disabled men is merely to secure the facts called for in the simplified forms and forward them to the State service department. This

service department is presided over by an official, named the State welfare officer, and when this department receives this information it is immediately recorded and transmitted to the district offices of the Board, marked for the attention of the American Legion liaison officer. Whatever may be the status of the case, it is then cleared up and action taken, with the result that the man is promptly notified, as is also the State service department mentioned. The liaison officer mentioned is a staff member of the Board, who gives all or part of his time to this work.

**WORK ACCOMPLISHED IN COOPERATION WITH THE LEGION.**

The work above mentioned has resulted in a cooperative system which has been most beneficial to the disabled men in the three States. During the past six months the liaison officer has recorded over 2,000 cases which have passed through his section. A large majority of these cases have been those of men who have been really handicapped in consequence of their war disability, and who have become eligible to the full benefits of the rehabilitation act.

The spirit of what might be termed "misunderstanding" occasioned at the time the Board first commenced to work with the American Legion has largely disappeared, because of a fuller understanding by both agencies of the work of the other. The objective is mutual. The desire on the part of both the legion and the Federal Board is to accomplish in the shortest time possible a successful rehabilitation of every disabled ex-service person residing within the jurisdiction of District No. 8. It is recognized by the Board that the legion is composed of comrades of the disabled ex-service men, and it is felt that the requests of the legion pertaining to the rehabilitation work must be given every consideration.

**ELIGIBILITY SQUADRON FIELD WORK.**

This district has its eligibility squadron, composed of several staff members who travel throughout the district with a view to making personal contact with all disabled men. In this work the squadron has had the helpful cooperation of the State headquarters of the legion, and also of each local post. Personal contact is the only successful means whereby cases can be cleared and men intelligently placed in training.

**FOLLOW-UP FOR MEN DECLARED ELIGIBLE.**

Every two weeks the district office of the Board submits to each legion State headquarters a complete list of the names of all men who have been approved for training during the 15 days past and who have as yet not accepted the training approved for them. The Legion immediately takes steps to secure personal contact with these

men, with the result that a great many men enter training who perhaps otherwise would not do so.

#### COOPERATIVE CONFERENCES.

At each convention or district meeting of the American Legion in each State the liaison officer of the Board meets with the various officials and members and discusses problems affecting the rehabilitation work in the State or community concerned. As a result the Legion is aware of the progress made and intelligently understands the various problems confronting the officials of the Board. It is through these meetings that the work of the Legion and Board have been coordinated, with a result that a splendid spirit of cooperation exists at the present time. Also the Legion is kept informed of the various phases of legislation which the officers of the Board recommend as being helpful to the disabled men. The legislative committee of the national body of the Legion, therefore, has first-hand information from each community and can act intelligently in presenting its requests for consideration to Congress.

#### EXTENSION OF LEGION SERVICE WORK.

Recent indications are that the service and welfare work of the Legion will be greatly broadened during the coming year, and it is expected that this increase in function will result in securing acceptances of training approved by a great many disabled men who possibly otherwise might not accept training.

#### RED CROSS SERVICE IN DISTRICT NO. 8.

Through courtesy of the central division of the American Red Cross and the Chicago chapter cooperative procedure for the purpose of solving rehabilitation problems was put into effect soon after the opening of District No. 8 office. Plans for work were definitely outlined in an effort to standardize service. Through the accomplishments of the Red Cross hundreds of cases have been successfully handled, many have been revived, and a large number have been referred to the Federal Board for the first time.

#### RED CROSS SERVICE IN THE DISTRICT OFFICE.

For the purpose of carrying out the work set up in the procedure referred to an experienced social-service worker was placed in the district office to direct all Red Cross activities. Other trained social-service workers have been associated with the person in charge and have carried out definite and well-defined functions. The Red Cross has provided its own necessary clerical assistance and all supplies with the exception of standard forms, which are furnished by the Federal Board. All matters pertaining to the Red Cross work in

the district, in the way of communications and from local chapters, have been cleared through the Red Cross unit in the district office. Red Cross workers in the district office have had access to the files of disabled men and have been free to counsel with any member of the district staff regarding rehabilitation problems.

#### SERVICE IN THE FIELD.

Red Cross work in connection with this program in the field has been carried out through the many local Red Cross chapters. The home-service section of the chapters, for the most part, has been directly charged with this work.

Inasmuch as the program of training, after eligibility has been decided, is carried out by local Federal Board offices, the Red Cross service in the field has been centered as largely as possible around the concrete problem. The district office is kept informed of the work of the Red Cross workers in the field at all times by reports through the district Red Cross unit. All communities in this district have rendered good service through the Red Cross home-service sections.

#### ASSISTANCE IN FINDING MEN.

The Red Cross has been the principal agency in locating men who have been lost to the Federal Board. This is true from the time the district office first makes contact with the man until he has been successfully rehabilitated. The district vocational officer makes regular reports to the chief Red Cross worker of all mail which is returned undelivered. Cases of men who fail to answer letters from the Board are considered lost and referred to the Red Cross for contact and for securing the proper address.

#### DEVELOPMENT OF NEW CASES.

Red Cross workers throughout Illinois, Wisconsin, and Michigan have been instrumental in bringing to the attention of the Federal Board in this district the names of many men who have not been reported to the Board through other channels. The Red Cross has taken especial pride in the development of these new cases. Through the local home-service sections they have been able to secure for the district office complete reports on Form 90. These reports give the principal points as to disability, education, and occupational history. They have secured in connection with these new cases certified copies of discharge and awards of compensation. Affidavits which establish the relation of the man's disability to service have been furnished to the district office for many men. Through the personal influence of the Red Cross workers some men have been persuaded to submit to medical examination. The Red Cross has, therefore, secured medical reports indirectly for the Federal Board. It is a simple

matter to determine eligibility when such information as this is properly presented.

#### APPEALS AND DEPENDENCY AFFIDAVITS.

In many cases it has been a difficult matter to secure satisfactory evidence to establish a man's right to section 2 training. Through his award of compensation he has in such cases been offered section 3 training, and the Red Cross workers who have been especially interested in the case have assisted the man in making an appeal from section 3 training. Many of these appeals have been passed upon favorably on the evidence submitted by the Red Cross.

Red Cross agents help the man present additional facts in making out the required papers properly. They are instrumental in securing for him letters from former employers to the effect that he is handicapped in his former vocation. Many times they send in medical reports from the family physician of the man in question. All these papers, when properly prepared, are sent through the local home-service section to the chief Red Cross worker in the district office.

Great assistance has been rendered by local Red Cross chapters in helping men to establish their claim for dependency pay. They assist him to submit evidence of marriage, birth certificates, and required affidavits. Men in most cases are unable to prepare these forms properly without expert assistance.

#### FOLLOW UP OF MEN APPROVED AS ELIGIBLE.

The district office finds that only about 50 per cent of the men declared eligible for training take advantage of this privilege. Through the close follow up of the Red Cross workers, a large number of men have been induced to enter training. The district office submits a list of names of men declared eligible for training to the Red Cross workers, referring to them particularly men declared eligible but who for some reason do not care to take up training or who fail to answer letters of notification.

While all men are not directly urged to take training, the Red Cross workers attempt to present to them the advantages of training and to bring the importance of it to the attention of friends or relatives of the disabled men. Many men shy at the mention of universities and colleges or even training on the job, and need encouragement such as the Red Cross workers can and do give. Through the Red Cross it has been possible to reach many men promptly after the declaration of eligibility, and thereby prevent these men from entering into ungainful occupations.



**RED CROSS FOLLOW UP ON DISCONTINUED CASES.**

At frequent intervals the district vocational officer furnishes the Red Cross workers lists of men who have discontinued training. Although the reason may be sickness, it may in some cases be lack of interest or unsuitability of the course of training. Through the proper contact by Red Cross workers many of these discontinuances are satisfactorily adjusted, and the man reenters training.

Any man who has discontinued training on account of illness is promptly referred to the Public Health or other medical service for treatment. When these facts are presented to the district vocational officer or the Red Cross workers a nurse may be sent out from the district office to give whatever attention to the man is necessary. The Red Cross workers have assumed this burden of responsibility without hesitancy.

**PERSONAL CONTACT.**

During the period of training or placement many men drop out of sight to the Federal Board. Through Red Cross workers the district office is able to secure adequate reports of the man's physical condition. They are able in many instances to overcome the man's antagonistic attitude to training. This antagonism may reflect an attitude toward Army life, but when it is explained to him that he enters training in a civilian capacity he oftentimes takes a different view of the situation. Through the large number of home service sections in these three States it is a comparatively easy matter for local workers to make personal contact with the men, and in many cases this sort of personal contact provides the only effective way of accomplishing the desired result.

**LOANS AND COLLECTIONS.**

Through the Elks' War Relief and the Red Cross fund it has been possible to make loans to men while awaiting their first Government check after entering training. While in most cases the district office is able to take care of all of the man's financial needs, there are many things pertaining to the man's family which must be taken care of by financial assistance from the Red Cross. It is true also that loans to men in training are necessitated through unforeseen circumstances. Under these circumstances the Red Cross comes to the assistance of men with a loan and the Federal Board assists the Red Cross in making collections from the men upon receipt of their Government pay.

**RECREATIONAL ACTIVITIES AND LIVING ACCOMMODATIONS.**

Through the influence and assistance of Red Cross workers, disabled men in training have been able to secure suitable living quar-

ters with pleasant surroundings. This has been a great relief to new men who are entering strange territories. Wholesome recreation has been arranged by the Red Cross in some communities for the men in training. Parties, picnics, games, and athletic events have been provided and dances arranged under proper supervision.

#### OTHER COOPERATING AGENCIES.

What has been said of the cooperative work on the part of the American Legion and the American Red Cross is true also of many other organizations. They have not, however, been so widely organized as to arrange programs such as have been outlined above. The program of rehabilitation has been facilitated in many ways through the pleasant and wholesome attitude of many cooperating agencies, which have done splendid work in connection with the training and placement of disabled ex-service men and women.

#### EXHIBIT A.

THE AMERICAN LEGION,

Department of \_\_\_\_\_.

(Vocational training instructions for local post-service officers in handling appeal cases.)

Information to be given on cases of men applying for section 2 training which will warrant the making of an appeal from an original unfavorable decision, or reconsideration of an appeal already executed but not acted upon favorably.

1. Full name and address of the man, together with his file number with the Federal Board for Vocational Education and the Bureau of War Risk Insurance.

2. Evidence of vocational handicap, as indicated by a reputable physician.

3. Evidence of unemployability, given by former or present employer, which will indicate:

(A) That man worked at the trade, business, or profession indicated previous to enlistment and was not afflicted with present disability.

(B) That man tried to go back to work at former vocation and did work, for what length of time, if any.

(C) That man was unable to follow former occupation specifically because of the nature of his disability as relative to the nature of his vocation.

(D) Any other pertinent remarks relative to the inability of the man to carry on his former vocation, due to his disability, which the employer understands was due to his service and which was not present previous to enlistment.

Note.—In cases where the man goes to work for an employer or employers with whom he was not associated previous to enlistment, the answers, of course, will be changed to a slight degree. This will not make any difference as far as the reconsideration of section 2 is concerned.

Keep these instructions and refer to them in all appeal cases. Send the information outlined above to the (state service officer, district vocational officer, etc., as conditions in the State may indicate).

(Name) \_\_\_\_\_,

Service Officer, Adjutant, etc.

## EXHIBIT B:

THE AMERICAN LEGION,  
Department of, \_\_\_\_\_.

(Vocational training instruction for local post service officers in handling *new* cases of vocational training.)

The following information is necessary in cases of disabled men who have never made application for training, or who have made application without having same acted on:

1. Name.
2. Former rank and organization.
3. Present address.
4. Former address, if different.
5. Describe present disability. (Use back of paper if necessary.)
6. Former vocation.
7. Is he receiving compensation?
8. If so, in what amount, and what is the compensation claim number?
9. Remarks.

Keep these instructions and refer to them in all *new* cases.

Send the above information to (service officer, name and address, or district vocational officer, name and address, as the conditions in the department may indicate).

Name, \_\_\_\_\_,  
Service Officer, State Adjutant, etc.

#### FEDERAL BOARD MEN AT NORTHWESTERN UNIVERSITY, CHICAGO, DISTRICT NO. 8.

The following statement relates to work done by Federal Board students at Northwestern University School of Commerce during the second half of the school year 1919-20. The account is limited to the second half of the year, for the reason that the work of the university as it affected Federal Board students was not well organized until the school year had fairly well started, and, moreover, many men did not register until the middle of the year.

Northwestern University School of Commerce is organized as a senior college, which requires a two-year precommerce course before their students are permitted to enter upon their regular commerce course. The faculty have, however, altered the requirements for their diploma in commerce and have ruled that any Federal Board man with a high-school education or its equivalent may qualify for this diploma if he satisfactorily completes 48 semester hours' work in commerce. That is to say, in the case of Federal Board students, the faculty withdrew their regular requirements and permitted any man to enter the commerce school who could successfully carry the work. Federal Board students were admitted into classes with regular senior and junior students and were required to maintain the same standard of work.

By careful checking it has been found that the scholastic preparation of Federal Board students at the university averages less than

two years of high school training. Of the entire group only one was a college graduate and two were seniors. This will give some idea of the fight many of our students had on their hands in attempting to "hold their own" with the university students. There are a number of men who have never had more than an eighth-grade preparation. However, in some cases past business experience tends to offset this lack of scholastic preparation. It must not be forgotten that many of the Federal Board men have been out of school for 10 years or more, and studying was very difficult for them. Few of them really knew how to study and were thus working under a double handicap.

The Federal Board men attending Northwestern University School of Commerce may with few exceptions be classified in four groups, according as they are pursuing courses in (1) accounting, (2) general business administration, (3) foreign commerce, and (4) sales management and advertising. The men in the first group, although they are being trained for the broad field of accountancy, seem in a majority of cases to have elected as their definite employment objective public accounting work. The university accounting course is unique in many respects. The various subjects are taught by experienced certified public accountants, many of whom have had long years of practical experience. These night subjects include book-keeping, accounting principles, cost accounting, public-service corporation accounting, and certified public accountant review work and business law.

Men pursuing courses in business administration select courses in business organization, factory management, office organization and management, etc., and men in the third group pursue courses in world commerce, foreign trade, Latin-American commerce, oriental trade, geography of North America, geography of South and Central America, and elementary courses in economics. Men in the fourth group take courses in advertising, marketing and distribution, selling policies, sales correspondence, and resources in trade.

A general meeting of Federal Board men was called for discussion of their training and job objectives. Later, personal conferences were arranged with each man to determine with him in detail his training program and the thing for which he was training. An attempt was made to ascertain so far as possible to what extent these men realized that they were actually facing squarely the proposition of training for specific employment. It would appear that at first the men thought they were training to become certified public accountants, business executives, sales managers, etc., realizing in a very small degree the fact that they could not possibly hope to become executives or certified public accountants except by beginning as sub-

ordinates and advancing by regular plan of promotion as they acquired experience.

Definite lines of promotion offered in various lines of business have been presented to the men. To illustrate: The group who thought they were preparing to become certified public accountants have had analyzed for them the definite positions they must first occupy and the experience they must have before they can hope to become certified public accountants. In order to obtain a definite scheme, conferences have been arranged with a number of certified public accountants to learn just how they promoted their own men after entering service.

In a general way lines of promotion, it was found, run as follows: Helper, junior accountant, senior junior accountant, junior senior accountant, and senior accountant, although not all accounting firms have definitely worked out lines of promotion. With this concrete information at hand, it was possible to impress upon the minds of the men the importance of the initial job and of each succeeding job and thus to clear up the mystery of the job objectives and show the men why it was necessary for them to decide upon some definite job training.

The conferences with different certified public accountants also revealed the fact that there were many men who aspired to become certified public accountants who would never be able to qualify as such. It was therefore necessary to recognize in the accounting section three distinct groups: (1) Those who by proper schooling and practice might fairly aspire to become senior accountants or certified public accountants, (2) those who might qualify as junior accountants, and (3) those who would perhaps never advance beyond the position of all-round bookkeeper. Quite logically, the second and third groups merge into one, and men in these groups find themselves connected with mercantile and industrial concerns as accountants, bookkeepers, cost clerks, ledger clerks, etc.

The same procedure was followed in the case of the other groups of trainees to inform them regarding employment objectives and normal lines of promotion. The school maintains a bureau of employment, whose facilities are available for Federal Board students.

There were 13 Federal Board men in attendance at the Northwestern University College of Liberal Arts; 4 men in training at the University School of Music, and 1 in the College of Engineering.

#### **TRAINING ILLITERATE FOREIGN-BORN EX-SERVICE MEN, DISTRICT NO. 8.**

Ex-service men were first assigned to the Washburne School (Chicago) on April 21, 1919. This school, located at Fourteenth Street and Union Avenue, Chicago, was at one time a grammar-school building. When it was first used for the training of ex-service men

it was a storehouse for quartermaster and ordnance supplies. It had no shop equipment, the former school equipment having been practically all removed, leaving the building in a very ~~disordered~~ condition for receiving students.

A contract between the Federal board and the Chicago Board of Education provides that men assigned to this school shall be trained in both academic subjects and shop practice. As soon as possible shops for instruction in shoe repairing, watch repairing, plumbing, sheet metal, electricity, pattern making, carpentry, baking, machine-shop practice, and drafting were established and equipped.

The school day consists of practically eight hours. The courses of study planned provide that students shall spend one half of their school time in academic subjects and one half in shop practice and drawing. Instruction is given in English, mathematics, civics, history, and science. The English includes reading, spelling, writing, punctuation, and grammar, with special emphasis upon oral language for the foreign born. It is with these illiterate foreign born that the following statement deals.

Many of the men who enter the Washburne School are skilled in some handicraft, but are unable to speak or write in English. It must be borne in mind that it is specially difficult to teach the mature mind to express itself in a new language, and more particularly in a new technical language. Naturally the men, since they are mature men and not children, grasp at the words which express their mature thoughts. For this reason the subject of English is presented to illiterate foreign-born students in a plain, direct, matter-of-fact conversational manner.

There is a twofold aim in teaching English to the foreigner. The first is to lead him to understand the oral language and to read such printed and written material as will enable him to perfect his workmanship. The second is to instruct him in such American literature and history as will lead him to acquire the highest American ideals and foster his ambition to become a true American citizen.

The course in citizenship has shown the foreigner that he has economic, social, and political responsibilities. He learns to realize that he has responsibilities as a citizen in the matter of making a living, and that he must deal with other people and accustom himself to their manner of living.

The school is in a measure a community where he mingles and works with others for the mutual good of all, but he is in close contact also with the everyday affairs of the larger community in which he lives—the home, the school, the street, the shop, and the mill or mine which has become the laboratory for his work.

Much attention is paid to health, sanitation, and personal cleanliness. The man is made to understand that his social status in the

community is the basis of his strength and progress and that it is his duty as well as his privilege to exercise his right of franchise in an intelligent manner. Great effort is made at all times to lead the foreigner to break away from the Old World customs and to urge him to mingle freely with the cosmopolitan community represented by the school. That the efforts are successful is evidenced by the good will and community spirit that exist among all the nationalities in the school, the shop, and the playground, and by the great desire of the men to acquire information about our civic, State, and National affairs.

It is further evidenced by the business relations established by the men who go into business life and take responsible positions. One rehabilitated foreign-born man who asked to return to the school for further instruction, when asked why he came back, replied that he liked the work and was getting 55 cents per hour, but that he could see that to advance he must learn more, and his job foreman would not explain or instruct him as he had been instructed in school.

Economically the school furnishes a shop equipment suitable to a broad field of instruction, and no pupils are more eager to avail themselves of the opportunities to become skilled workmen than the foreign born.

Four of our students have been promoted to a university course at the University of Illinois. All of these men were foreign born. There is no reason why the larger part, a majority, even, of the more illiterate foreign born, may not be stimulated to acquire a high degree of efficiency, provided their training period be of sufficient length. Some of the shopwork at the school is practical, productive, and constructive. The foreign born are exceptionally reliable in workmanship in consequence of early training in the old country. This trait of the foreigner may well be cultivated and be made into a national asset. The foreigner scorns no job that has a purpose; he will work patiently at details, will stick to the job, and slowly but surely gain skill.

Few of the foreign born enter into commercial work; however, for the benefit of the few who are so disabled as to lessen their efficiency as manual tradesmen, a business course is furnished. This supplies to those of commercial ability an opportunity to gain a substantial skill.

#### TUTOR WORK IN DISTRICT NO. 9.

In this district 127 men have been compelled during the year, on account of lack of early training, to begin the process of rehabilitation at the bottom, with the elements of reading, writing, spelling, English, and arithmetic.

This group includes, of course, a large proportion of foreign-born men, who must take up these elementary subjects to qualify them for anything more than the routine unskilled work of the farm, garden, dairy, poultry yard, or greenhouse. Many of these men can not read books in English; can not spell or write rapidly enough to take notes, and some can not make the simplest arithmetical computations. Greeks, Rumanians, Bohemians, Poles, Swiss, Belgians, Dutch, Danes, Swedes, Russians, and Irish have been in our tutor classes.

But the astounding fact is that so many native Americans over 20 years of age have been found who need this very elementary training fully as much as do the foreign born. These include men who have never been beyond the second and third grades. Many of them have not been within a schoolroom for 20 years or more, and the majority have been out of school from 10 to 15 years. They must now master the very elements of writing and figuring.

All, both native and foreign born, nearly to a man are making heroic efforts in attacking problems which should have been solved for them 10 to 15 years ago and which could, of course, have been solved for and by them much more easily then than now.

These men have had far to go and in many cases still have far to go to fit themselves for their new vocations. They are full of courage and will win out, but they need all the sympathy, perseverance, and patience that our teachers can give them. The highest skill in teaching, the most cordial cooperation, unwearied zeal, and full recognition of the fact that many of these men are not their former selves, that some are in poor physical condition, some still suffering from wounds and shell shock and the consequent nervous and other pathological conditions are required of every teacher.

These men have had wide and varied experience, which has taught them many things not to be learned out of books. Their training for years has been in the school of hard knocks, and yet they are sometimes as sensitive as children. Too much can not be expected of them nor, on the other hand, should too little be required of them in work and study.

Some of them hesitate to begin the technical part of their training. They must be encouraged, and in some cases given special tutor work in the technical subjects. Observation leads to the conclusion that special groups or classes, not too large in size, should be formed for the men whose early training has been neglected. Care must be taken in the selection of teachers. Merely knowing the subject to be taught is by no means a sufficient qualification for the teacher—to that essential must be added ability to simplify the teaching process and adapt it to the comprehension of mature pupils of only third or fourth grade schooling. Even in teaching the common elementary branches care must be exercised not to exceed the learning



capacities of the men. They are eager to advance. There is seldom a shirk among them. They work to the limit of their strength and capacity and more can not be expected of them.

#### FEDERAL BOARD TRAINEES ENROLLED IN IOWA STATE COLLEGE, DISTRICT NO. 9.

From District No. 9 a brief report is submitted regarding the work being done and the progress made by some Federal Board men enrolled in Iowa State College.

Notwithstanding all their handicaps, physical disabilities, frequent lack of educational background, foreign birth, and little knowledge of English, and the possibility of not being able to make good in a new vocation, these young men are with magnificent bravery overcoming obstacles and discouragement and are moving forward into broader fields of endeavor and usefulness. The cases mentioned could be duplicated throughout the country in hundreds and thousands of instances in every calling in life.

One splendid example is that of J. S., not physically able to be in the classroom, but who has, under the supervision of a special tutor, during the past summer successfully carried on a market-gardening project, his returns often being as high as \$9 per day and whose final report is anticipated with interest.

Another case is that of R. G., who has been receiving special training in seed work and farm crops, and began his duties as foreman of a seed company at an initial salary of \$1,500 per year.

F. S. is a native of Bohemia, a tailor, who was shot through the right arm, and having had less than four years' schooling he was able to read and write English with difficulty. He is now in the second year of his training and is mastering the details of greenhouse management; at the same time he is mastering English, arithmetic, and other elementary subjects, and is saving his money to buy a greenhouse of his own.

L. C. W. has lost his left leg close to the body. He has a sixth-grade education and is advancing rapidly in elementary subjects, while taking special work with experts in apiculture. He builds up his colonies of bees during summer vacation. After four years' training he will have an excellent foundation in common studies, will know the principles of bee culture, and will have developed his colonies to a point of profitable production.

F. P. has lost his left arm. He was born and raised in Croatia and is training to become a machine draftsman, for which his experience as stationary engineer makes an excellent background. After one year's training he will be equipped to reenter civil employment.

C. C. S. had shrapnel wounds of leg, hip, hand, and face. His hearing is impaired and his leg shortened. He is progressing rapidly and will become a graduate architectural engineer. The firm that secures his services will be fortunate.

C. B. McG. received wounds in the throat from high-explosive shells. A second degree in animal inspection will be conferred upon him within a few years, and the injury to his vocal cords will be a minor handicap in the life work he has chosen.

Groups of men from different walks of life are training to become inspectors or salesmen of dairy products, butter, cheese, ice creams, etc.

J. F. W. is a farm boy of mature years with a sixth-grade education, his right hand having been badly mutilated by shrapnel. He is specializing in the study of animal pedigrees, and will receive additional training at a school of auctioneering. He is taking work in stock judging, stock feeding, animal pedigrees, animal breeding, and in English and public speaking. He already has an offer to keep up the pedigrees of two large herds of pure-bred Hereford cattle, which he can do in addition to his work as a live-stock auctioneer.

A. H. was born and educated in Bohemia. He has rheumatism and heart trouble—post operative—but is improving, and is taking tutorial instruction in mathematics and English. He is assisting in the care of pure-bred live stock, attends international live-stock shows and regular classes in the study of animal breeding, animal feeding, and the study of farm crops. By spring, 1921, returning health plus the training will enable him to manage or assist in the management of some pure-bred herd.

A. B. was wounded in the leg, which prevents him following his former vocation of farming. He is specializing as a meat cutter and hopes to own a shop of his own. That he may know animals thoroughly he is taking a course in animal husbandry and will receive special training in a packing house and with a retail butcher.

One group of young men, each having had several years' experience in carpentry and building, but whose disabilities prevent them from again doing heavy work, are training as building inspectors. Their background of actual experience, supplemented by thorough training, insures success. They have constructed a model house, demonstrating various types of construction in every part of the building.

Following is a list of foreign-born boys who have risked their lives for their adopted land, now broken in body but not in spirit, who have set about learning a new way of making a livelihood. These boys are associating together, mastering the English language, and learning some definite trade, occupation, or profes-

sion, and at the same time developing a deeper sense of the meaning of American citizenship: Ficke, of Germany; Horak, of Bohemia; Johnson, of Sweden; Lambert, of Belgium; Nielson, of Denmark; Papparizos, of Greece; Wahl, of France; Pearson, of Norway; Van Buren, of Holland; Paladin, of Croatia; Szucs, of Roumania; Beyerink, of Holland; Wind, of Denmark; Christiansen, of Denmark.

#### DRIVES IN COOPERATION WITH THE AMERICAN LEGION, DISTRICT NO. 10.

The vast, sparsely settled territory of Montana and North and South Dakota offered a difficult problem to the Board, particularly in getting evidence of eligibility from the disabled men who had returned to their homes. Field men were sent to the principal towns, and applicants were directed by mail to meet the representatives on certain dates. Owing to the limited mail facilities and long distances, most of the appointments failed to materialize. Many applicants found it necessary to travel sometimes on horse 100 miles or more to a railroad. A delay en route often meant that the field man had gone to the next city before the applicant arrived.

Of the three States, Montana offered the most difficulties. In November, 1919, a conference was arranged between representatives of the Veterans' Welfare Commission of Montana, the American Legion Department of Montana, and the Federal Board for Vocational Education. A plan was evolved which has proven by trial in three States to be eminently successful in accomplishing the results which could not be otherwise accomplished in this territory.

Montana was divided into 16 subdivisions, paying due regard to accessibility from some central point, the number of prospective applicants in the subdivision, and the availability of the United States Public Health Service examiners. The State American Legion officials recommended ex-service men in the central point in each subdivision who would serve the Board in a proposed 60 days' drive. The men were placed as temporary field representatives of the Board at a salary of \$150 per month for two months, with the understanding that after the drive they would gladly take care of the "straggling cases."

A conference of instruction was called at Helena at which a thorough explanation of the work was made by members of the staff of the Federal Board, the United States Public Health Service, the Red Cross, and the Bureau of War Risk Insurance. Following this conference the men returned to their designated official stations with a complete list of all known applicants, showing what was lacking in the matter of eligibility in each case. The men were aided in the drive by the thorough cooperation of the United States Public Health

Service and the Red Cross. In most instances the Red Cross furnished emergency stenographic assistance, as well as information and very direct aid in assisting in getting applicants to the field representatives. A very great advantage was found in the fact that the representative, being a local man, was thoroughly acquainted with the locality. He knew the people and in many instances had direct knowledge of the applicant.

The drive in Montana started December 1 and ended January 31. In spite of the climatic conditions in the winter, it proved a great success, and practically all known applicants were taken care of. Following success of the work in Montana, a similar drive was planned for South Dakota. The State was divided into 16 subdivisions and 17 men were appointed upon recommendation of the American Legion officials to conduct the work. The drive started April 17, 1920, and ended June 16, 1920. Great difficulty was experienced by some of the representatives, owing to the heavy spring rains, which interrupted railroad communication in some places a week or more at a time and made roads impassable. The drive developed many new cases and at its close there was a very small percentage of cases upon which there were incomplete data and upon which the Board had not taken definite action on eligibility.

The drive in North Dakota was opened on July 16 with 22 field representatives, selected as in previous drives. At the beginning of the drive there was recorded for the State a total of 1,654 cases, of which there were approximately 1,000 cases needing contact for some additional evidence. One hundred and twenty-seven new cases were developed during the drive, making a total of 1,781, of which over 63 per cent needed some evidence or contact. The drive closed on September 15 with all but from 10 to 14 per cent of the cases in the State definitely settled. Many of the applicants possessing disabilities of a minor nature were very loath to interrupt what work they were able to do in the harvest fields in order to complete their applications. In all the drives it was found that the last 15 days were productive of the greatest result. By that time the special representatives had become thoroughly familiar with the work and were able to meet the difficulties which arose.

Not the least benefit resulting from the drives is the fact that in each locality there now is a man well informed on the work of rehabilitation and one who can give assistance to anyone who desires to make application for training. These men have in practically every instance signified their willingness to continue cooperation, and, in order that they may act with authority, have been appointed as special representatives of the Board at \$1 per year. Appreciation is due the men who for 60 days sacrificed their time for their former comrades. The success of the drives is due to their work.

They were untiring in their efforts to get the work done on time. Appreciation is also due the United States Public Health Service for expeditious action in the matter of physical examinations, and to the Red Cross, who, through giving publicity concerning the drive and aiding in getting contact with the applicants, were of great assistance.

#### AGRICULTURAL CORRESPONDENCE COURSES, DISTRICT NO. 10.

Agriculture is the principal occupation in this large district. It is also somewhat in the pioneer stage, with many partially developed farms and ranches and with many men living on homesteads not yet patented. Naturally, then, there are large numbers of ex-service men who live on farms and should be interested in agriculture. The present high prices of agricultural products increase the interest of ex-service men in farming as an occupation. Section 3 training, which carries no training pay, is of small value to young men living on these farms, as they can not possibly pay their living expenses while attending a resident school. They are not interested in correspondence courses along commercial or other lines, such as are offered by commercialized correspondence schools. To make section 3 training of real value to them correspondence courses in agriculture were arranged. Because of the conditions prevailing in agriculture in this district, there are also many men entitled to section 2 training who can not avail themselves of such opportunity—they can not leave their homestead claims or small farms to attend school, because they have growing crops and small herds of live stock, and they can not afford to hire a caretaker, nor can they obtain dependable men, even if they had the funds. They can not afford to sell this stock, and thus sacrifice the beginnings of success, in order to attend school. These men, also, welcome the opportunity to study agriculture by correspondence under section 3.

There are four splendid agricultural colleges in this district, but none of these institutions had ever offered such courses as a part of their educational program, and it was considered doubtful whether they would depart from their established practice and inaugurate the desired courses, partly because teaching agricultural subjects by this method is new to this district, and partly because these four agricultural colleges are already crowded with students. Therefore a personal representative of the district office was sent to each of the colleges and laid before them the necessity for these courses. The response was extremely gratifying. However, as the subject was presented for consideration during the summer, when in each college some of the officials were absent on vacation, a few matters still remain for final adjustment. The College of Agriculture and

Mechanic Arts, Bozeman, Mont., announced on August 25, 1920, that it would offer the following 14 distinct courses, covering the principal branches of agriculture:

**CROPS AND SOILS.**

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|------------------|-----------------------------------|
| 1. Grain crops.  | 3. Principles of soil management. |
| 2. Forage crops. | 4. Soil fertility.                |

**ANIMAL HUSBANDRY.**

- |                                      |                          |
|--------------------------------------|--------------------------|
| 1. Principles of feeding live stock. | 4. Management of horses. |
| 2. Management of dairy cattle.       | 5. Management of sheep.  |
| 3. Management of beef cattle.        | 6. Management of swine.  |

**DAIRY.**

1. Farm dairying.

**VETERINARY SCIENCE.**

1. Diseases of farm animals.

**POULTRY.**

1. Farm poultry.

**FARM MANAGEMENT.**

1. Farm accounting.

On August 4, 1920, the South Dakota State College of Agriculture and Mechanic Arts, Brookings, S. Dak., announced a course in animal husbandry ready to send out. Students completing this satisfactorily will be given credit for admission to the college proper. South Dakota has further courses under consideration. On September 20, 1920, the executive committee of the department of agriculture, University of Minnesota, unanimously voted to offer such courses, and appointed a subcommittee of three to arrange courses and details. In North Dakota matters have proceeded more slowly and less satisfactorily, because of incidental local circumstances. President Ladd, of the agricultural college, has assured us of their willingness to do all they can. He personally favors the plan. It is now under consideration and details are being arranged.

In view of the fact that this district regards it as being of the utmost importance to keep rural men upon the farms for their own good, and in view of the wonderful opportunities offered by farms in the Northwest to the individual farmer with scientific knowledge of farming, the new training facilities opened up by securing these correspondence courses in agriculture are regarded with satisfaction. They constitute a permanent contribution to the educational efforts in this district, as the colleges themselves seem to consider this work, begun for ex-service men, as destined to be continued as a permanent part of their work.

**MEDICAL FOLLOW-UP WORK IN DISTRICT NO. 11, WITH ESPECIAL REFERENCE TO THE TUBERCULOSIS PROBLEM.**

The problem of proper medical follow-up work is the job of keeping in good physical condition the thousands of ex-service men who have suffered handicapping disabilities, so that they may continue training until they are rehabilitated. In District No. 11, comprising the States of Colorado, Wyoming, Utah, and New Mexico, this work is further complicated, but at the same time made worthy of our best efforts by the fact that about 40 per cent of these men are handicapped by tuberculosis. Only 6 per cent of all those whom the rehabilitation division has contacted in this district have major amputations. Of the entire 14,000 cases handled in the district from January 1, 1919, through June 30, 1920, approximately 6,500 were those of tuberculous men, and of the entire 14,000 approximately 6,000 have been transferred to other districts.

Since, therefore, the problem of the rehabilitation of these disabled men is founded upon our understanding of their disability and our knowledge of the means whereby their handicaps can be overcome, the problem of medical follow up is of the first importance.

In the follow-up work there is a distinction between supervision of training hours and the advisement as to recreation and amusement during leisure hours. The problem also is somewhat different according to whether the men are in training in educational institutions or "on the job." In following up the individual case, therefore, the above distinctions are always carefully considered.

The typical organization of medical supervisory care at an institution where there are any considerable number of men in training is a "unit of care" of one or more Public Health Service consultants and one or more Public Health Service nurses. The vocational objectives are taken care of at such units by a counselor, a member of the institution's faculty, and a coordinator in the full-time employ of the Federal Board. These people cooperate in supervision of the men's training from both the medical and the vocational standpoints.

Under such an organization, and in accordance with central office ruling, periodic examinations of each man in training are made mandatory. No trainee can enter training without receiving approval through examination by the Public Health Service physician.

The large number of tuberculous cases, of course, involve great care and frequency of examinations. At the time of this first examination, also, the organization of the work, according to instructions, requires the making out of such files as will insure examinations, with proper action thereunder, automatically.

Throughout the men's attendance at the institutions, or training "on the job," the questions of changes of courses, discontinuances,

or extensions of courses are reviewed by the vocational expert in charge of the cases, and by the physician in the light of the series of examinations. A review board sits on each case. All factors having to do with the feasibility of the training are carefully considered. The physician's decision is always the deciding factor. Eleven per cent of the tuberculous men have had their courses changed at least once, whereas 13 per cent of nontuberculous men have had their courses changed.

Medical follow-up work in District No. 11 first got well under way in the latter part of 1919. In the eight months previous to 1920 the Public Health Service arranged for medical care and treatment of men in training at all training centers. In this way adequate and immediate aid and supervision have been available at all times. All men with tuberculous disability are examined regularly once a month. Men taking job training are attended to, of course, in large centers of population by the usual cooperative arrangements between the Public Health Service and the Federal Board, and in the smaller centers by the Public Health Service physicians; and in a few instances by arrangements which the Federal Board has provided for care and attendance by private physicians.

The work of the nurses has been largely a matter of personal contact, winning the men's confidence, discovering their ailments, and advising them as to treatment. They also inquire as to their living conditions and make proper investigations concerning health conditions at places of training. Records are kept of all such visits, and they are placed in the file in connection with medical examinations. This follow-up work by the nurses has been of inestimable value from both the vocational and the medical standpoints, and as a factor in keeping up the morale of the men.

Men are thus kept under surveillance, and in cases of reactivation of tuberculous cases the man is removed from training. When the disability is nontuberculous hours of work are shortened or other action is immediately taken. The trainees consequently feel that the Federal Board is taking a personal interest in their physical welfare as well as in their education for a proper vocation.

Wherever possible, eating and sleeping accommodations are investigated by the nurses in cooperation with voluntary students' organizations, or helping committees of the Federal Board men, or by other agencies.

Next to the proper organization through the "units of care," and the arrangements for examinations and supervision, is the third factor of the actual follow-up work. This has to do with the relationship and functioning of the cooperating agencies. Of the first importance is the United States Public Health Service.



The assignment of Public Health Service physicians where we have men in training has already been mentioned. These men are definitely assigned to Federal Board work, are in close touch with the district medical officer, and function with an eye single to the best interests of the trainees. As mentioned above, there are physicians assigned to all educational institutions. In addition, there are in this district 240 Public Health Service examiners who are available at all times for men who may be in training in smaller groups in all communities, or in job training. Medical, surgical, dental care, and hospitalization are available, not only for illnesses traceable to the service, but also for intercurrent illnesses. All of these Public Health Service physicians, for instance, are given such powers as that of recommending to the district medical officer men's "vacations on pay for medical reasons," whenever this seems advisable. This is an illustration of the scope of their power, as well as a measure of their interest in this cooperative work.

Conversely, men who have become reactivated, who are in Public Health Service hospitals, may, if the commanding officer approves, take certain preliminary courses under the Federal Board. This is provided so that when discharged from hospitals and regularly under the Federal Board training, the training may have been as continuous as possible. There are now 1,300 such men in District No. 11, who will become wards of the Federal Board upon release from the hospitals, if they so desire.

In matters having to do with family conditions, as well as in the general assistance in the upkeep of morale, many other semiofficial and semibenevolent organizations have been of definite value in medical follow-up. The Red Cross, for instance, in granting loans for various purposes, has been of great and definite assistance. The Elks have also maintained a loan fund for trainees. In providing entertainments and in partial supervision of the men's hours of leisure the Elks, the Y. M. C. A., and various organizations of the trainees themselves have all contributed to the general maintenance of the high standard of physical well-being.

As a result of our comparatively brief experience in this all-important matter of medical follow-up work, our first conclusion is that there must be a careful business organization, first, of the physicians and clerks in the district office; next, in the arrangements for follow-up at the institutions and for men in job training; and, third, in the important relationship with the Public Health Service. As a part of this organization the use of nurses assigned to Federal Board work is invaluable.

A further conclusion is obvious—that there must always be available facilities for complete and immediate examinations; the decision of the Public Health Service physician as to action is final.

The desire of the physicians to become acquainted with the vocational aspects and requirements of the entire work is notable and of vast assistance.

Every official and private facility by which the leisure hours of the trainee can be properly supervised should be encouraged. This is probably more valuable than an attempt to have each man keep a daily or weekly clinical record of his case and actions.

The results attained show that medical follow-up of men in training has been more than justified. But the man must be treated as an individual, not en masse as was necessary during the period of military service, when he was merely a unit in a company or regiment.

#### PROBLEMS AND RESULTS IN THE TRAINING OF SPANISH-AMERICANS BY THE FEDERAL BOARD, DISTRICT NO. 11.

During the great war Spanish-Americans in the southwestern part of the United States proved their loyalty in service for their country. Following the signing of the armistice some hundreds of these Spanish-American boys became wards of the rehabilitation division of the Federal Board. Of the 13,000 who entered the service from New Mexico, over half were Spanish-Americans. Nearly 40 per cent of the 1,200 New Mexico Spanish-American cases handled have the handicapping disability of tuberculosis, while only 21 suffered major amputations.

To understand some of the problems which confront the Federal Board in retraining these men and returning them successfully to civil employment, it is necessary to know something of their previous environment and of that section of the country from which they come.

A great majority of the Spanish-Americans in the United States live in the States of New Mexico and Arizona, with an appreciable number in the southern sections of Colorado, Texas, and California. Since over 80 per cent of the Spanish-American trainees in this district come from the State of New Mexico, conditions in that State are here chiefly considered.

New Mexico became a State in 1911. It is not a backward State, although it is in many respects undeveloped. It has an area of 122,503 square miles and an estimated population of over 400,000, averaging a population of 3 to a square mile. At the present time there are many sparsely-settled parts of the State where there are no schools in which instruction is given in English.

Lying as it does in the arid belt of the continent, its industries are limited because of its location. Ranching, cattle and sheep raising, mining, with a recent increase in irrigated farming, are the chief industries.

These facts have been taken into consideration as having important bearing upon the training advisement necessary for the handicapped ex-service men. From the beginning of our contacts with these men we have endeavored to use Spanish-speaking advisers and in many cases Spanish-Americans themselves in this service. This serves to allay the distrust and suspicion of our work, which in a few instances has been in evidence. Partly on account of lack of training and for other reasons, the physical stamina and resisting power of many of these handicapped men is below the average. Many of them were taken into the Army directly from small farms or from pursuits such as sheep herding or laboring in the mines. The majority were unskilled laborers. As a result of their lack of schooling the number of vocations by which they can be successfully returned to civil employment is limited.

The trainees from New Mexico average completion of schooling of about the fourth grade. Sixty per cent of them have only that English which they have picked up in the Army. Their native intelligence, however, is good. Their great difficulty, which is ours also, is their lack of employment objective. In some instances they are shortsighted, and in practically all cases they are home loving and close to the soil. These characteristics have meant for the Federal Board a real training problem.

If some of them are therefore by nature perhaps less awake to the advantages of education than the population in some other parts of the country, it is not their fault, but the natural result of conditions over which they themselves have had no control.

#### METHODS OF TRAINING.

The methods by which the problem of training the Spanish-American have been worked out have been necessarily determined by a consideration of the facts which have just been noted. A thorough comprehension of the fundamental needs in returning these men even to their own communities as rehabilitated citizens recognizes that each one of them should first be taught to read and write English and given a thorough grounding in the meaning of American citizenship. At the same time it has been the endeavor of the Board to furnish practical education along industrial and academic lines. The value of trade try-out courses has also been especially demonstrated.

By the cooperation of county agricultural agents the initial contacts and follow-up work have been facilitated. The use by our cooperating schools of the special agricultural unit courses as outlined by central office experts has also proved of great advantage.

In 90 per cent of the cases it has been found wise at first to spend a greater part of the time upon English, arithmetic, elementary citi-

zenship, and thence, through trade try out or training on the job, to progress toward the specific vocation and employment objective. The eagerness with which many of these ex-service men, semi-il-literates and from the simplest environments, grasp at this work and progress in it is at once a comment on the efficiency of the work and proof of its training for citizenship as well as for the specific job.

Our experience has shown in most instances that it is wise to train these men, if possible, near their homes. While there are exceptions to this general rule, it is of questionable value to train them in large centers of population if they are later to return to their home towns or villages for employment. The solution of this whole question of proper environment during training is still, in some respects, in the experimental stage.

#### SCHOOLS USED.

With these general principles or methods in mind, this district, while using all possible facilities at hand, has found three schools of special value in training this type of men. These schools are the Denver Opportunity School, the New Mexico Agricultural and Me-  
chanic Arts College, at Las Cruces, and the New Mexico Normal University, at Las Vegas. The spirit and morale of the Denver Opportunity School are such that there is engendered exactly the proper atmosphere for broadening the vision of these men on the foundation of right citizenship. Since this institution is used also as a receiving station, the Spanish-American placed there is ordi-  
narily one who can not be placed at other schools because of his inability to use the English language. A great majority of these men are so deficient in elementary education that it is also essential that work in the three Rs be given them before they are given much try out or trade courses. Some of the best elementary civics teachers in the country spend several hours each week with all these men in teaching the fundamentals of citizenship. As a result most of them show a real desire to understand English, an attitude which they may never have manifested prior to their induction into the service. Many of them are able to cover four or five grades in a year at this institution.

As many of them require sufficient English to be able to profit by trade instruction, their trade course work is broadened and increased by this method of instruction. Often it has been found more feasible, as soon as a suitable trade is determined upon, to transfer them to training on the job. The following is a partial list of trades in which men are making good "on the job" in Denver: Barbering, automo-  
bile repair, cigar making, railway machinist, sheet-metal work, show-card writing, shoemaking, saddlery, telegraphy, tailoring, welding.

The largest group of Spanish-American trainees is at the New Mexico Agricultural and Mechanic Arts College, at Las Cruces. Following is a quotation from a report by the coordinator at that college, which is interesting at this point:

Special courses for Federal Board men are given in English, arithmetic, general agriculture, and animal husbandry. Instructional content of these courses ranges from the first to the sixth grade. The aim in their presentation is to prepare men, both Spanish-Americans and Americans who have lacked the advantages of previous education, to carry on in general agriculture or stock raising on their home ranches or to assume positions of responsibility on the larger stock ranches. A special class has been organized in poultry husbandry. This consists of lectures, demonstrations, and practical work on the college poultry farm, supplemented by English and elective subjects in the regular elementary classes of the school.

Many of these are taking training in the following lines: Agriculture, arithmetic, automobile mechanics, animal husbandry, business courses, English, gardening, poultry raising. Lectures and objective work in citizenship are given to all.

In all the schools, in fact, instructors have graded the pupils according to their respective advancement, so that there is progress according to the individual ability. The work in agriculture at this institution is in charge of a graduate of the school, who speaks both English and Spanish fluently.

At Las Vegas is the New Mexico Normal University. This institution is rendering a distinct service to the citizens of New Mexico in its cooperative work with the Federal Board. Men who have only a seventh-grade education are there given intensive courses in elementary subjects, together with lectures and other work which prepares them for a teaching certificate in the State of New Mexico. Because of the great need for teachers in this State and the desire of many communities to employ Spanish-Americans, the work at this institution has proved of great immediate and practical value. Although only a few have taken these courses, this is one of the best bits of work carried through by the Federal Board. It is expected that in the coming year many more will take up work in the normal university.

Of great importance in connection with the plans and methods of training this type of trainees is the bearing which medical supervision has upon them and upon their work. On account of their disabilities and what sometimes seems to be racial lack of stamina, in their tendency toward serious cases of tuberculosis, for instance, it has been found necessary to keep especially close medical supervision of these men. Examinations are sometimes, therefore, made more often than in the case of others, and the nurses as well as the physicians assigned to the Federal Board try to teach personally to

these men the value of proper living conditions and the adjustment of their working, sleeping, and leisure hours. This information which the men will take back to their native villages will be of real value to those communities.

#### GENERAL RESULTS.

The results of the methods and plans so far have been excellent. Nearly 300 are being trained in about 25 different vocations. Of these 300, about 100 are being trained on the job and the rest in educational institutions.

Extracts from three reports concerning men well on the way toward rehabilitation are given below:

E. C. was disabled by a gunshot wound in his left leg above the knee, which handicaps him for standing and lifting, and he is therefore unable to carry on as a laborer and teamster. He has had only a fifth-grade education. This man is Spanish-American. He has had a great deal of trouble in getting started in his training because of the continual occurrence of some physical disability. He has had trouble with his teeth and also with his feet and wounded leg. During the first part of his training he had to be out for various reasons. He was therefore changed twice before he finally lined up at his present place of training. He has now taken hold of his training very earnestly and is always "on the job." His physical condition seems to be all right, and the proprietor of the Modern Shoe Shop, where he is being trained as a shoemaker, states that he will certainly make a success at the shoe-repairing business. When our training officer made the last follow up on this man he found that he had been started on the sewing machine and was being given training in the higher grade of shoe-repairing work. He is not yet rehabilitated, but is making very good progress toward that goal, is interested in his training, and we believe that he will be able to carry on at this work with about six additional months' training.

P. M. was disabled by a shrapnel wound through his left thigh, which caused weakness of the muscle of the leg and made it impossible for him to return to his former occupation as boilermaker's helper, because he was unable to do heavy lifting. He has completed the seventh grade and is a very intelligent and ambitious Spanish-American boy. He is now 28 years old. He was approved for training August 4, 1919, and was placed in training on September 1 with the Vulcan Iron Works as a boilermaker's layer out. He has made unusual progress in his training and is now able to lay out all simple jobs, and he has come to this office and stated that he wished supplementary training in geometry and in blue-print reading so that he could become qualified for any kind of laying-out work. We have arranged for training at night in these subjects,

and although his wife is sick and it makes it difficult for him to study at night, he has taken hold of the work and is devoting his evenings to his mathematics and drawing in order that he may make of himself a thoroughly qualified layer out. The man has taken unusual interest from the very start and is well on his way to rehabilitation, which will probably be consummated in the next six months.

Prior to entering service P. T. was a messenger for the Western Union Telegraph Co. He suffered the amputation of his right leg as a result of an injury to his spine. He had had an eighth-grade education, and because of his disability and the fact that he was sufficiently qualified he was placed in the Modern School of Business for training in telegraphy. He proved himself adaptable and was later placed in the Western Union School for completion of his training. His instructor states that, in his opinion, T. will shortly graduate from their school. Upon his graduation he will be employed by the Western Union Telegraph Co. either in the capacity of a regular operator or that of manager or assistant manager of some small office.

As we review the past environment of these men and consider the methods and results so far known, our first fundamental conclusion is that in the majority of cases courses in elementary education and citizenship should parallel and sometimes precede the definite vocational work of these men. Largely as the result of the great amount of elementary work required it is possible that the total length of training per man will average higher for the Spanish-Americans than for many other groups of trainees. This will be at once of great value for the trainees as a group, and also accounts for the comparatively small number of graduates.

We may also conclude that their training should be taken not far from their homes, and that where possible it should be by job training or of distinctly vocational content if in institutions.

Surveys of training opportunities so far made in New Mexico show that for the majority of these men training based on the above conclusions is practicable. The increased personnel of the Board will allow us more and more to seek training opportunities in New Mexico or in Colorado where the Spanish-American is understood. It will also be necessary to take a certain number out of their home environment to such places as the Denver Opportunity School, where special needs in instruction can be furnished. A try-out school, teaching elementary subjects, should properly be one of the next developments of the Federal Board in New Mexico.

A slight clannishness among the Spanish-Americans, coupled with a slight prejudice against them, sometimes work together in making

placement difficult. One of the great services of the Federal Board will continue to be slowly to eliminate this clannishness and this prejudice.

We can also conclude from our experience that for the greatest number courses in mechanical and agricultural lines are the most valuable. As a corollary to this it follows that whenever one of unusual intelligence is found, his training should be such that he can return to teach his people and be of social service assistance to them. The value of the few hundred service men who will be trained by the Federal Board in bringing home to their respective communities the necessity for civic growth and betterment can not be overestimated. Through them the physical health of individuals, the education of the masses of people, the elevation of the conception of citizenship, will all make for further progress of all kinds in this great and growing State.

These people are "good people." They are intelligent, friendly, adaptable, and desire to be progressive if given the opportunity. The very youth of their statehood has been at once a disadvantage and a promise of future development. The work of the Federal Board, and its welcome from officials and cooperating agencies in New Mexico are an augury of continued success. The \$25,000 spent monthly in training allowances to the men or in other expenditures for this rehabilitation work in the State has been and will be spent in turning out the best possible product—intelligent, self-dependent, patriotic citizens.

#### FEDERAL BOARD STUDENT ORGANIZATIONS, DISTRICT 12.

There is a desire among the Federal Board trainees to perpetuate the comradeship developed during the war and to band themselves together for mutual helpfulness. As one disabled man expressed it: "With the passing years the people will forget that we are handicapped. We should organize to protect ourselves."

Recognizing the value of association, the students in training under the Federal Board have organized themselves wherever the groups are homogeneous and sufficiently large to warrant it. The associations in District 12 are: the Associated Federal Students, University of California; the Associated Federal Students, Stanford University; the Associated Federal Students, University Farm School, Davis; the Associated Federal Students, University of Arizona; the Federal Class, University of California, southern branch; Engineering Society, Polytechnic College of Engineering, Oakland. The purpose of these organizations is expressed clearly in the following by-laws of the Associated Federal Students of the University of California:



I.

The regular meetings of the organization shall be held on the second and fourth Fridays of each month between 11 a. m. and 12 o'clock noon.

II.

There shall be four regular standing committees: The clubhouse committee, the committee on federal relations, the scholarship committee, and the committee on social activities.

III.

The standing committees shall consist of three members each and shall be appointed by the president, in council with the executive committee, subject to ratification by a majority of the organization.

IV.

SEC. 1. The clubhouse committee shall thoroughly investigate the lodging and boarding conditions in the immediate vicinity of the campus in order to secure the best accommodations possible for members of the organization. To this committee shall be intrusted the duty of carrying on such activities as will be necessary to further the plan of establishing a clubhouse. With the establishment of the clubhouse this committee will assume charge, under the direction of the executive committee.

SEC. 2. The committee on federal relations shall be thoroughly acquainted with all matters pertaining to trainees' relation to the Federal Board and shall be prepared to assist the counselor in answering questions at the meetings and to secure special information for members desiring it. This committee will also report concerning current legislation by or before Congress concerning disabled service men and women.

SEC. 3. The scholarship committee, under the direction of the counselor, shall assist new students to enroll at the university, and shall be well informed concerning the work in the various colleges. In the furtherance of this the committee shall cooperate with the deans and heads of departments in an effort to secure the best courses and instructors for Federal Board men.

SEC. 4. The committee on social activities shall provide entertainment for every regular meeting of the organization; and shall perfect plans for all other special entertainment which may be recommended by the organization.

V.

The chairmen of the standing committees are required to be present at the first official meeting of the executive committee each semester in order that they may receive such instructions and advice as the executive committee considers necessary for the proper fulfillment of their duties.

VI.

Additional by-laws may be introduced through a regular motion and passed by a majority vote of those present at the time of voting.

The various associations have made their influences felt in the institutions in which they are in training. They have (a) maintained standards of conduct among the trainees, (b) provided housing facilities; (c) supported legislation affecting their interests; (d) made new students welcome; (e) brought to the attention of the Federal board matters affecting their welfare; (f) conducted their own social affairs.

The following are some of the activities of these associations: The Associated Federal Students of the University of California won the silver cup in the Safety First Parade; the Associated Federal Students of the University Farm School, Davis, plan a parade in Sacramento on Armistice Day in favor of land settlement legislation; the Associated Federal Students of Stanford University challenged the Federal Students of the University of California to a ball game and entertained them with a barbecue; the Associated Federal Students of the University of California held a reception at their house for Director Lamkin; the Associated Federal Students of Stanford University entertained Director Lamkin at a barbecue; the Associated Federal Students of the University of California showed their respect by attending in a body the funeral of their "buddy," Ransford Crook.

One of the chief activities of these organizations is the providing of housing facilities for trainees. Stanford University has set aside Alvarado Hall for Federal board students. Efforts are being made to obtain the exclusive use of another hall. The barracks at the University of Arizona are now a dormitory for Federal board students. The students at the University Farm School, Davis, where housing facilities are inadequate, are petitioning the university for a dormitory.

Special mention should be given the house of the Associated Federal Students at the University of California. Through the efforts of the members of this association a house has been obtained, convenient to the university and in one of the best sections of Berkeley. Various agencies in the community lent generous assistance; through the cooperation of the Rotary Club and the American Legion the necessary financial arrangements were consummated; the Red Cross and the Community Club provided the furniture and the necessary supplies. A dining hall is maintained in the house under the management of the boys; here the boys keep open house for all the trainees of the university.

The experience of the past year indicates conclusively that the results obtained from student body associations aid materially in effecting rehabilitation. The men learn from these associations to become cooperative members of the larger community life into which they go upon completion of training.

#### **RECORDS OF THE FEDERAL BOARD TRAINEES IN THE PROFESSIONAL AND SEMI-PROFESSIONAL SCHOOLS, DISTRICT NO. 12.**

The public, which provides the money for the rehabilitation of the disabled ex-service men, is entitled to an answer to the following questions:

(a) Are training periods of two years or more justified for disabled ex-service men if their mental capacities permit?

(b) Will men who are older than the average students by several years and whose careers were interrupted by the war apply themselves to study and make good?

These questions are answered affirmatively by the records of students in the professional and semiprofessional schools of District 12.

We must bear in mind the handicaps under which these men enter training: They are physically subnormal, due to their disabilities; and they are rusty in ability to give attention to study. They have to their credit, however, that which the average student does not have—an employment objective. The disabled men discuss with the officers of the Federal Board the lines of work which they should follow, as consistent with their abilities and disabilities, and when they begin they know whither they are going and that the training is necessary to prepare for the selected objectives.

A record of the grades received by Federal Board trainees at Stanford University and the University of California has been kept and compared with records of other students. The results of the comparison are as follows:

Stanford University:

Average for all male students.....	1.33
Average for Federal Board students, fall quarter.....	1.42
Average for Federal Board students, winter quarter.....	1.44
Average for Federal Board students, spring quarter.....	1.20
Average for Federal Board students, summer quarter.....	1.40

An explanation is necessary regarding these grades: The higher the grade, the better the record. For three quarters out of four the Federal Board trainees outranked the average for the male students at the university.

University of California:

Average for all male students in men's clubs and dormitories..	2.4648
Average for Federal Board students.....	2.425

An explanation is necessary here also: The smaller the grade the higher the record. The basis on which records are determined differs in the two universities.

The introductory questions are answered in the affirmative also by the records in individual cases, both in the professional and semiprofessional schools.

Special mention is made of James McNally, who entered Stanford University with only a fifth-grade education, but with a psychological rating sufficiently high to indicate his ability to carry university work. In the summer record he stood tenth in the list of 25 students.

D. V., Chaffey Junior College of Agriculture, has made special investigation of the peach thrips.

A. G., Chaffey Junior College of Agriculture, has been called upon to do special inspection work by the horticulture commission, Riverside County.

I. N., University Farm School, Davis, won first place in judging horses and second place in judging cattle at the State fair, Sacramento, September 4-12, 1920.

F. C., University Farm School, Davis, won first place in judging cattle and second place in judging horses.

Of the Chaffey Junior College of Agriculture students, George W. Garretson "heads the list."

C. L. S. "received the highest grades ever made by any student at the University Farm School, Davis."

C. C. of Stanford University, "was given the highest grade the university could bestow on any student."

A. S., W. B., and G. R. S., at the University of California, "received 1's in every subject."

The records which have been made, both collectively and individually, show undoubtedly that it is a good investment to train the disabled ex-service men in professional and semiprofessional lines if their capacities permit. The return which they will render to the community will certainly justify the expenditure.

#### VOCATIONAL GUIDANCE SCHOOL AT SAN LUIS OBISPO, CALIF., DISTRICT NO. 12.

One of the most difficult problems confronting the Federal Board rehabilitation division is the determining of the employment objective for the disabled ex-service men, especially with the following three groups:

- (a) Those whose disabilities are such that they must make a decisive change in their employment.
- (b) Those who have insufficient education to enable them to select wisely.
- (c) Those who have not had a definite vocational experience.

District 12 recognized the necessity for having a place where these men could have an opportunity to test themselves in various lines under a stimulating environment and with expert counsel. The California Polytechnic School, San Luis Obispo, offered an opportunity. It is a trade and industrial school located on 165 acres of land, most of which is under cultivation. Contract arrangements were made with the school March 22, 1920, whereby the school was to receive Federal Board men, the school providing instructors, supplies, equipment, and the Federal Board reimbursing the institution by a tuition rate of \$20 per month per man.

—An average attendance of 75 has been maintained at the school. Ten instructors, selected because of their qualifications and strong personalities, give try-out training in the following subjects: Machine-shop practice, practical electricity, mechanical drafting, cabi-

netmaking, tractor operation, agriculture, arithmetic, English, and science. Two coordinators are giving full time to the special counseling of the men in helping them to select their employment objectives and arrange for try-out training.

### REPORT ON TRAINING IN DISTRICT NO. 13.

#### FISHERIES.

Training in fisheries in District No. 13 is unique both in that the College of Fisheries, University of Washington, Seattle, is the only school of its kind in the country and in that training provided by the school is founded, in curriculum and in instructional methods, directly upon the needs of the fishing industry of the Pacific coast in particular and upon the demands of the Federal work in fisheries in general. The economic interests of the Nation demand more intensive work in fish propagation and the discovery and preparation for consumption of the more edible species.

The increasing strictness of pure-food laws calls for improved methods of canning and curing fish. The keen competition and the nature of marketing conditions require a combination of scientific and business training.

The need of scientifically trained men is being cordially recognized by commercial interests who see in the rapid depletion of the fish supply, due to wasteful methods and greedy competition, the loss of an enormous amount of invested capital. In consequence of this recognition many cannery companies have donated freely to the equipment required by the school in making its instruction thoroughly practical and vocational. By advancing the technical knowledge of matters pertaining to the fishing industry and by turning out trained fish technologists and culturists, the College of Fisheries is responding to the demands of industry, and has fitted its course of instruction accordingly.

The College of Fisheries occupies three buildings, in which are housed, besides the usual recitation rooms and laboratories, the museum of fishing gear, the canning machinery, washing tanks, hatching troughs, aquaria, barrel-making outfits, etc. In addition it is planning to build in the near future four cement fish ponds on the campus, which will be used for the purpose of rearing fry. Practical instruction is thus provided in the best methods of canning and curing fish and other sea foods and in the most effective means of propagating fish from spawn. The practical work is backed by a thorough training in biology, bacteriology, ichthyology, chemistry, and fish pathology, thus insuring a training that is fundamentally sound and scientific. During the winter a short course is held for men already engaged in the fishing business, which covers the subjects of canning and curing of herring and of fishery products, classi-

fication and habits of economic species, diseases and parasites of fish, bacteriology of food, fish culture, marine gas engineering, and elements of navigation.

An interesting phase of the training in this field is the opportunity for getting first-hand acquaintance with the industry offered by summer work in the canneries, on fishing boats, in the employ of the National Cannery Association, with the Bureau of Fisheries, and with the State hatcheries. All of the 10 men taking fisheries this past year spent the summer in the field, some as far north as the Bering Sea, others on Prince William Sound and in southeastern Alaska, and others on Puget Sound or the Columbia River. The knowledge thus gained of fishing methods, gear used, salmon habits and habitats, working conditions, canning machinery, and disposal of product is of very great value to men both as students and as future workers in the industry.

Since the fishing industry ranks first in Alaska, second in British Columbia, and third in Washington, and is of much importance in Oregon and California, employment outlets are numerous and varied in nature. To those who are trained in fish culture are open such positions as scientific assistant, field agent, fish culturist, naturalist with the Federal Government, superintendent and foreman of hatcheries for State, county, and private interests and scientific positions in official and private biological laboratories. Those who are trained in fish technology will work into places of responsibility with canneries, salteries, fertilizer, and other by-products plants. Men who combine a technical training with a business training may also qualify for office work with fish brokers. For those whose lack of scholastic training will not permit of registration as degree students, courses are provided that will make them employable in lesser positions in hatcheries, as foremen of canneries, engineers on fish boats, and as cannery inspectors for the National Cannery Association.

Since the fisheries of Siberia, China, and Korea are as yet undeveloped to but a slight extent, it is probable, when once development gets under way, that graduates of the school will be called upon as experts to direct the work.

The work of the school has the hearty support of the fishing interests of this coast, and willing cooperation may be expected from them in placing men trained for the work.

#### **SPECIAL TRAINING IN AGRICULTURE ON SELECTED FARMS CONDUCTED BY SCIENTIFIC AGRICULTURISTS.**

Rehabilitation along agricultural lines is, in most instances, most quickly accomplished by institutional training, and the general policy of the Federal Board based upon this fact has been conformed to in District No. 13. Training "on the job" has not been resorted to

except in special cases. It is difficult and expensive to closely "follow up" the training of men on farms and the danger of their being exploited by farmers anxious to obtain help at little expense is at once evident. The more general the training desired the more probable it is that a trainee, all other things being equal, will make more rapid progress in an institution than on a farm. Instruction in institutions is more concentrated because it is possible to cover in a short period principles which could not be learned in less than one complete season on the farm.

There are, however, a considerable number of cases which, for various reasons, make it highly desirable, or even imperative, that the training be given "on the job." In many other cases it is necessary that there be some training "on the job" to supplement the institutional training.

In District No. 13 agricultural training is in charge of a staff of men specially trained in agriculture, due to which fact it has been possible to give particular attention to cases needing job or placement training. The staff members have a wide acquaintance among agriculturists of the three States, and as a result training opportunities of very exceptional value have been located. Each farm or concern is carefully surveyed before a man is sent there for training, and the follow-up system includes a visit to the men every 20 days or as much oftener as may be deemed necessary by the staff member who is following the case. It is believed that the specialization in agricultural pursuits of supervising officers who are following these cases has accomplished some remarkably fine results. The citation of a few cases will indicate what has been done.

#### TRAINING IN FILBERT CULTURE.

The case of B. D. affords an excellent example of the special advantages that are to be gained in some instances by training "on the job" rather than in an institution. This man had the major part of his lower jaw shot away overseas and his present very natural appearance and almost normal speech bear testimony to the marvelous excellence of the surgical attention which he received. A rib was grafted in to take the place of the missing jawbone and an artificial plate is held in place by his one remaining tooth.

The nervous strain of his military experience and the following surgical treatment left him in such a condition that outside employment was recommended. He decided to take up filbert culture. His uncle is growing filberts, and young D., convinced of the excellent future of this industry, asked to be allowed to specialize in it.

Careful investigation by the specialist in agricultural training facilities revealed the fact that there is practically nothing offered in the curricula of the various institutions on the subject of filbert cul-

ture. It is a comparatively new science. Recently in the Northwest it has shown marked promise of success, although in most of the eastern sections, where it had been tried out, it has proved to be a failure. Further investigation showed that D.'s uncle is one of the pioneers in this work.

He enjoys the confidence of the horticultural department of the Oregon Agricultural College to such an extent that they are making use of his groves for experiments in pollination, pruning, and spraying filberts, recognizing, as they do, his ability and the coming importance of this industry.

Although B. D. has never been on a farm for any length of time, he is a graduate of College of Commerce of the University of Oregon and had learned to study independently, so that there was every reason to believe that he would make the most of the unusual opportunity for training offered on his uncle's farm at Springfield. He could not only have the invaluable assistance of his uncle, but also that of the various specialists from the college, who are cooperating in experimental work on the farm.

The man was placed in training and has been visited every 20 days since that time by the specialist in agriculture who is following his case. The results are profoundly gratifying. He is learning the details of orchard management and filbert culture based on the best knowledge that could be gained from long years of experience and is enthusiastic over his work. In his room a fine collection of books and current periodicals dealing with horticulture and nut culture bear witness to the fact that the man is making use of every available aid to his progress. His training was started on the 1st of May, and it is planned to keep him in his present location for at least a year, in order that he may learn the routine of orchard management for the four seasons and get a thorough grasp of the special problems involved in his chosen specialty.

The evidences are good that he is as favorably located as he could possibly be in this particular line of work. Further than the fact that he is making satisfactory progress, it is pleasing to know that the large amount of outdoor work has effected a pronounced improvement in his health. He has definite plans, too, for entering into filbert culture for himself upon the completion of his training.

#### DEVELOPMENT OF A POULTRY PLANT.

Another opportunity which the agricultural staff has considered a very fortunate find is that which was offered on the farm of a graduate of a high-grade agricultural college who has had several years of farming experience since his graduation. His financial returns speak well for the farming methods which he uses. During the



spring just passed he was planning to develop a 1,000-unit poultry plant on his farm. His place was visited and surveyed by one of the agricultural specialists of the district and arrangements were made for R. E. W. to take advantage of the training opportunity furnished by this project.

The situation was very similar to that which the farmer would face when he should finish his training and desire to enter the poultry business for himself. There was a very small flock and some inadequate tumble-down buildings which had to be replaced by new ones. Day-old chicks were purchased, and under the farmer's guidance suitable buildings were erected for the housing of the brooder chicks and the fall flock. A careful system of cost accounting is maintained, and Mr. W. was given instruction in the business side of the proposition, as well as in the erection of buildings, the care of the poultry, and the general farm routine.

This experience in the actual development of a poultry plant, under actual conditions and with the guidance of an experienced scientific farmer, is one by which any trainee in poultry husbandry might greatly profit. At the close of the active spring work Mr. W. was given short, intensive, six-weeks' course especially arranged for Federal Board men at the Western Washington Experiment Station, and he is just now being finally placed under conditions which promise marked success for the man.

#### TRAINING IN ORCHARD MANAGEMENT.

An exceptional training opportunity has been found for A. A. Mr. A. suffers from idiopathic epilepsy (heart failure) and must avoid any form of exertion that would be too great a strain upon his heart. In September, 1919, he entered training at the Oregon Agricultural College to prepare himself for work as an orchard manager. He is a high-school graduate and has had three years of practical experience on a small fruit and berry farm. As might have been expected, he made rapid progress in his work in the institution. A considerable part of A.'s equipment as an orchard manager, however, should be his ability in managing men, his technical skill, and his fund of general knowledge gained from practical experience.

Near Corvallis, where the college is located, an owner has 100 acres of orchard land, 75 of which is planted to orchard and small fruits of various kinds. There is here not only the opportunity for experience in the routine of ordinary orchard management, but also the opportunity to observe and take part in the various experiments carried on in these orchards by the horticultural, pathological, and entomological departments of the college. In a personal confer-

ence it was arranged for the owner to take Mr. A. and give him the opportunity to learn orchard management on this place. He has been in training there since the close of the last school term, and both he and Prof. Brown are highly pleased with the arrangement. Problems met are typical of those to be found in orchard work in this district, and the keen interest taken by both the trainer and the trainee have made possible the very rapid progress of the latter.

#### MANAGEMENT OF A BIG-SCALE POULTRY PLANT.

H. S. M. has been given an excellent opportunity for training on the farm of a graduate of the University of Missouri who has taken special work in poultry husbandry at the Oregon Agricultural College. Just seven years ago he borrowed money to buy the rocky hillside where his modern poultry plant is now located. He is worth \$50,000 to-day, and the transformation that has taken place in the farm where he made this money speaks for the remarkable ability of the man. His methods in producing day-old chicks, his main specialty, are strictly up to date. The fact that he operates a 23,000-egg incubator indicates the scale on which his plant is run.

Following a preliminary training at Oregon Agricultural College, during the course of which many hours were spent on the farm, Mr. M. was transferred on June 10 to full-time placement training with the farmer. Since he plans to specialize in the "day-old chicks" business, this location is unusually fortunate for him. Mr. M.'s disability is heart disease, and his special preparation in poultry husbandry gives him a business more fitted to his physical condition than general farming, which was his former occupation.

#### OTHER PLACEMENT TRAINING OPPORTUNITIES BEING USED.

The above cases are offered as representative of the special training in agriculture on selected farms conducted by scientific agriculturists. A large number of cases might be described, all of which would be interesting, but in order to save space a few of the selected training places are here briefly mentioned to further indicate the general quality of the training opportunities which are being utilized in District No. 13.

Two men are with the O. A. C. orchards at Monroe, Oreg. The orchard is owned by a company made up of members of the horticulture faculty of the Oregon Agricultural College, and the president of the college heads the organization. The orchard is superintended by a graduate of that institution.

The Pacific Meat Co.'s farm, at Kirkland, Wash., is another place of which advantage is being taken. This is a hog ranch where swine

production is highly specialized. It is a thoroughly modern commercial plant in every regard and is in charge of an experienced college graduate, assisted by a corps of specialists. The work of the farm is so organized that it is possible to rotate a trainee from one kind of work to another, allowing him to spend as much time as is necessary on each particular phase of the business. The management is cooperating in a fine way in the training of men.

The Hollywood Farm, at Hollywood, Wash., is proving exceptionally valuable on account of the specialization which prevails and makes possible the rotation of trainees through the different phases of farm work:

Many other high-grade farms managed by scientific farmers, a large percentage of whom are college graduates, and all of whom have established a reputation that justifies confidence in their ability, are being used as training places for Federal Board men.

Also worthy of mention is the training "on the job" other than that done on farms. This includes training with the extension service of the Oregon Agricultural College, where men are being prepared to carry on as county agricultural agents; training in creameries, with cow-testing associations, nurseries, seed companies, implement houses, and many other organizations and concerns that are equipped to train men and which offer employment opportunities to men properly qualified. It is in such work as that that training "on the job" offers greatest advantage.

#### TRAINING IN STATIONARY ENGINEERING.

Early in May, 1919, District Office 13 started a class in stationary steam engineering. The class, which numbered five, was at first held in one of the recitation rooms of the engineering department at the University of Washington, Seattle. Its rapid growth led to a removal to larger quarters in the city. It is now housed in three rooms on the same floor with the general offices occupied by the district office, but the present size of the class (40 in number) necessitates seeking still larger quarters.

The course consists of highly intensive training in the mathematical, mechanical, practical, and efficiency problems pertaining to the construction, installation, operation, and upkeep of all types of stationary steam engines, boilers, pumps, condensers, etc., such as the Corliss, common slide valve, riding cut-off, turbines, various high-speed single valve, condensing, and noncondensing, together with elevator and refrigeration plants—in fact, every type of boiler in both fire and water tube class. Enough elementary instruction is given in direct and alternating currents to enable one to know how to "cut in."

The class work is based on lesson sheets, containing questions and answers, descriptions, formulas, problems, etc., such as will be met with in any examination required of those seeking a license. All rules and formulas used in this course are in keeping with the Massachusetts code and that of the American Society of Mechanical Engineers.

The theoretical instruction is supplemented by six to eight weeks' practical experience in boiler and engine rooms of various plants in the city, in which opportunity is afforded for observation and study of the mechanical operations of plants. Splendid cooperation has been secured with the chief engineers of such plants, who have shown themselves willing to assist the men in every way.

The course qualifies one to take the examination for third, second, and first grade licenses required of those seeking positions in Seattle and other cities, and prepares one to handle steam plants in office buildings, mills, laundries, refrigeration plants, hotels, and apartment houses. It also prepares one to take the examination for boiler inspectors. The course likewise provides an excellent preparation for those desiring to become marine engineers.

During the period this school has been operating 28 men have secured licenses from the examining board in Seattle, of which 3 are for operating engines of unlimited horsepower, 4 for engines up to 1,500 horsepower, and the remainder for engines up to 500 horsepower. The first man graduated is now assistant engineer for the Puget Sound Light and Power Co. Two other men have passed the examination for boiler inspectors, one of whom is already on the job and the other awaiting appointment. Of the total number 13 have completed training and are holding positions; the remainder are completing their training "on the job."

One of the unique features of the pedagogical methods employed is advancing men in six months' time to a point where they can solve such intricate formulas as are involved in "butt and double stray joints, triple riveted." At present in the school there are a couple of men who are learning the multiplication table of twos. Another man, an Italian, who had to start with addition and subtraction, is now working problems in square root and will soon be ready for cube root. Such men, in addition to acquiring the technical knowledge wrapped up in the course, are at the same time acquiring a general education in English and mathematics. All of the students are taught how to make their logarithmic tables.

This training, together with supplementary training on the job, is calculated to fit men to become stationary steam engineers in the real sense of the word.

**PLAN OF ORGANIZATION IN DISTRICT 14 AND THE DEVELOPMENT OF ITS BRANCH OFFICES.**

The plan of organization now operative in district 14 has been developed largely out of the experience of handling problems of rehabilitation as they arose in the district office and a study of the situation as the work progressed with a view to establishing a system of service sufficiently complete to insure the prompt and effective management of the Board's work in dealing with ex-service men.

A careful analysis of the various duties that must be performed by the district office in order that ex-service men applying for training under the rehabilitation act of Congress might be given a decision on their cases reveals the fact that there are many considerations demanding the attention of the district office before the act can be satisfactorily administered with fairness and justice and the ex-service man be adjudged rehabilitated in accordance with law. Until we have made a careful study of the perplexities of rehabilitation, we are likely to view the Board's responsibility in this respect as one of simply authorizing young men to enter school, while, as a matter of fact, it is a very different responsibility. The fact that every man applying for training presents one or more individual problems is the explanation of this statement.

**THE PROBLEM GROWS.**

From a small beginning in November, 1918, the work of the Dallas district office has grown to large proportions. At first the office force consisted of 5 people and the volume of work at that time was less than 200 cases on file for the entire district, composed of the States of Arkansas, Oklahoma, and Texas. On January 1, 1919, the number of applicants had increased to nearly 1,000; by June, 1919, registration had reached approximately 9,000; and one year later it was considerably above 15,000.

This registration was so much in excess of what was expected that it made the outlook for the administration of the act seem almost out of the question at times. Not only were there unavoidable delays in getting Army records of men, recent medical examinations, personal interviews, and final papers, that the men might be inducted into training and their names placed on the Government pay roll, but it was also necessary that arrangements should be made so that the men would be accepted for instruction in the various institutions, trades, and industries in order that they could profit by their training and acquire remunerative vocations. As a matter of fact, it was impossible to forecast the number of trainees which was to overtax existing training facilities.

A large number of the men were eager to begin training at once, and they, together with their friends, could see no good reason why an award of training could not be made without the usual so-called "red-tape" procedure. "Does the law not provide training for me?" was often asked by the man. Few persons, save those who were charged with the responsibility of administering the law, seemed to give consideration to the limitations and requirements placed upon those who were charged with the administration of the act.

#### REQUIREMENTS OF THE LAW.

As a matter of course all procedure must be established in conformity with the provisions of the law. It was very clear that the law restricted vocational training: First, the man must have a vocational handicap; second, his vocational handicap must be due to a disability incurred, increased, or aggravated in service; third, training must be feasible in every case; and, fourth, the man must have received an honorable discharge.

It was evident that the law required investigation before training could be awarded to anyone at the expense of the Government and under the direction of the board; and, training having been awarded, it was equally apparent that the law required close supervision of all training matters, for without it the majority of the disabled could never receive the maximum benefits conferred by Congress on the handicapped ex-service men.

A careful investigation in each case must be made in order that a man's rightful claim to the benefits of the act can be legally established. Judicious advisement is necessary in most cases, for the reason that a very large per cent of the men are without the fundamentals of an education, and, too, some of the men, except during the war, had never been very far away from their homes; many of them lived in out-of-the-way rural districts or were practically lost in the unobserved quarters of the towns and cities.

Therefore, in order to carry out the requirements of the law, the man must be found, interviewed, advised, encouraged, examined mentally with regard to feasibility of training, examined physically with regard to practicability of training; and then comes the process of getting him away from his home environment, which is not always the best, and transporting him, as a rule physically incapacitated, to a place of training and there inducting him into training under conditions that will be conducive to his complete rehabilitation. Nor is this all; it is further necessary to supervise his work, help him to adjust his financial troubles, sympathetically listen to his social or family troubles, help him solve his numerous difficulties, and get him installed for study and improvement under conditions entirely unfamiliar to him.

## PUTTING THE MAN'S CASE THROUGH THE OFFICE.

The organization of District 14 is designed not only to expedite matters of training in general, but to operate along two distinct lines, as follows: First, to handle a man's case properly when he comes to the office in person to see about his training; second, to handle the man's case properly when he writes a letter to the district office about matters of training.<sup>1</sup> This large volume of mail necessarily requires an efficient organization in order that all letters may be promptly routed, considered, and answered without unnecessary delay. Each case must be handled systematically in order to avoid contradictory correspondence or failure to make proper connection in such correspondence. In order, therefore, to handle a man's case satisfactorily, either by correspondence or in person, it was necessary to establish a workable system for recording and making accessible all matters pertaining to a man's case. Individual folders were provided in which to place correspondence and official documents regarding the disabled soldier. This folder is given a District 14 number and is filed in numerical order in suitable filing cabinets. Each folder also contains an "out card" bearing a corresponding District 14 number for convenience in keeping record of the man's folder when out of the files.

There are two cards made on each case when the folder is established—one an alphabetical card and the other a status card. The alphabetical card bears the man's full name, and "D" number, and is filed in alphabetical order for the purpose of enabling the clerk in charge to locate at once any man's case. The status card contains a brief of the contents of the man's folder, and is filed according to the status of the man's case in alphabetical order.

All official forms received from the Bureau of War Risk Insurance are given prompt attention, and when no record already exists in the records office, new cases are opened. No new case is ever opened without a thorough investigation first being made to be sure that no case already exists on the same man.

It is just as necessary to have a workable system for handling ex-service men who call in person to inquire about their cases as it is in handling matters of correspondence, and it is always more satisfactory to handle a man's case in his presence than it is to deal with him through correspondence. Callers are, therefore, welcomed in the district office, and a system has been installed whereby each man will be promptly directed to that section where his case will be given expert attention.

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<sup>1</sup> During the month of June, 1920, there was received at the district office an average of 18 callers and 650 pieces of mail daily pertaining to matters of training.

An ex-service man calling at the office gives his name and address to the information clerk stationed at the entrance to the building. The information clerk asks him to be seated while she makes the necessary arrangements for him to get attention, whereupon she calls the records office by phone and states, for example, that Mr. John Doe is in waiting and asks for information as to his case. The records office immediately locates his case and sends it to the contact officer, where the man and his case first come together. The contact officer, who is thoroughly familiar with the work, examines the case and takes action if within his jurisdiction. If the contact officer is unable to attend to the case himself and finds it necessary to refer the man to another officer, such action is immediately taken and the man shown the way to the official who is in position to take action on his case. In this way unnecessary delays are avoided, and the man, getting prompt attention, usually leaves the office in a good frame of mind.

For the purpose of expediting the work of handling men in person when they call at the district office, and also in order that the work of the day may be checked by the district vocational officer, the following interoffice memorandum is attached to the man's folder as he leaves the desk of the contact officer, to accompany him as he may be directed from one staff member to another for attention:

Form 14—653.

## INTEROFFICE MEMORANDUM.

NOTE.—This memorandum will be used by the information clerk in directing a man to the contact officer. Each person to whom the case is referred will indicate the action taken on the case and the time action was taken. When the medical officer, the eligibility officer, or other staff member completes action on the case the folder will then be returned, with the memorandum attached, to the contact officer, who will examine as to final action and then place on the desk of the district vocational officer for his information.

## SPECIAL CASE.

(Man in office.)

1. Date \_\_\_\_\_  
Name \_\_\_\_\_ present address \_\_\_\_\_

The above-named man called at the desk of the information clerk at \_\_\_\_\_  
a. m. \_\_\_\_\_ p. m. He desired \_\_\_\_\_

I have indicated below the person to whom he was referred.

\_\_\_\_\_  
Information Clerk.

2. Referred to \_\_\_\_\_ at \_\_\_\_\_ a. m. \_\_\_\_\_ p. m.  
(Name of staff member.)

Action taken \_\_\_\_\_

\_\_\_\_\_  
(Name of staff member.)



3. Referred to \_\_\_\_\_ at \_\_\_\_\_ a. m. \_\_\_\_\_ p. m.  
(Name of staff member.)

Action taken \_\_\_\_\_  
(Name of staff member.)

4. Referred to \_\_\_\_\_ at \_\_\_\_\_ a. m. \_\_\_\_\_ p. m.  
(Name of staff member.)

Action taken \_\_\_\_\_  
(Name of staff member.)

5. Case folder returned to contact officer at \_\_\_\_\_ a. m. \_\_\_\_\_ p. m.

\_\_\_\_\_  
*Contact Officer.*

The information clerk is likewise required to place on the desk of the district vocational officer at the close of business each day a complete list of all ex-service men who call at her desk during the day.

The information clerk is instructed to ask the ex-service man on leaving the office if he received satisfactory attention; and, if it appears to her that the man failed to get proper consideration of his case for any reason whatever, he is asked to wait and the matter is reported to the district vocational officer for his attention. No ex-service man is denied the right to take his case to the district vocational officer in person, but he is usually told that he should, in the first place, discuss the matter with the man who last handled his case before taking it to the district vocational officer, and, inasmuch as this plan usually gives satisfaction, the man leaves the office without the necessity of taking his case up with the district vocational officer.

#### PROCEDURE IN HANDLING TUBERCULOUS CASES.

The handling of 2,300 tuberculous patients is no easy problem in District 14, and in order to expedite the work the tubercular section was established in February, 1920. The work was assigned to an experienced supervisor and a well-qualified doctor, who were willing to make a special study of tuberculosis.

After a man's disease becomes arrested and training is feasible he is referred to the local supervisor for training, and upon receipt of Form 107 (commencement of course form) the reverse side of a "training card" is filled out to show his training status. This side of the card shows his name, training address, previous occupation, occupation he is training for, name of the coordinator of the school he is attending, the name of the examiner who will submit the monthly following-up examination, and the date he entered school. As each monthly medical examination is received it is entered on this card, giving the examiner's diagnosis. If the man shows signs of physical incapacity for training he is given a 30-day sick leave to recuperate. Should the disease again become active he is taken out of training

and referred to the United States Public Health Service for treatment.

When the man enters training a small card is filled out. This is used as a monthly tickler for medical follow up. The date the examination is due is entered on the card, and it is filed under the month the examination is due; these cards are filed in alphabetical order. When the examination is received, this date is noted on the card, the date the examination is next due is entered, and the card filed in the following month, etc.

In the local office, where a nurse follow-up worker is stationed, she also keeps a file on the tuberculous men in training and submits the examinations as they become due; in these places the examinations and follow up are very satisfactory. But where the men are in placement training and the medical examination is made out by the man himself, they are very unsatisfactory, being submitted very irregularly, and in some cases the statements made on the report are unreliable. For instance, if a man wants 30 days' leave he fills out the medical report accordingly. If he is interested in his training and wishes to remain in training, regardless of his health, he also fixes the medical report accordingly, etc. Of the 2,300 contact cases on file in this office approximately 1,800 cases are active, 216 are in training under section 2, 34 under section 3, and 200 others are approved, training feasible, and are expected to enter training in the fall.

When the follow-up system was organized a number of tuberculous patients whose physical condition would not warrant it were taking training; training for 72 of these has been discontinued for medical reasons. Some of them were taking placement training under conditions detrimental to health conditions. The tuberculous section was instrumental in getting them out of undesirable environments and making assignments for them under better conditions for the summer months.

#### METHOD OF HANDLING CHECKS FOR TRAINEES.

In making settlements with trainees at any given institution pay lists are made to check identification and with the proper space for signature. When pay lists are prepared for all institutions in a given territory they are mailed to the local supervisor, who checks the names against the training records in his district, detaching and returning to the district office any checks which for any reason should not go to the men. The local supervisor then forwards the checks to the institution, where they are delivered to the men by the counselor, who has each man sign for his check in space provided for that purpose, which signature serves as a receipt for delivery of check. Checks for trainees who are taking placement training are sent to the local supervisor, and are mailed by him direct to the men,

who sign receipts for the checks and return them to the local supervisor. At stated periods during each month all receipts are returned to the local supervisor, and then by the local supervisor they are returned to the district office.

This system of delivering checks guarantees that the person responsible for the supervision of the man's training shall at all times have exact knowledge of the man's status so far as the receipt of checks is involved. The counselors and the men in training correspond with the local supervisor with regard to checks, and not with the district office.

The work of the district office is so organized that all checks are mailed out of the district office to the local supervisors on the day they are received from Washington. Under no conditions are checks ever allowed to remain in the district office overnight, nor are they permitted to remain overnight in the local office. Accordingly, checks for trainees are usually in the hands of the trainees within 24 hours from the time they are received in the district office.

At institutions where we have a full-time coordinator the checks are sent directly to the coordinator and not through the local supervisor. We have a regular system of tickler cards used as a means of follow up to determine that each man receives his check promptly. In any case where a man enters training and does not receive his check within 30 days the matter is referred to central office by wire.

Forms 107, designed to place men on the pay roll, are handled in the district office in the same manner as telegrams, thereby guaranteeing prompt action on these forms when they reach the district office.

In order that checks may not be delayed, when a man changes place of training from one school to another or from the territory of one local office to another local office, the staff member, authorizing the transfer of the trainee, is required to send notice to the district office on the day the transfer is made, and if it is within three days of the time for checks to be sent out the notice comes to the district office by wire, proper notation being made on record cards, thereby eliminating loss of time in transmitting check to an institution when the man has changed to some other institution.

#### RECORDS AND ACCOUNTS.

There is established in the district office a complete system of book-keeping, which cares for something over 8,000 individual accounts. All financial transactions of the Board are properly recorded and by the system, which is followed, it is possible to determine at the end of each day the exact status of all financial transactions during any given period of time.

The office is now handling all correspondence regarding vouchers and accounts on the day it is received and is transmitting to central office at the close of each day all vouchers which have been properly prepared and are ready for submission. This has been accomplished through the establishment of a definite follow-up system on all vouchers and accounts.

It has been found through experience in this office that most of the trouble which has existed in securing payment for supplies, used by trainees and by the various offices of the Board, was due either to an improperly executed voucher or to lack of authority for the purchase. These matters have been largely corrected by issuing definite instructions to all employees regarding these points and by arranging to handle a major portion of the purchases directly through the district office. At the present time prompt payment of all accounts submitted is being made. It has also been found that on current contracts with institutions for instruction, where vouchers are properly authorized before submission to the central office, we are securing prompt payment of these vouchers.

A permanent record is made in the district office regarding the issuance and use of all transportation requests and meal and lodging requests, and the records, required by the central office, are prepared and transmitted to central office at the end of each day. This is accomplished by having a unit organized which deals only with the work of keeping a proper record of transportation, meal, and lodging requests issued from the district office.

#### **SUPPLIES AND EQUIPMENT FOR TRAINEES, DISTRICT AND LOCAL OFFICES.**

It has been found necessary to organize in the district office a unit dealing solely with supplies and equipment. Up to the present time this district has been hampered in the matter of keeping on hand all supplies necessary for the operation of the district office and of local offices, due to lack of sufficient space in the building to keep on hand at all times an adequate supply of all forms and materials used by the district and local office organizations. We are now moving to new quarters, and a storeroom, adequate to care for our needs will be available. Under our plan of organization it is the duty of the person in charge of the supply unit to see that all supplies necessary, in order that the organization may function properly, are ordered if they are to be sent from the central office four months in advance, and if purchased locally far enough in advance to guarantee delivery before needed. This is accomplished by having all supplies and equipment carefully checked at the close of each day.

Under the operation of Instructions 133-Rev. (training and supplies) it has been found advisable for the district office to purchase

practically all equipment needed for trainees and ship to local offices, rather than to have the equipment purchased by each local organization. This has been made necessary because in many instances it is not possible at the point the local office is situated to secure the necessary equipment. Furthermore, where equipment is purchased in small lots it consumes too much time of the local supervisor and there is also an added opportunity for error in the procedure to be followed in order that these bills be paid promptly. Local supervisors are requested to anticipate their needs and to place their orders for supplies and equipment as far as possible in advance in order to insure prompt delivery. Where local offices desire to do so they are allowed to make their own purchases provided the purchase has been properly authorized.

In order that the funds of the Board may be conserved, a definite system has been worked out which required that before any purchase can be made the necessity for the purchase must be clearly shown and recommended by the staff member who is most thoroughly conversant with the needs of the particular section of the work requesting the supplies, or, in cases where it is equipment and supplies for a trainee, by the staff member who is most thoroughly conversant with the needs of men taking that particular type of training.

#### PERSONNEL.

The district vocational officer gives the selection of personnel for the office his personal attention in so far as it is possible for him to do so. The chief clerk interviews and employs such clerical force as is authorized by the district vocational officer. This assistant district vocational officer assists with interviews of applicants for staff positions and explains to them civil-service regulations and the duties of the positions.

In building a personnel for the district office the attempt has been made to select staff members who were trained in the line of work to be assigned them, and in addition thereto were familiar with local conditions and opportunities for training and employment for men with whom the Federal Board is dealing. It has been found, however, in this district that the salary limitations, together with civil-service regulations, have made it difficult to perfect the organization necessary to expedite training matters as much as the gravity of the situation demands.

In the selection of clerical and stenographic personnel every effort has been made to secure those who are thoroughly competent and interested in the work, and for that reason it has required considerable time and effort to build up an efficient clerical personnel. This has been accomplished, however, through the system of promoting

those who have shown a keen interest in and a special ability for handling the work of the Board, and giving due consideration to personal characteristics and placing each person where he or she will render the most efficient service has strengthened the efficiency of the office personnel.

#### DEVELOPMENT OF BRANCH OFFICES.

The first branch offices established in District 14 were located at San Antonio, Houston, Oklahoma City, and Little Rock in September, 1919. The success of the undertaking was apparent from the beginning, and after an experimental period of about one month it was decided to open additional branch offices at Fort Worth, Tulsa, and El Paso. Nine months' successful operation of branch offices in District 14 now makes it seem advisable that we take necessary steps to open other offices at Fort Smith, Paris, and Beaumont. In the meantime a local office has been established at Dallas to handle men approved for training in Dallas local territory.

#### FACTORS TAKEN INTO CONSIDERATION IN LOCATING THE BRANCH OFFICES.

In establishing branch offices in District 14 the district office takes into consideration primarily the following factors:

1. Geographical location with regard to centers of population.
2. Railroad facilities from point where the branch office is established to other points in the territory of the branch office.
3. Educational institutions which could be utilized by the Board that are adjacent to the point where the branch office is established.
4. Training opportunities along industrial lines which existed in the place where the branch office is located.
5. Cooperative agencies having headquarters at the point where the branch office is located. For example, the desire to have branch office so located as to facilitate cooperation between the United States Public Health Service, the American Legion, the American Red Cross, and other agencies dealing with ex-service men.
6. The ultimate aim of developing the branch-office territory so that it may be used as a unit for training, as well as that of placing men in employment. In so far as it is possible, the attempt is made to establish the branch office so that its territory will include institutions, trades, and industries for giving the various types of training opportunities for placing men in all types of employment.

This plan of defining the branch-office territory makes it possible for the local representative of the Federal Board having charge of the branch office to follow the man continuously from his entrance into training until he is finally rehabilitated and placed in remunerative employment.

#### SUPERVISORS FOR BRANCH OFFICES.

In selecting men to be placed in charge of branch offices the attempt has always been made to find some one who had capacity as an

executive, personal interest in the welfare of ex-service men, ability to deal satisfactorily with the public; and establish cordial relations with cooperative agencies, and special qualifications to administer all phases of training which the Board was attempting to accomplish in the territory.

#### SCOPE OF WORK ASSIGNED TO BRANCH OFFICES.

Until the issuance of Instructions 82 the branch offices were concerned largely with placement matters, and were therefore in most instances under the direction of a placement officer, responsible directly to the supervisor of placement. Under the new procedure branch-office managers were made responsible directly to the district vocational officer, and the scope of work, in accordance with new instructions from central office, was considerably enlarged to include practically any phase of the Board's work. Consequently orders were issued by the district vocational officer to each man in charge of the branch office that the branch office must not be regarded in any sense as an organization working primarily for one section, but that the office must, if assigned to it, do all things necessary in order that the work of rehabilitation might be accomplished. The manager in charge of each office was instructed that all communications going out from the branch office should be signed by him as a representative of the Board in charge of the branch office. This was the first decided step forward in the handling of the work of the Board in District 14 through its branch offices.

This broadening of the work of the branch offices made necessary additions to the staff in each local office. Effort was then made to have in each branch office a staff composed of men with sufficiently varied experience to make it possible for the branch-office organization to handle all phases of training work.

In enlarging the scope of the branch offices the district office proceeded as follows:

(a) The man in charge of the branch office was held directly responsible to the district vocational officer for all work of the Board in the territory of the branch office.

(b) When a man was approved for training, a card was sent to the branch office showing that the man was eligible for training, and all responsibility for inducting this man into training was placed on the man in charge of the branch office.

(c) The man in charge of the branch office had authority to agree with the man on the type of course which he should take; to enter the man into training directly, either institutional or placement training; to change the man's course after he had entered training without referring the matter to the district office if deemed advis-

able; to extend the man's course where necessary without referring the matter to the district office; to terminate the man's training where necessary without referring to the district office, it being understood that in all cases the man's right to have his case reviewed by the district office was in no way abridged.

(d) All cases of advisement, where it was not thought necessary to bring the man to the district office, were handled by a staff member in the branch office.

#### ADMINISTRATION OF THE WORK THROUGH SPECIALIST.

Under the new plan of organization the district office recognized very clearly that it would not be possible to have in charge of each local office a man with a sufficiently broad knowledge to enable him to handle a man's training where expert knowledge was required. Therefore the district office provided for the following specialists: Specialist in trade and industries, specialist in commercial training, specialist in agricultural training, specialist in professional training. These specialists are responsible directly to the district vocational officer, and at regular intervals visit institutions throughout the district and make reports to local supervisors, making such recommendations as they deem necessary, and also making reports to the district vocational officer regarding the particular line of training they are supervising. The plan has been carried out so far that the matter of actually dealing with the men and determining courses they should pursue, as well as handling all of their personal requests while in training, is delegated to and handled by the local supervisor at the local office.

While the specialist handles all matters pertaining to the selection of training facilities, recommendation of selection for additional training facilities, and determination of whether or not various institutions are offering the right type of instruction, he operates strictly in the field of a specialist, and is only authorized to recommend to the local supervisor. The district office follows up these recommendations in order that we may know that local supervisors are not ignoring the recommendations made by specialists.

#### CONCLUSION.

The evolution of the branch office into the local office in this district was made almost without knowledge of the fact that the change was being made.

Experience in this district leads to the conclusion that the plan of delegating more authority to the local offices is a good one, and that the facts thoroughly justified this procedure. We are also thoroughly of the opinion that there must be in each district one man who is the



executive officer for the district vocational officer, authorized to deal with all questions pertaining to the rehabilitation of a man. Any plan which provides for a division of authority along this line will work confusion, will impair the work of the local office organizations, and will hinder the general progress of the work of rehabilitation.

Under the present plan the district office is first concerned with the development of individual cases, in order that eligibility may be established and the man assigned to a local office for training, and, secondly, with the various steps of rehabilitation as actually effected through the branch offices of the district.

## **PART V.**

### **A GROUP OF STUDIES MADE IN CENTRAL OFFICE, WASHINGTON.**

#### **COMMERCIAL VOCATIONAL REHABILITATION.**

The problems that arise in the training of the soldier from the standpoint of commerce are no different from those involved in educating him from the standpoint of industry, agriculture, or science. The factors involved in this educational process are—the disabled man, the school or other place of training, the course of training designed to rehabilitate the man, and the specific occupation in which it is proposed to have the man carry on. These factors are generally paramount in the training process in every line. Properly placing a man in a course of training involves an analysis of his previous education, experience, disability, present ambitions, and the particular line of activity in which the man proposes to carry on. In view of his disability, additional factors must be considered, such as working hours, wages paid, over and under crowded lines of employment in commercial concerns.

Having decided, consistently with its general policy, to use business schools already in existence, the Federal Board found it would be preferable in most cases to use private rather than public schools, since as under their plan of organization these schools were better adapted to render the service required. Such schools are, for example, generally open the year round, admit students of all ages, and offer a large amount of individual instruction. Another factor favoring the private school is that practically all of them have regular placement bureaus, which can be used to advantage in locating the men in positions when the work of retraining has been completed.

Moreover, investigation showed that many of the strongest private business schools have had considerable experience in training handicapped men, 24 schools furnishing case histories of 133 disabled students whom they had already trained and who are making good in business.

On reaching the decision to use private business schools it became necessary to establish a few general principles under which a sufficient number of schools could be chosen to do the required work. In the United States there are over 2,500 such schools. On account of the expense involved and the time required, it was impossible to

make an inspection of all of these schools for the purpose of gathering information on the basis of which to make selections. The country was at war, soldiers were being returned in a crippled condition, and it was necessary to secure quick action.

A conference of 30 representative private-school proprietors was called and the situation was thoroughly discussed. It was decided that some schools should be chosen in each State and that, except in the two largest cities, it would not be advisable to offer the same course in two schools in the same city. It was also agreed that, as it was a war measure, no school should be permitted to take any advantage of its selection by advertising that fact in any way. The Board believed that it had an important public mission to perform and entered it on a strictly business basis.

It was agreed that the charge made the Government by any school for service rendered should be the charge regularly made by the school for the same courses, although it was recognized that in most cases extra attention would be required by the soldier on account of his disability.

A list of nearly 400 business schools was prepared, all of which were known to be representative. Questionnaires were sent to the schools, and based on the replies received about 300 selections were made, not necessarily because they were better than other schools in the same cities but because they offered courses which were satisfactory to the board.

It has been necessary to limit the number of schools to which men would be sent, since in addition to the regular reports required concerning the progress of the men inspection must be continuously maintained.

Schools have been selected only in connection with actual cases of soldiers to be retrained. While the Board has found it necessary to make some arbitrary selections tentatively, it has reserved the right to make changes whenever in its judgment they would be beneficial. Contracts are made with the schools for each individual student, and whenever the capacity of any school to do satisfactory work for the men has been reached another school has been chosen in the same city.

The Board appreciates the patriotic cooperation shown by the proprietors of private business schools. It has endeavored to safeguard the interest of those schools which have not been chosen for this work, and from the experiences already reported it is evident that the schools chosen are not finding the contracts financially advantageous.

The schools have been led to recognize that if they are to successfully rehabilitate men they must set up as their educational aim courses of study primarily designed to meet the duties and requirements of specific business occupations. Many business schools had

already set up this educational aim. Business courses designed to train men for business in general and not for business in particular are obsolete. It is important, however, that such particular business training be built upon an adequate foundation of general education which all business men need as a minimum essential for success in following any particular occupation. Many institutions have been operating for years under the old idea that "if a man completes a course with us he can get a job," but this hit or miss educational program is being rapidly replaced by more specific training. Commercial vocational rehabilitation, as a scheme of education, must function as vocational education and should be concerned with general education only as regards a minimum foundation upon which effectively to build specific job preparation or improvement.

In further consideration of the factors involved in the education of the disabled soldier, it is important that the institution in which it is proposed to train the man be of the highest type and adequately qualified to carry out in full our educational program of commercial vocational education. The method of measuring the efficiency of institutions in which it is proposed to train men is not very different from the method used to measure the efficiency of any commercial institution. The true measure lies in the quality of its product. A commercial institution can not hope to survive if its product is of a quality inferior to the product produced by its competitor. No more should a commercial school expect to survive that does not render vocationally efficient service by training men to carry on in some specific line of commercial activity. The equipment and facilities of the school must be the best obtainable. Whatever the condition, it is essential that a school be equipped to do efficiently the work for which it has been selected.

The importance of the teacher's personality in carrying on our educational program with the war disabled is even greater than it is in vocational teaching generally. Many Federal Board trainees have been out of school for years. On this account, and for other reasons, a great deal of individual attention is necessary, and the teacher must possess an unusual degree of patience if he is to do the work successfully. He must be able to interest the student in his work, and must be able to make the work practical, and must, of course, have a definite knowledge of the specific jobs for which men are being trained. In selecting training facilities, these factors have been given chief consideration.

The Board has had to recognize the distinct types of training necessary to properly rehabilitate men of varying capacities and educational qualifications. Obviously, the man who has had a college education, or rates very high mentally, does not require the same type of training as the man who ranks low mentally. Whatever

the man's natural or acquired capacities, the Federal Board assumes a specific obligation when it accepts the disabled man and agrees to train him so that he will be able to overcome the handicap of his disability.

#### "TRAINING FOR A JOB."

All commercial training should insure "job success," and to insure this every man must have a definite "job motive." To insure a definite job motive, every man must be constantly advised while in training to see that he is being trained for his most promising vocation. To insure adequate preparation for this most promising vocational training, every man must be constantly supervised, to make certain as nearly as possible that the training is adequate to guarantee "job success." The true test of commercial, as of other vocational training, is employment—that is, the job.

There are cases where a man enters upon a course of study and does not know definitely in just what line of commercial activity he wishes to work. An effort is always made to have the trainee decide upon some definite goal as early as possible, because it is most advantageous when starting on the occupational training of the man.

#### VOCATIONAL AND PREVOCATIONAL TRAINING.

Probably at least 45 per cent of prospective Federal Board trainees are men of meager education, who need a considerable amount of training to qualify them to carry on in any new line of work. A large percentage of these men have need for special training in elementary subjects, which constitute the very foundation of specifically vocational education.

Federal Board elementary cases have not been put in a business school for business training. They have had arranged for them special classes in special subjects leading up to specific commercial training courses. As they develop in this elementary work they are promoted to more advanced work.

In one of our districts a tentative policy was adopted in the early stages of this work under which no cases below an eighth grade were to be considered as commercial training cases. This, however, could not be set up as an arbitrary standard, because there are many mature men with but an eighth-grade education who, with a thorough business training, can carry on successfully in the business world in some specific line of employment. It does not follow at all that a man who has only an elementary education can not in any case train for a responsible commercial position. Each case must be considered on its own merits and recommendations made accordingly.

In one locality it was estimated that the average scholastic preparation for the commercial training cases was less than sixth grade. In another district, in which in assigning commercial students to the

University School of Commerce an attempt was made to assign the higher class of men to the institution, it was found upon investigation that the scholastic preparation of even the selected group embraced only a little over one year of high-school training. The results obtained, nevertheless, were phenomenal. Federal Board students were trained in the same classes with regular university students, who were not permitted to enter upon the commerce course until their junior year. They had an average of over four years greater scholastic preparation than did the Federal Board students. At the close of the past year reports showed that 5½ per cent of the Federal Board students had made grades of A, while 8 per cent of the university students made grades of A; 22½ per cent of the Federal Board students made grades of B, and only 20 per cent of the university students; 38 per cent of the Federal Board students made grades of C, and 48 per cent of the university students; 14 per cent of the Federal Board students made grades of D, and 17 per cent of the university students. Of the Federal Board students 5 per cent were conditioned, requiring a second examination, 4 per cent failed, a little over 2 per cent were dropped, 6 per cent did not complete course as result of absence from examinations, while the university students had 7 per cent conditioned and failed.

This is a most significant showing, in view of the various handicaps under which the Federal Board students were working. While they lack in scholastic preparation, they make up for that deficiency in age, maturity of mind, and previous business experience. In this type of school men will qualify for responsible business positions in a period of from a year and a half to two years and a half of training. Each man is pursuing a highly specialized course in some line of work.

Many of the commercial training cases have been in training for perhaps 10 or 12 months completing their general foundation. This has been important because there exists a real necessity for having a good foundation on which to build the superstructure of business training. The program at the present time is to concentrate the training so that it will lead to some specific type of business position. During the coming year hundreds of men will complete their commercial training, and will enter upon a specific line of employment. A successfully trained institutional case will usually require a very short period of placement training.

Many of the accounting firms throughout the country are employing men direct from accounting schools as junior accountants; paying them salaries ranging from \$140 to \$200 per month. This has stimulated the demand for highly specialized courses in accounting.

This is equally true in other lines of commercial activity. Business to-day demands specially trained men. The day of the "Jack-of-all-

trades " is past. Men must be trained to become experts in their line. The "Jack-of-all-trades " soon finds himself last in the modern commercial institutions.

#### TYPES OF COURSES.

The tabulation given in the statistical section of this report shows the many different types of business training being pursued by Federal Board students, and is evidence to justify the necessity for specialized training.

The wide range of courses being pursued by trainees necessitates careful supervision and only adequate supervision and follow-up will insure successful training.

#### TRAINING OF THOSE HAVING HEARING AND SPEECH DISABILITIES.

An important part of the reconstruction program of the office of the Surgeon General was providing lip reading and speech correction lessons for soldiers needing such instruction during their stay in Army hospitals.

This work of the department of physical reconstruction was accomplished at United States Army General Hospital No. 11, Cape May, N. J., from July, 1918, to July, 1919, and at United States Army General Hospital No. 41, Fox Hills, Staten Island, N. Y., from July, 1919, to December, 1919. A teaching personnel of 12 specialists instructed 162 men, 112 of whom were deaf and 60 speech defect cases.

In November, 1919, an authorized representative of the office of the Surgeon General came to central office for a conference regarding the vocational training of such cases. As a result of that conference a member of the teaching force at the Fox Hills Hospital was added to the central office staff January 12, 1920. All the men who had been taught at the Army hospitals were known personally to this appointee, and copies of records giving important information on these cases, as well as numerous personal letters, were in her possession. It was understood that this agent, afterwards properly certified as training assistant, was to handle all cases through the district offices, to assist by means of records and her personal knowledge in the clearing up of the cases, and to advise concerning their vocational training.

The district offices were directed to hold responsible one member of their staff for the satisfactory disposition of each of these cases. The training assistant in central office was authorized to communicate directly with all cases, keeping the district offices informed of the substance of all letters written.

It has developed that less than 50 per cent of the cases needing rehabilitation along these lines received training while in the Army. It has devolved upon the Federal Board to provide this special training for more than 200 men. A few men who did not make satisfactory progress while in the Army schools have received additional lessons.

The nature of the disabilities of these men, particularly that of the deaf, shut them off from the usual avenues of learning of the opportunities the Government was ready to offer them. Such information had to be brought directly to the man himself. Thus it happened that but few of these had applied for training and that the Board was in touch, on January 1, 1920, with less than 10 per cent of the cases now known to central office. Less than 5 per cent were then receiving training.

The district offices were instructed that men deaf to a degree necessitating lip reading should be rated as having a major vocational handicap. The Army standard, which held that inability to hear conversational voice at a distance of 5 feet gave the man claim to lessons in lip reading, was adopted. It was held that men suffering bilateral reduction of hearing to this degree, either incurred the disability or had such disability greatly aggravated or increased while in the service, as it was not presumable that men so handicapped could have passed a registration board. Thus the eligibility of these cases was readily determined.

As a result of the coordination of effort between central office and the district offices, we are able to report that 99 per cent of deaf men known to the Board have been offered training. The four cases now awaiting training have but recently been discharged from hospitals and have not yet decided on the courses they wish to pursue. All speech defect cases now known to the Board, who are physically and mentally able to take training, have been offered it. Men indifferent to training have been persistently followed up by letters and personal contact. Recently a man in New York State, who did not desire training, but needed it badly, wrote: "The Federal Board has wrote me so many letters that I have got discouraged with them and have decided to go where they want me to." (R-2-122018.)

Appended is a table showing the status of these cases, giving the totals for the country and showing the district work in detail. As a matter of scientific record, the causes of deafness and the number of men having various types of speech disabilities are included; also the totals of cases incurring their disability in the service and those having their disability aggravated while in the service.

As this work has progressed, it was found that the best results were obtained by regarding both the lessons in speech and lip reading as



prevocational training. It is estimated, through actual experience of trainees, that to become an expert lip reader a man should have from two to six months' intensive work, the ease with which he acquires this art largely depending on his natural aptitude for it. The speech cases have averaged about the same length of time for special speech training.

While the Board desires that these men should be as completely rehabilitated as possible through lip reading and speech reeducation, it feels that the courses should be neither prolonged nor curtailed unnecessarily, and central office and the district offices have been in close touch with all schools and teachers giving these lessons and each case has been given a great deal of individual attention. Just as soon as a man is able to take vocational training it is provided for him.

At the present time 215 men are in training. Vocational courses have been arranged for 196 of these men. The remaining 19 are taking lip reading or speech correction lessons preparatory to vocational work. Nine speech defect cases, after receiving lessons for correction of their speech, refused vocational training, and 2 deaf trainees, who have completed a course in lip reading, did not desire further work. Below is a table showing the courses pursued in both institutional and placement training and the number of men taking each course:

*Courses being taken by hearing and speech defect cases, June 30, 1920.*

Course.	Number in training.	Course.	Number in training.
Total.....	215	Fur and leather work.....	1
Lip reading and speech correction.....	19	Gas-fitting appliance.....	1
Total vocational courses.....	196	Hotel cooking.....	1
Accountancy.....	7	Horticulture.....	2
Adding-machine repairing.....	1	Ignition and lighting.....	4
Advertising writing.....	3	Illustrating and editing.....	2
Agriculture.....	30	Insurance adjuster.....	1
Animal husbandry.....	1	Jewelry making.....	1
Architectural drawing.....	1	Journalism.....	1
Auto mechanics.....	6	Landscape gardening.....	3
Bacteriology.....	1	Law.....	2
Banking.....	1	Lens grinding.....	2
Bookkeeping.....	1	Manual training.....	1
Bookkeeping.....	15	Machine-shop practice.....	4
Biology.....	1	Massaging.....	1
Butter making.....	1	Mechanical drafting.....	10
Business course.....	12	Medical post graduate.....	2
Cabinetmaking.....	7	Milling and cyaniding.....	1
Cartooning.....	1	Movie acting.....	1
Chemistry.....	2	Newspaper photography.....	1
Chemical engineering.....	2	Pattern making.....	4
Civil engineering.....	1	Paper hanging.....	1
Commercial art.....	4	Plumbing.....	1
Commerce and finance.....	3	Plumbing engineering.....	1
Dairying.....	3	Poultry raising.....	3
Dentistry.....	1	Postal-clerk work.....	2
Designing.....	1	Printing.....	1
Electric engineering.....	3	Stationary engineering.....	3
Electric wiring.....	3	Shoemaking.....	8
Elementary subjects.....	8	Sociology.....	1
Embalming.....	2	Structural engineering.....	1
Farm mechanics.....	1	Tailoring.....	2
Furniture making.....	2	Vulcanizing.....	2
		Watch repairing.....	2
		Window trimming.....	1

A few of these men have been able to enter some of our higher educational institutions and are taking courses at Cornell, Columbia, and the State universities of Ohio, Missouri, Minnesota, and Wisconsin. A trainee suffering from a serious speech defect which has been corrected by special training and was graduated in architecture from Washington University, in St. Louis, last June.

The most extreme care has been taken to help the man choose the vocation in which his former experience and training would be capitalized, if possible, and one which was compatible with the limitations imposed by his disability. A large majority of these men have held to their first choice—only a few have asked to have their courses changed. The Board has been patient in its efforts to satisfactorily place the men who have been dissatisfied; and one file (R-12-15402) shows that the man tried horticulture, lip reading at two schools, auto mechanics, printing, and tailoring in less than a year. That man during this time fell into the hands of the police and later figured as a head-liner in the California press as one making good in spite of a heavy handicap. The last report of his district office is that he has abandoned training, taking with him the clothing of another trainee. We contend that the Federal Board has done its best to conserve that man for the State. He represents one of three men in this group of special cases who have discontinued training without adequate reasons.

A thorough and personal follow-up of these cases has been made in 10 districts, and the remaining 4 will have been visited before January 1, 1921. The men are visited personally in school or shop or home and reports are made as to their progress and prospects.

As a class, these men are satisfied with the efforts the Government is putting forth in their behalf, and our commendatory files will show voluntary expressions of appreciation from many of them. A few weeks ago a St. Louis man (R-9-37674) wrote that he would not take a million dollars for his course in lip reading. A nurse, formerly a member of the Army Corps, a woman of the highest type and of excellent education (R-4-72941), deafened as a result of her service in France, writes: "My lip reading is a wonderful help. If the Board never does anything more for me than that I certainly have cause to bear it lifelong gratitude."

Attention is called to the item showing that a total of 41 men refused training. With one exception, those men received instruction in the Army schools and were able to return to their former vocations because of lip reading or reestablished speech. One of these men, totally deaf, wrote that he did not like cities and that he had made \$10,000 in two years on his South Dakota farm. It was

the opinion of the Board that that man was not in need of vocational training.

Attention is further directed to the number of cases of discontinuing training—18 in all. In the main, these have given up their courses because of physical incapacity on medical advice. The majority of cases not disposed of are at present patients in Public Health Service hospitals. New cases come to the attention of the Board every few days, and it is probable that men having these disabilities will total four or five hundred.

There will probably be several thousand men throughout the country whose hearing has been more or less seriously affected as a result of the war. Many of these men, deaf in one ear or with slightly impaired hearing in both ears, are receiving vocational training. These do not need lip reading. Such men have not been included in this group.

Unless one has made a practical and sympathetic study of the problems of deafness and unintelligible speech, one does not readily conceive of the heaviness of such handicaps.

When one considers the future of these men, from the standpoint of employability, the hazard to life, the limited opportunities both in work and in play, one realizes the difficulty of complete rehabilitation in each individual case.

These cases, so deserving of personal care and interest, have received it in a large measure from the Board. The attitude of these men toward their opportunities for training has justified every effort made in their behalf.

<i>Cases of hearing and speech disabilities.</i>		Cases not disposed of.....	
		Hearing disabilities.....	39
Total number of cases.....	357	In hospital .....	7
Cases disposed of.....	318	Addresses lost .....	2
Hearing disabilities.....	247	Awaiting training.....	4
In training .....	164	Undecided as to course.....	2
Approved for training.....	23	Speech disabilities .....	24
Refused training .....	37	In hospitals .....	17
Discontinued training .....	15	Awaiting training .....	2
Completed training.....	4	Discharged aphasics.....	4
Cases closed (ineligible, 3; by death, 1).....	4	Indifferent as to training.....	1
Speech disabilities .....	71	Cases having hearing disabilities..	262
In training .....	51	Cases having speech disabilities...	95
Approved for training .....	1	Causes of deafness.....	262
Refused training .....	8	Concussion from shell explosion..	51
Discontinued training .....	9	Operations and wounds.....	19
Completed training .....	2	Exposure.....	15
		Gas .....	7

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Infection .....	7	Aphonia .....	11
Causes unknown .....	9	Stammering .....	39
Records incomplete .....	13	Other .....	1
Diseases:			
Meningitis .....	53	CASES INCURRING DISABILITIES IN	
Paralysis auditory nerve .....	4	SERVICE.	
Influenza .....	14	Hearing .....	213
Catarrhal trouble .....	53	Speech .....	70
Other diseases .....	16	CASES HAVING DISABILITIES AGGRA-	
Other .....	1	VATED IN SERVICE.	
Types of speech disabilities .....	95	Hearing .....	49
Aphasia .....	12	Speech .....	25
Imperfect phonation .....	32		

Hearing and speech disability cases disposed of to June 30, 1920, by districts.

District.	Hearing disabilities.										Speech disabilities.					
	Total.	Total.	In training.	Approved for training.	Refused training.	Discontinued training.	Completed training.	Closed.		Total.	In training.	Approved for training.	Refused training.	Discontinued training.	Completed training.	
								Ineligible.	By death.							
Total.....	318	247	164	23	37	15	4	3	1	71	51	1	8	9	2	
District:																
No. 1.....	16	10	8	.....	2	3	4	.....	.....	6	4	1	1	.....	.....	
No. 2.....	46	31	19	2	3	4	2	1	.....	15	11	.....	4	.....	.....	
No. 3.....	72	56	43	3	6	1	.....	1	.....	16	13	.....	2	1	.....	
No. 4.....	9	8	4	.....	4	.....	.....	.....	.....	1	1	.....	.....	.....	.....	
No. 5.....	17	17	10	2	3	2	.....	.....	.....	1	.....	.....	.....	.....	.....	
No. 6.....	16	15	9	4	1	1	.....	.....	.....	1	1	.....	.....	.....	.....	
No. 7.....	17	15	7	4	4	.....	.....	.....	.....	2	2	.....	.....	.....	.....	
No. 8.....	41	26	17	5	3	1	.....	.....	.....	15	7	.....	1	6	1	
No. 9.....	24	17	10	1	5	1	.....	.....	.....	7	5	.....	.....	.....	1	
No. 10.....	12	9	7	.....	1	.....	.....	1	.....	3	3	.....	.....	.....	.....	
No. 11.....	5	5	4	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
No. 12.....	23	21	15	1	1	3	1	.....	.....	2	2	.....	.....	.....	.....	
No. 13.....	6	5	4	.....	1	.....	.....	.....	.....	1	1	.....	.....	.....	.....	
No. 14.....	14	12	5	1	2	2	1	1	.....	2	1	.....	.....	1	.....	

*Hearing and speech disability cases not disposed of to June 30, 1920, by districts.*

District.	Total.	Hearing disabilities.					Speech disabilities.				
		Total.	In hospitals.	Addresses lost or unobtainable.	Awaiting training.	Undecided as to course.	Total.	In hospitals.	Awaiting training.	Discharged upon release.	Indifferent as to training.
Total.....	39	15	7	2	4	2	24	17	2	4	1
District:											
No. 1.....	10	2	1	1			8	6		2	
No. 2.....	6	3	2			1	3	1		2	
No. 3.....	2	1				1	1				1
No. 4.....	1						1	1			
No. 5.....	0	2	2				4	4			
No. 6.....											
No. 7.....	2	1		1			1	1			
No. 8.....	3	1			1		2	2			
No. 9.....	4	2			2		2		2		
No. 10.....	1						1	1			
No. 11.....	1	1	1								
No. 12.....	2	1	1				1	1			
No. 13.....											
No. 14.....	1	1			1						

*Hearing and speech disability cases disposed of and not disposed of to June 30, 1920, by districts.*

District.	Total.	Hearing disabilities.	Speech disabilities.	Cases disposed of.			Cases not disposed of.		
				Total.	Hearing disabilities.	Speech disabilities.	Total.	Hearing disabilities.	Speech disabilities.
Total.....	357	262	95	318	247	71	39	15	24
District:									
No. 1.....	26	12	14	16	10	6	10	2	8
No. 2.....	52	34	18	46	31	15	6	3	3
No. 3.....	74	57	17	72	56	16	2	1	1
No. 4.....	10	8	2	9	8	1	1		1
No. 5.....	23	19	4	17	17		6	2	4
No. 6.....	16	15	1	16	15	1			
No. 7.....	19	16	3	17	15	2	2	1	1
No. 8.....	44	27	17	41	26	15	3	1	2
No. 9.....	28	19	9	24	17	7	4	2	2
No. 10.....	13	9	4	12	9	3	1		1
No. 11.....	6	6		5	5		1	1	
No. 12.....	25	22	3	23	21	2	2	1	1
No. 13.....	6	5	1	6	5	1			
No. 14.....	15	13	2	14	12	2	1	1	

**METHODS EMPLOYED IN REHABILITATION OF THE WAR BLIND.**

When it became the responsibility of the Federal Board to plan for the rehabilitation of our disabled soldiers, sailors, and marines, the Board decided to call into its service experienced workers for the blind, to aid in organizing the work of rehabilitation for men blinded in the service or handicapped by seriously impaired vision. The beginnings of the work of rehabilitation of the war blinded are briefly as follows:

First, conference held on October 12, 1917, of prominent educators and workers for the blind, which formulated a plan for reeducation of the blind soldiers.

Second, establishment of the United States Army Hospital No. 7, known as Evergreen, as a separate unit for preliminary training of the blind before discharge.

Third, establishment of a Red Cross organization, known as the Red Cross Institute for the Blind, to supplement the work of the hospital.

Fourth, discharge of all men from Hospital No. 7 in May, 1919, and the turning over of the buildings and equipment to the Red Cross Institute for the Blind.

Fifth, agreement between the Federal Board and the Red Cross Institute for the Blind, whereby the institute agreed to accept for training such men as the Federal Board enrolled for courses approved by the Board.

As a result of this agreement, the American Red Cross through its Institute for the Blind is now conducting a school in Baltimore, Md., for the vocational rehabilitation of discharged soldiers, sailors, and marines blinded or with seriously impaired eyesight. The authorities of this institution are responsible for the administration of the school. The Federal Board pays tuition at the rate of \$100 per month for each man enrolled, and furnishes in addition necessary supplies and equipment not to exceed \$6.50 per month for each man enrolled.

Of the total number of men disabled in the war, 308 are known to be blind or to have seriously defective eyesight. A comparison of this figure with the total number of disabled men indicates that quantitatively the rehabilitation of the war blinded presents a small problem. From every other point of view, however, no other form of disability seems to involve so fundamental a readjustment as blindness. This fact was evident from the first to those who planned the organization of the rehabilitation division of the Federal Board. It was decided that cases of the blind and of those with less than one-tenth vision in the better eye should be referred directly to a special worker for the blind who was to be a staff member of the rehabilitation division. As supervisor for the blind he was made responsible

for carrying out the terms of the rehabilitation act in its application to the war blinded. It was later decided that all cases of men with one-fifth vision or less in the better eye should be referred directly to the supervisor for the blind.

The problems involved in this work are indeed complex. To understand clearly the policy of the Federal Board in carrying out its program, some of the factors which enter into these problems must be examined. Two groups of men are involved—those who are totally blind and those who have defective eyesight. In addition to blindness there are in individual cases the added handicaps of partial deafness, paralysis, amputation, weakness due to gassing, tuberculosis, and other ills.

In the case of these soldiers the cause of blindness is a factor the gravity of which is not realized save by those in close contact with the work. These causes may be grouped under five general heads:

(1) *Direct*—56 per cent of the cases.—Blindness due to wounds received while in action or from the direct effects of gas.

(2) *Illness*—19 per cent of the cases.—(a) Blindness due to such diseases as influenza, measles, and spinal meningitis; (b) the after effects of gas or exposure.

(3) *Specific*—13 per cent of the cases.—Blindness due to venereal diseases and toxic poisoning contracted while in service.

(4) *Existed prior to enlistment*—8 per cent of the cases.—Blindness due to some congenital defect, such as myopia, astigmatism, retinitis pigmentosa, or keratitis, which was increased or aggravated while in service.

(5) *Unknown or cause undetermined*—4 per cent of the cases.—These cases may be considered as in group 3 or 4 in so far as vocational training is concerned.

Groups (1) to (4) present each a different problem. The men in group (1) have received a shock which plunged most of them into sudden darkness. They found themselves in a new world and compelled to readjust themselves to entirely new conditions. Their whole system received such a shock that it will take time for them to be restored to normality. Unless, however, they have received some injury which will retard their mental development, they will, except for their defective eyesight, become normal and able in most cases to take up some regular employment.

The men in Group 2 in some cases present a similar problem where their blindness is total and the immediate result of influenza or spinal meningitis. With the larger number, however, the blindness is only partial and due to the after effects of these diseases. It has come on more gradually and there has been no severe shock to the nervous system.

The men in Group 3, though fortunately only a small percentage of the whole, present a very serious problem and are the most difficult to handle. They are nervous, irritable, and erratic. This is due

not to a sudden shock to their nervous system but in most cases to the progress of the disease itself. Added to this is the psychological effect of feeling that their disability is largely, if not entirely, their own fault. In many of these cases it is not only the eyes which are affected but the central nervous system, which means that partial, and perhaps total paralysis will be the final result. Their nervous condition does not subside but rather increases. Yet they must receive the same training and treatment as the men whose blindness was incurred through other causes and in many cases they expect far more attention and consideration.

The men in Group 4, with the exception of a few cases, have partial vision and the only problem in their case is the vocational one. They, too, however, often expect the same compensation and advantages as the men whose eyesight is completely gone as the result of wounds received in action.

About 65 per cent of the men have but little education, and have been farmers or industrial laborers. Some are illiterate, a few can not speak English, and several are mentally deficient.

Almost every one of the men receives approximately \$1,900 per annum from the Government, and will continue to draw this amount, which represents compensation and insurance, as long as they live. This income has a decided effect on the attitude of the average man toward vocational training. In many cases the hopes and ambitions of the men have been raised by the Nation-wide interest in the war blinded and the sincere efforts of those whose enthusiasm was sometimes greater than their judgment to heights which would be impossible of attainment were the men possessed of full sight. This has confused and unfitted for immediate adequate training a number of the charges of the Federal Board.

These are a few of the disconcerting factors and many others are encountered in individual cases. It will be understood, of course, that there are exceptions and that, despite these unfortunate circumstances, men are working and succeeding.

One of the fundamental factors lies in the cooperation of the community and family of the man. The securing of such cooperation has been, and is now, an important phase in the rehabilitation work. First-hand information is obtained concerning former employment, attitude of the man's family, possibility of returning to former employer, attitude of the community, and opportunities for employment in the community. Most of the men have been previously visited in their homes by a member of the staff of the supervisor for the blind or other workers for the blind. Every one of the men registered except two has been surveyed personally by an agent of the Board. With one of these two contact has been established by letter. The other one is not only blind but totally deaf and completely paralyzed.



Valuable and effective work has been done in persuading men and their families of the necessity of taking instruction for readjustment. This phase of the work has brought out the great importance of thorough preparation of the home and community to receive the man after training is completed.

Written statements from employers offering employment to men upon the completion of their training are on file.

In one instance, an agent of the Board was told by the mother of one of the men that her son would never be given vocational training except over her dead body. Four unsuccessful attempts have been made to convince the mother that she is doing her son a great injustice. The father of one of the men refuses to be convinced that his son should receive training. "My boy will always have enough money, and all he needs now is a good wife." It is needless to picture the condition of the poor fellow when his father is gone and the good wife has failed to materialize.

Often a man is physically unable to go to a school for training. In such instances it is the aim of the Federal Board to find some one who can give instruction in Braille, typewriting, and manual training, going to the man's home if possible, and at the same time demonstrate to the family the possibilities of overcoming the handicap.

It is impossible to go into all phases of the much discussed question of vocational training. No one can speak authoritatively on methods and means of training without personal experience with every phase of readjustment from advisement to employment, both vocational and social. After over two years of actual experience in dealing with the problems involved in the reconstruction of the war blinded, it is the opinion of those in intimate contact with the work and who can speak with authority that a vocational training center for the military blinded is by no means the most effective agency for the purpose of complete vocational rehabilitation of all the war blinded. On the other hand, it is agreed that under present circumstances a training center where men may be given prevocational training in Braille, typewriting, music, manual training, English, and other branches, and where they may learn orientation is of value. For this reason the Federal Board aims to send a man to the Red Cross Institute for the Blind for a period of from three to six months. This enables him to come in contact with others who have a similar disability to learn to be independent, and to talk with and be advised by the vocational adviser of the Federal Board, who is himself totally blind.

At the conclusion of this period of fundamental or prevocational training it is the aim of the Board, if possible, to place a man in some regular vocational institution for the seeing or to find employ-

ment for him in some suitable occupation. It is the opinion of those who are responsible for the vocational training of the men that the emphasis placed on special vocational courses for the blind in an institution has a tendency to lead the blind men, whether they have the ability or not, to seek to follow vocations in which they can not all carry on successfully. It also makes for the separation of the men from actual working conditions in association with the seeing to such an extent that readjustment becomes more rather than less difficult.

It is not necessary to point out that the most critical period in readjustment lies between the time when the average man leaves the sheltering cover of the institution to take his place among the seeing and the time when he either succeeds or fails. In this period, be it long or short, are fought some of the greatest battles which the men will ever fight. For the average man with normal vision it is often necessary to try several kinds of work before the right one is found, and it is to be expected that the average blind man will have more difficulty in finding his place, even with a maximum of training. Resourcefulness, tact, personality, and common sense are the basis of achievement. It is better for every man to demonstrate that he possesses these qualifications for success by making certain necessary readjustments and trying himself out in society after a brief period of fundamental training and before he decides finally on the specific vocation which he will follow.

Following out these principles, it is the aim of the Federal Board to give a man practical training in his chosen vocation, where he will become accustomed to actual working conditions. This will give those supervising the training an opportunity to decide whether the individual trainee has the qualifications enumerated for success in his chosen line and will serve to eliminate those who show no interest or real desire for accomplishment. After a trial definite plans can be made for systematic training. Men who have left the institution to go out and meet actual conditions are already beginning to realize the nature of their handicap and are returning eager to accept the advice of agents of the Federal Board, which they had previously disregarded. This was, of course, anticipated and is borne out by experience with the civilian blind. Such practical try-out training as is noted above will do more than anything else to convince a mechanic, for example, that he should not study massage, and a man with a third-grade education that he has not the prerequisites of a college course. In dealing with the civilian blind overeducation has been one of the serious blunders. The vocations in which the average blind man can engage (and there need be no concern for one above the average) require a maximum of practical experience on the job and a minimum of theoretical training.

Prevocational and vocational training are only the first steps in vocational rehabilitation. Actual employment requires a man to devote every minute of his time from 8 to 10 hours a day. It implies a change in routine and the nervous strain of travel to and fro from the place of residence. If a man is not at home, it means readjustment in living conditions, dependence on strangers, inexperienced and often nondependable guides. Mistaken kindness and humiliating and embarrassing remarks of the public are a factor to be reckoned with. Difficulty of finding boarding accommodations and a host of other minor conditions known only to those who have tried to make the necessary arrangements supplementary to the actual working must be taken into account. These conditions are arguments in favor of the return of the man to his home rather than to a community entirely new. Opportunities have been offered by large industrial concerns for the employment of a number of blind men with the view of establishing colonies for the blind, but in the case of the blind, immobility of labor is a greater bar even than it is among the seeing.

The work of the Federal Board in the rehabilitation of the blind and those with seriously defective eye sight may be summarized as follows:

1. Investigation of each case by means of a personal visit of an experienced worker for the blind to the home of the man.
2. Adequate prevocational and vocational training. The final authority in deciding upon and approving courses rests with the Federal Board on the advice of the Supervisor for the Blind. Men have been enrolled for courses at the Red Cross Institute for the Blind primarily for prevocational training. Vocational training is approved at the Red Cross Institute if it is considered feasible. On September 15, 1920, there were 83 men enrolled at the Red Cross Institute, and 22 in other schools and colleges. Guides and readers are furnished by the Board if necessary. A few men with the aid of a reader are taking a correspondence course.
3. Obtaining suitable employment and placement training through an experienced worker for the blind. On September 15, there were 32 men in training on the job—in factory training, 2; pamphlet binding, 1; administration in factory, 1; vulcanizing, 4; wickerwork shop, 1; coal and wood business, 1; store keeping, 6; poultry raising, 5; insurance salesmen, 1; drug business, 1; reporter, 1; dictaphone operating, 1; massage, 4; salesmanship, 3. The Federal Board has, in practically every instance, started the men in their work. Some of the men are furnished with paid attendants or assistants to aid them for a definite period in their work; others have been furnished with all or part of the equipment used in the particular business in which

they are engaged. All of these men are visited periodically by an agent of the board who submits a written report on the progress of the case.

The following cases, by no means the only ones, illustrate the splendid way in which these men have overcome tremendous obstacles and have attained success:

Through the premature explosion of a hand grenade one man lost the sight of both eyes, and it was found necessary because of his severe injuries to amputate both hands at the wrist. Before enlistment he had been a drug clerk and possessed considerable knowledge of chemistry. After completing his fundamental training he went into the drug business for himself, and has put on the market a pharmaceutical preparation formulated by himself. He has been assisted by his brother, who is an experienced salesman, paid by the Federal Board. His business has been very successful—so much so that he expects to incorporate very soon and carry it on without further aid from the Board.

Another man, totally blind, took a course in poultry raising and has established himself in this business at his home, in a small town of about 500 inhabitants. He is totally blind and has taught his Airedale puppy to lead him wherever he wishes to go. He built his chicken house of old lumber from a stable which he himself tore down. He has worked out plans for keeping his poultry records in Braille, and with the aid of the typewriter will be able to carry on all correspondence himself. When visited early in September he pointed with pride to a flourishing garden which he himself planted and to some potatoes which he had dug. He also built the fire in the fireplace without help. Such assistance as he needs is furnished by his wife, who is eager to make him as self-reliant as possible.

A third man, also totally blind from wounds received at Verdun, after completing a course in storekeeping secured a small stand in the courthouse of his home city. There he may be seen any day dispensing newspapers, magazines, stationery, cigars and tobacco, and wrapped candy. His business is entirely free from debt and he is making excellent progress. Our agent reports that he is very well liked and is already the information center of the building. He has entirely completed his training and is no longer receiving assistance from the Board.

Another case is that of a young man who enlisted early in the war and lost the sight of both eyes in action at Château Thierry. This was a terrible blow to him, because he had always been active physically and much interested in all branches of athletics. He decided upon his return to the United States to study massage, and completed his course in December, 1919. From the first he has been very independent, and when possible has insisted on doing everything for himself. Early in January of this year he began to build up a practice in his home community. He has made many friends and has been very successful in his work. An official of the Public Health Service speaks in highest terms of this young man. He told the agent from the Federal Board that "if the Government does as good a job for other soldiers as they did for this boy it would be doing perfect work."

4. Constant follow up of the man for a period of time sufficiently long to insure success in his vocation. It is the intention of the Federal Board to use every existing agency and every available individual to assist its agents in the successful follow up of every man who has been and is to be placed.

The following summary statements show the present status of the cases under the jurisdiction of the Supervisor for the Blind up to September 15, 1920:

Total number of cases.....	398
<b>Causes of blindness:</b>	
I. Direct.....	173
II. Disease (not venereal).....	58
III. Disease (venereal).....	40
IV. Prior to enlistment.....	24
V. Unknown.....	13
<b>Percentage of vision:</b>	
I. Totally blind or with light perception only.....	157
II. Partially sighted but with less than one-tenth normal vision.....	86
III. Partially sighted, over one-tenth but less than one-fifth normal vision.....	65
<b>Training statistics:</b>	
I. In training.....	137
Red Cross Institute for the Blind.....	83
Other institutions.....	22
Training on job.....	32
II. Discontinued or completed training.....	53
Completed:	
(a) Placed.....	4
(b) Employment deferred.....	5
Prevocational training completed:	
(a) Employed.....	5
(b) Not employed.....	3
(c) Preparing to take further training.....	9
Training not completed:	
(a) Employed.....	7
(b) Not employed.....	11
Discontinued by Federal Board:	
Elks' case.....	1
Physical incapacity.....	8
III. Approved but not in training.....	107
In process of induction.....	19
Training deferred:	
(a) Employed.....	10
(b) Not employed.....	14
Not interested:	
(a) Employed.....	15
(b) Not employed.....	25
Physical incapacity:	
(a) Temporary.....	12
(b) Permanent.....	9
Dead.....	3
IV. Pending eligibility.....	9
V. Ineligible.....	2

### AGRICULTURAL TRAINING.

Primarily in this field as in other fields training for vocational rehabilitation implies employment. An employment objective is the first consideration and is kept constantly before the disabled man taking agricultural training. The idea in training for successful employment is to gain for the man efficiency in the practical application of his technical knowledge. As the learning goes forward step by step, so does the practical application.

In all lines of agricultural training practice is important, and, in fact, the training is with very few exceptions given at some agricultural college or school where there is little difficulty in securing the practical work along with the theoretical. Many institutions not heretofore giving agricultural courses, upon concluding to offer such courses to disabled soldiers, have arranged for the necessary equipment and machinery, live stock, poultry, etc., to enable them to give the practical training.

Some advisors have favored the policy of giving men of very elementary education training on the job. This method has, however, its limitations and complications. Training can not be had with any ordinary farmer; it must be arranged with the scientific farmer, who himself has had thorough agricultural training. The men to be trained are scattered, as are also the farmers with necessary ability, for giving training, and well-conducted farms, with good appliances, machinery, and live stock. To get the trainees and those to supervise training together would be a Herculean task that would require much supervision and travel and clerical help.

### GROUP VERSUS INDIVIDUAL INSTRUCTION.

Careful consideration has been given to the advantages of personal instruction and tutorial assistance given individually to each man of low elementary grade. But experience demonstrates that group instruction is more inspiring and gives to each one of the group greater incentive for study and advancement than does individual personal instruction, however carefully it may be conducted.

However stimulating the personality of an instructor and his enthusiasm as a specialist, all can be brought to greater account in group instruction. The experience in giving group instruction with the supervised study room and the organized class work in receiving stations and assembly depots all confirms this view as sound. Every instructor will testify to this effect. Therefore, it was wisely conceived that an organization was preferable where these men of varying elementary grades could be segregated and studied individually for classification as to grades and general guidance, not

only in the elementary branches, but for an employment objective. The first experiments in guidance schools, in which the elementary branches were taught vocationally and in conjunction with elementary agriculture and horticulture, were made at receiving stations in connection with State agricultural colleges.

#### AGRICULTURAL BIDDING FOR TRAINEES.

The practical work is easily obtainable in agriculture and horticulture in the department where such practicums are best conducted. The former covers all features of farming, including live stock, dairy, and poultry; the latter, orcharding, small fruits and gardening, plant propagation, and greenhouses.

When the course is completed at an institution, and the man has had the practical with the theoretical and has been given a certificate for the work he has done, he still needs training on the job under actual employment conditions. The agricultural training officers in most districts have more opportunities for such men than there are men to fill the opportunities. In some districts the training officers have listed half a dozen positions for each man, instead of half a dozen men for one position. Under such conditions the undertaking resolves itself into one of selecting the best position for the man. All over the country at the present time there is congestion in the cities, while in the country houses are vacant and considerable areas of land are idle.

This is undoubtedly an invitation to training in agriculture. The demand is great and prices are high for all agricultural products. Every encouragement should be given to agricultural training. Every man with a background of experience in agriculture should be induced to consider well before declining to choose some line of vocational training in the agricultural field. The disability of the soldier with agricultural experience is seldom so great that he can not be trained in some line of agriculture and pursue the employment successfully. The greater his disability, of course, the greater the necessity for extensive training to enable him to use his brain in directing others and to depend upon his own brawn. A large majority of present-day farmers realize that they are not conducting their business in the most efficient manner, employing machinery and breeding the best live stock, without which the greatest profits can not be secured. They personally have not had the necessary training in scientific, up-to-date farming, and they are therefore seeking precisely that sort of assistance which may be readily supplied through a well-trained rehabilitated soldier.

In this connection the experience of one illiterate soldier may be cited by way of illustration. Although he was sufficiently advanced

in years so that he would not have been called upon to serve his country, he nevertheless heroically volunteered and was disabled in service. Before being dismissed from the hospital he decided that he could not afford to lose the asset that existed in his prewar experience in agriculture. His disability led him to select gardening, poultry, and bees for his vocational training, but his lack of education and knowledge of how to study made the undertaking of systematic training a task that did not go easily and finally caused him to change from institutional to training on the job. He was well located with practical men who took an interest in him and were reputed to have excellent knowledge of their lines of work. In a fortnight the disabled soldier was back at the college with a new spirit and enthusiasm. When asked as to the cause of his return, he said not a day had passed that he had not been asked where he got certain ideas and where he had learned this or that, and always he had to give the same answer, "At the agricultural college." Hence, he concluded he had better return to the institution that was giving him so much information and apply himself to the common branches along with the practical training in the line of his selection, remaining with the college work as long as he could continue gaining information, for as long a time as the Federal Board would approve.

The agricultural college can provide the proper atmosphere for every man desiring agricultural training, or the prevocational work necessary to that training. The disabled soldier is a mature man and should be placed with mature men and in the atmosphere of an institution of advanced learning, where he has the opportunity of seeing scientific up-to-date farming, dairying, orcharding, and all lines of work. So conditioned, he has inspiration for work. He finds that he can apply himself as other men do, and his inclination is generally to take all the training he can in as efficient a manner as possible.

The school for the prevocational preparation of men of low educational status should be a part of the agricultural college, but if institutions can not arrange for it the common branches or the guidance school proper should be arranged in close proximity to the institution. This will enable the use of the school farm, barns, implements, live stock, and dairy for the practical work. No institution has as yet refused to cooperate in this way, although the regular enrollment may have absolutely prevented the supplying of classrooms and equipment for a guidance school proper.

Many of the men of low elementary grade advance rapidly and soon are able to enter at least the subcollege courses, which in most institutions cover two years, arranging to complete other practical training on a farm.

Others can carry on still further, are entitled to more extended training, and eventually may enter the college four-year course, as



thousands have done in the past year. Well-educated, trained men are in demand in the agricultural colleges, experiment stations, agricultural extension work, and in the United States Department of Agriculture and its various divisions.

The customary agricultural ladder to farm ownership is one which the agriculturally trained disabled soldier must use. He is a mature man, frequently has a little capital, or may soon acquire enough to become a manager with part salary and a share of the profits, or he may become a renter of a part of the farm, or of all of it, and eventually a small landowner.

The Federal Board has splendid opportunity of watching over these men through the cooperation of the States Relations Service of the United States Department of Agriculture. Its Agricultural Extension Service connected with every State agricultural college advises and directs farmers in every county of the Union. The county agent, demonstrator, club organizer, and other agricultural extension agents and the vocational instructors have formed important links in the chain of agricultural training. Many of these workers are themselves ex-service men and they stand ready to help and supervise the trainees as they return to actual employment wherever they may be located.

Opportunity for employment of trained men and opportunity for ownership of one's own business is exceptionally good in agriculture to-day. In this connection the word "agriculture" is used to cover all the operations to be performed, not only care of live stock, dairying, etc., but, broadly speaking, horticulture, gardening, floriculture, forestry, beekeeping, poultry raising, small fruits, orcharding, nut-growing, and all the specialties.

Men trained by the Federal Board are being sought at the institutions of training and at the Federal Board offices in every section of the country. At the Oregon Agricultural College, Corvallis, at one time, 500 farmers were in attendance at a Farmers' Tractor Training School, from all parts of the State. Numerous men had made application for Federal Board students as soon as their training was complete. Others had talked personally with the men and arranged that they take certain courses that would prepare them for the specific employment they could offer. Other men told proudly of their own boys, disabled in the service, who were being trained. One sturdy looking, responsible farmer said: "I am unfortunate in having no boys, but this college is training three for me; one will be my farm manager and farm mechanic, one will be my herdsman in charge of all my live stock, and the other will be my horticulturist, in charge of my orchard, small fruits, and gardening, and I will see that there is proper cooperation and coordination of the work."

## NUMBER OF AGRICULTURAL TRAINEES.

It is safe to say that the number of disabled soldiers who had entered some line of agricultural training by the end of the fiscal year considerably exceeded the number indicated by the records as having entered such training to June 30, 1920. The number reported for this date is 5,397, but nearly 1,000 men classified under other headings might be included as in agricultural training quite as appropriately as in industrial or scientific training. Many men taking training as farm mechanics, tractor mechanics in agricultural chemistry, biology, bacteriology, entomology (bee culture), veterinary science, cotton grading, etc., in the agricultural colleges and schools are taking this training as their special or major work, and are in almost every instance carrying other agricultural studies.

Again it is to be noted that a large percentage of the agricultural men come from the country and from isolated districts, and are of a low educational grade. Guidance schools for the elementary branches and elementary agriculture have been established in many of the State agricultural colleges. These men who are really preparing for agriculture are counted under prevocational training.

As a result of close contact with these institutions in supervising and making surveys and reports on nearly all it is believed to be a safe estimate that more than 25 per cent of the men taking prevocational work are agricultural trainees, studying elementary practical agriculture, in connection with the elementary common branches, the latter being taught vocationally from a standpoint of agriculture, and constituting the major effort and principal work until sufficiently advanced to articulate with the regular subcollege courses and special lines of training.

Men of small educational advantages present problems most difficult to solve. Many institutions have looked with favor upon the organization of elementary schools for the purpose of advancing such men sufficiently to take the regular courses of the institutions to advantage, and have not only organized elementary schools, but in a few cases have organized rehabilitation divisions and schools for agricultural men of elementary grade.

The men approved for agricultural training may be classified into three general groups:

- (1) Those who went into the war from agricultural institutions and, returning, have reentered the colleges proper. Many men have done this before being found eligible as Federal Board trainees.

- (2) Those with an eighth-grade preparation who are admitted into subcollege two-year or special courses. Many of this class have been found as matriculants in college.

- (3) Those of elementary grade, ranging from illiterates to the seventh or eighth grade, who of necessity must have prevocational assistance in order

that they may receive instruction intelligently and benefit to the greatest degree from their training. These constitute a larger number than the first two classes combined and present an immense problem to both the Federal Board and the institutions of learning as well as to themselves.

**AGRICULTURAL-TRAINING PROBLEM—MEN OF ELEMENTARY OR ANY HIGHER GRADE ARRIVING AT ANY TIME AND IN ANY NUMBER:**

To provide appropriate training for the third group specified above has been a difficult task. In the words of one college president, "through this class of men of low elementary grades insurmountable difficulties have arisen." Thorough investigation proved early in the college year 1919-20, that such men varying in different districts constitute from 25 to as high as 62 per cent of the men approved for agricultural training.

This is probably a larger percentage than exists in any other line of training, due to the fact already noted that the men approved for agricultural training are frequently from isolated districts of the country where the boys have not been given the opportunity of securing adequate schooling because of the lack of good schools, and the disinclination of the farmer parents to give the boys more than a very ordinary education for fear of losing them from the farm. Compulsory education and the great improvement in rural schools came too late to have affected the education of many of the ex-service men of the World War. Their average age is 27 years. Many of these men are illiterate or practically so. Added to this number are the foreign illiterates—that is, those men of foreign nationality who are illiterate from the standpoint of English.

The institutions, however, have become convinced, first, that it is their patriotic duty to assist the Federal Board in making preparation to extend the necessary prevocational training to these men under conditions which will insure that they will be associated with mature men such as they are themselves and at the same time have the benefit of the atmosphere of the college, where the advanced ideas of scientific agriculture in all its lines are constantly before them and impressed upon them. Second, educational institutions have changed wonderfully in favor of training disabled men as a part of their regular educational program.

**GUIDANCE SCHOOL AGRICULTURAL UNIT COURSES PRESSING NEED. ADAPTATION OF AGRICULTURAL TRAINING TO DISABLED MEN OF ELEMENTARY GRADE.**

As a result of all the investigations made, an elementary school was planned where these men could be collected at each agricultural college. This was termed a guidance school, its purpose being to study, try out, and instruct these men vocationally in the elementary common branches and in elementary agriculture.

This prevocational school training is really a prerequisite for certain courses, prepared and designated as agricultural unit courses, which are divided into units of one month each and cover one year continuously from month to month, and may be entered any month. A man may take one or several unit courses—one as a major and the others as minors related to the major—at the same time that he continues in the common branches of the guidance school. If the man is to have but one year's training, it will consist of the unit courses selected, with an extension beyond the year to cover his preparation and to enable him to complete the year in the unit courses. If he is entitled to more than one year's training, he should then be taken from the unit courses and inducted into the two-year agricultural course at such time—the beginning of the year or the term—as will enable him to complete that course. Nearly all State agricultural institutions will allow the men credits for work done in the unit agricultural courses or two years' courses. In case of extension of training, this enables the man to take work in the four-year agricultural college course with the advantage of credits for work done. Many men are sufficiently ambitious to finish the four-year course even if their extensions do not carry them through it.

#### **SOLUTION OF THE PROBLEM.**

Plans for the guidance school and agricultural unit courses were reduced to definite form and mimeographed as Miscellaneous 185 for the benefit and assistance of all institutions offering agricultural training to the disabled man. The system was first placed in operation at the Massachusetts Agricultural College, where, in a receiving station, a large body of men were found (more than 50 per cent of elementary grade) needing careful organization and elementary training. The system proved to be satisfactory and under it 100 additional men have received their prevocational training and are to-day carrying on their agricultural training to good advantage.

#### **SUPERVISORS NECESSARY.**

The system described in Miscellaneous 185 has been introduced and thoroughly organized in from 25 to 30 agricultural colleges to great advantage, although not attended with complete success unless there is adequate inspection, supervision, and general follow-up. In some places the organization has not been complete for want of instructors. In others a sufficient number of instructors have been secured, but they are unfortunately without sufficient training and experience.

#### **COORDINATORS NEEDED.**

Many institutions are in need of coordinators in order that the instruction may be properly correlated and the men correctly classified to insure their rapid advancement.

It can not be said that the introduction of the unit system and prerequisite guidance school has reached its greatest success in any institution without the direction of some one understanding its organization, who is, therefore, able to explain fully the advantages to the institution for using the agricultural guidance school and unit system in coordinating such a large number of students. Special instructors are necessary. The interest and cooperation of the whole faculty, and particularly of the counselors of the Federal Board men is of paramount importance for full harmony and support in the undertaking. In addition to those required for organizing this work, a supervisory force is imperative to follow, to inspect, and to supervise in order that the work may continue to the best advantage of the men.

#### TRAINING FORCE NECESSARY.

Two difficulties are encountered in securing the necessary agricultural training officers and instructors:

(1) The difficulty of securing properly prepared persons, or those who are even moderately well prepared, for the reason that they are not procurable under present demands for men with such training.

(2) The inability of the Federal Board to offer the salaries necessary to secure services when available.

The Federal Board "labor turnover" has been very large and the expectation is that it will be much greater by the opening of the college year. We have already experienced great difficulty in securing such training assistants as have been needed, and have been compelled, in securing instructors to take many persons for half time, using men who are doing their graduate work for advanced degrees or senior students and in many cases the wives of professors who have heretofore had experience in teaching. Women are often the best of instructors in the elementary branches and handle the men of elementary grades to very excellent advantage.

#### HOSPITAL TRAINING CENTERS AND COMMUNITY SCHOOLS.

Another large increase of men for agricultural training is evidently at this moment demanding attention at the training centers and community schools. The number probably will be increased beyond present definitely ascertained numbers on account of arrangements contemplated at hospitals and sanatoria for tuberculous men seeking agricultural training. For such men special placement has been suggested and is being planned that they may be supervised and directed on small farms, the ownership of which they may acquire on exceptional terms.

No survey has been made from which to estimate the number of men at these institutions who have had experience in agriculture. At

one training center, with 142 men, more than one-third have as their best vocational asset agricultural experience in some line.

The opportunity is great for giving prevocational training at these centers and at the same time for getting a man's mind off himself and his disability. His improvement will be much more rapid if his goal in training has been determined by him. Once he has determined upon his course, he may be advanced rapidly by receiving the instruction in the elementary branches taught vocationally in the line of training he is going to take. Elementary books may be secured in almost all lines of training, and correspondence courses are available. These elementary works and courses are not difficult of supervision. In agricultural lines arrangements have been made with the various agricultural colleges for supplying courses and their supervision. With many of the centers and community schools agricultural instructors have been placed and the work has made a good beginning.

#### AGRICULTURAL CORRESPONDENCE COURSES.

In addition to the valuable use being made of agricultural correspondence courses at training centers and community schools, they have been found exceedingly useful in interesting men in training who will not for various reasons take institutional training at the present time. As men are being interviewed to induce them to take training and are found eligible, they are, if they absolutely decline to take regular training, urged to consider the value of agriculture correspondence courses. As section 3 men they can be given these courses, and if they lack sufficient education, arrangements can be made for tutorial assistance. Rural school teachers, vocational instructors, county agents, and others of the agricultural extension units have been found to be always ready to give assistance. The agricultural correspondence courses have been arranged for in every district, and usually come from one or more of the agricultural colleges of the district, but when this has not been possible of arrangement, State agricultural colleges in other districts have offered to supply the courses gratis to disabled men and to arrange for their supervision.

Many agricultural colleges have prepared courses for the express use of Federal Board students, and others have rewritten and revised their courses for the district in which they are located, thus supplying them for the other States. Some of the agricultural colleges have shown such a hearty spirit of cooperation as to offer these courses for any part of the United States, together with arrangement for supervision, all to be gratis to the disabled ex-service man.

In connection with the courses, the institutions recommend the most suitable agricultural books to accompany them. These are se-

cured for the students by the Federal Board, together with any additional supplies necessary for the most satisfactory pursuit of the courses. Some of the agricultural colleges, desiring to give every possible encouragement to the student of correspondence courses to eventually take institutional training, examine the students, grade their papers, and give them credits such as they deserve in a regular course to be taken later. Arrangements are being made this year for a visit of all correspondence students to the agricultural college of the State in which the students are located at some advantageous time arranged for by the institution, and probably also again at commencement. Nothing can be conceived that would tend to more greatly encourage a disabled man to take institutional training than the plans just outlined.

#### AGRICULTURAL EXTENSION COOPERATION.

Arrangements were completed early last year with the States relations service for cooperation of the agricultural extension unit. A division of the Department of Agriculture established at each State agricultural college for assistance in inducing men to avail themselves of the training offered them. The director of the agricultural extension, with the briefs of approved men in the State and letters of instruction, distributes briefs with a letter of instruction to county agents in closest proximity to the men.

In most instances a drive has been put on throughout the State, resulting in a large number of men who had not evinced any interest before to come to the institution for training. During this drive many men have been found who had in no wise been investigated as to eligibility for training by the Federal Board. When the county agent and other advisors fail to induce a man to take training, an earnest endeavor is made to persuade him to take correspondence courses and tutorial assistance in the common branches if he needs it.

#### AGRICULTURAL TRAINING ENCOURAGED.

From the above it might be presumed that an effort was being recommended to encourage agricultural training over training in other lines. While such is not the case, men most suited to and who should take agricultural training are most difficult to reach, and as has been definitely learned have not been reached with the information as to the opportunity for training. The United States needs these men trained for agriculture, which is and has been for some time losing to all other occupations. Not only is it in need of men, but with the greater and greater introduction of machinery and improved live stock agriculture is in need of trained men. They are sought everywhere on the farm—North, South, East, and West. They

are also sought by the United States Department of Agriculture in its research work, its Agricultural Extension Service, its Forest Service. The department now employs over 70,000 trained men. Many of these men, for example, in the Agricultural Extension Service, which works through the county agents, demonstration workers, and club organizers, as well as the agricultural colleges, which work through the farm institutes, are having uphill business in their endeavor to instruct the ordinary farmer, who is without scientific knowledge and who, unfortunately, has not a son who has been given the opportunity of study and training at the agricultural college. One old-time Virginia farmer, who had given his three oldest boys engineering courses and had finally yielded to the solicitations of his youngest son to take a course in farming, summed up the results as follows: "Since John took that book-farming course at Blacksburg he certainly has revolutionized our farm and made more money in three years than I have made in all my life. My three engineering boys have all gone afarming since John showed them a thing or two." The chairman of the Committee on Education of the House of Representatives recently said, "I personally am convinced that the farm problem is coming to be serious, and if the drift is away from the farm, as I think it is, some agencies ought to be put into action to turn that drift the other way."

#### **SPECIAL OPPORTUNITIES FOR CIVIL SERVICE EMPLOYMENT OF DISABLED EX-SERVICE MEN.**

By Executive order of the President, April 16, 1919, civil-service rule 5, section 4, was amended, permitting the United States Civil Service Commission to waive physical requirements of disabled ex-service men who were applicants and certified to the commission by the Federal Board for Vocational Education. The Federal Board initiated conferences with representatives of Government departments and secured the cooperation of the following departments: Department of Agriculture, Department of Labor, Department of Commerce, Department of the Interior, Navy Department, War Department, Treasury Department, Post Office Department, State Department.

In addition the United States Civil Service Commission has from the beginning given hearty cooperation.

The disabled ex-service men affected by the amended civil-service regulations are divided into two groups:

- Group I: Disabled ex-service men who first come to the attention of the Board, expressing a desire to be trained for civil-service positions.
- Group II: Disabled ex-service men who apply directly to the United States Civil Service Commission for a position, but are disqualified for the positions desired because of physical disability, and are referred to the Federal Board.



The cases of disabled persons in Group I, above, are taken up individually in conference with a representative of the Civil Service Commission and an opinion secured in each case regarding the fitness of the man physically for the position which he desires. If the opinion given in conference with a representative of the Board states that the man is not competent physically to perform the duties of the position desired, either wholly or to such an extent that it will be a serious impediment to his future advancement, the man is so advised through the district office of the Board and suggestions are offered concerning suitable Government positions for which his disability will not be an irremediable bar.

If a disabled ex-service man in "Group I" is declared competent to perform the duties of the position desired from the standpoint of his physical disability, he is so informed through the district office of the Board and placed in training for the position. At the completion of his training he is certified to the Civil Service Commission on the following form:

(Date) \_\_\_\_\_

From: Chief Division of Rehabilitation.

To: United States Civil Service Commission.

Re: (Name of trainee.)

Pursuant to Civil Service Rule V, section 4, as amended by Executive order, April 16, 1919, it is hereby certified that the above-named man has been specially trained for the position of \_\_\_\_\_ and has passed a practical test demonstrating his physical ability to perform the duties required of such position.

A duplicate of this certification is being transmitted to the above-mentioned man in order that he may file it with his application for the examination.

FEDERAL BOARD FOR VOCATIONAL EDUCATION.

This certification simply admits the man to the civil-service examination set for the position specified. The training which he has been given is expected to qualify him mentally, and the Board's certification to remove his physical disqualification. If he passes the set examination after being certified by the Board he is given veteran preference in accordance with Form 1481, August, 1919, issued by the Civil Service Commission.

If a disabled ex-service man in "Group I" fails to pass the first examination taken, he can be continued in training by the Federal Board until it is believed that he is qualified to pass the required examination, at which time the examination may be reopened in accordance with form 2276, May, 1920, issued by the commission.

The cases of disabled ex-service men in "Group II" are immediately referred to the Federal Board by the Civil Service Commission for a report on the status of the man's case. If information is available in the central office of the Board, the commission is immediately advised. If insufficient information is at hand, the man's case is im-

mediately referred by telegram to the district office of the Board in which the man resides, and the district vocational officer directed to make immediate contact and report fully, so that the commission can be advised within 30 days from the date the case was submitted to the Board. The cases in "Group II" are handled otherwise in the same way as are the cases in "Group I."

Experience has shown that many ex-service men are disqualified under civil-service standards for positions having special physical requirements who yet do not fall within the provisions of the vocational rehabilitation act, in that their disability does not constitute a handicap for the vocation followed by them prior to their entry into the service. Many of these also are not eligible for training under section 3 of said act because disabled less than 10 per cent according to the standards of the Bureau of War Risk Insurance and therefore not compensable. When such cases are referred to the Board by the Civil Service Commission an investigation is immediately instituted. In the investigation of the man's eligibility for training the fact that he is an applicant for a civil-service position is kept in mind, and if it is finally determined that he is not eligible for training under the vocational rehabilitation act but that he is competent physically to perform the duties of the position in the civil service for which he has applied, he is certified to the commission upon the following form:

(Date) \_\_\_\_\_

From: Chief Division of Rehabilitation.

To: United States Civil Service Commission, Washington, D. C.

Re: (Name of trainee.)

The above-mentioned man has been physically examined by a representative of the Federal Board in order to determine his eligibility for training under the vocational rehabilitation act.

As a result of this physical examination it is certified that, so far as his physical ability is concerned, it is the opinion of the Board that he is qualified to perform the duties of \_\_\_\_\_.

A duplicate of this certification is being transmitted to the above-mentioned man in order that he may file it with his application for the examination.

FEDERAL BOARD FOR VOCATIONAL EDUCATION.

Disabled ex-service men in "Group I" and in "Group II" are not certified to the commission unless they have been tried out and found to be competent physically to perform the duties of the positions desired. The only exceptions are those cases which have been settled in conference with a representative of the Civil Service Commission, who had rendered an opinion upon the medical data submitted that the man is physically qualified for the position so far as his disability is concerned.

The total number of cases classified according to positions desired under "Group I" above is as follows:

Accountants.....	4	Law clerk.....	1
Agricultural course.....	1	Lay (meat) inspector.....	18
Antinarcotic inspector.....	1	Legal assistant.....	1
Bakery inspector.....	1	Lighthouse keeper.....	2
Building inspector.....	2	Locomotive inspector.....	2
Business course.....	1	Mail carrier.....	17
Certified public accountant.....	1	Mason material inspector.....	1
Civil service.....	15	Messengers.....	1
Construction inspector.....	1	Mine inspector.....	1
Consular service.....	5	Pharmacist.....	1
Customs house clerk.....	6	Plumbing inspector.....	1
Customs inspector.....	4	Postmasters.....	6
Deputy collector.....	1	Post office clerks.....	29
Electric welder.....	1	Post office work.....	11
Engineering inspector.....	1	Railway mail clerk.....	16
Factory inspector.....	1	Road engineers.....	1
Foreign trade.....	1	Rural mail carrier.....	21
Foreman.....	1	Safety appliance inspector.....	3
Forestry service.....	12	Salesman.....	1
General clerk.....	30	Sanitary inspector.....	2
Grain inspector.....	3	Secret service.....	2
Immigration inspector.....	10	Stenographers.....	2
Income tax clerk.....	1	Switch engine operator.....	1
Indian agent.....	1	Vulcanizer.....	2
Internal revenue inspector.....	3	Watchmaker.....	1
Interpreter.....	1	Total.....	253

The total number of cases referred to the Board under "Group II" above, classified in like manner, is as follows:

Accountant.....	5	Lighthouse keeper.....	1
Auditor.....	2	Locomotive inspector.....	1
Auto mechanics.....	3	Locomotive safety device inspec- tor.....	1
Antinarcotic agent.....	2	Mail carrier.....	41
Boiler inspector.....	5	Medical examiner.....	2
Bookkeeper.....	1	Post office clerk.....	80
Bureau fisheries.....	1	Painter.....	1
Business.....	1	Plant pathologist.....	1
Business course.....	2	Plumber.....	1
Carpenter foreman.....	1	Plumbing inspector.....	1
Chauffeur.....	3	Postmasters.....	2
Civil service.....	24	Post office.....	4
Consular service.....	3	Printer.....	1
Customs service.....	3	Railway mail clerk.....	21
Elevator conductor.....	1	Rural mail carrier.....	75
Forestry service.....	1	Shoemaker.....	1
General clerk.....	8	Stationary engineer.....	1
Immigration inspector.....	2	Storekeeper.....	2
Inspector.....	1	Subclerks.....	22
Inspector airplanes.....	1	Traffic manager.....	2
Interior.....	1	Training assistant.....	1
Laboratory attendant.....	1	Unskilled laborers.....	3
Law course.....	1	Total.....	335
Leading man and quartermaster.....	1		

The grand total of so-called civil-service cases is 558.

The total number of cases certified to the United States Civil Service Commission as competent physically to perform the duties of the positions desired, classified according to the positions applied for, is as follows:

Auditor and accountant.....	1	Printer .....	1
Chauffeur .....	2	Rural carrier .....	13
Elevator conductor.....	1	Subclerks .....	5
Inspector and agent, antinarcotic act .....	1	Traffic clerk .....	1
Inspector of airplanes.....	1	Training assistant .....	1
Plant pathologist.....	1	Unskilled laborer .....	1
Postmaster .....	1	Lay (meat) inspector .....	1
Post-office carrier .....	5	Total .....	55
Post-office clerk .....	19		

A large percentage of the 503 persons not yet certified are still in training. Some have postponed training because of their physical condition and others because satisfactorily employed.

All ex-service men, whether disabled or not, are required to attain an average percentage of only 65 in order to become eligible for appointment, while those not entitled to preference are required to attain an average percentage of at least 70. Ex-service men are also released from all age limitations.

The facilities of all Government departments for training disabled ex-service men by the method of placement training have been made available for the Federal Board. Restrictions regarding Government officials offering assistance and instructions to those not in the employ of the Government have been removed.

The attitude of the War Department is expressed in Bulletin No. 12, issued March 29, 1920, from which the following is quoted:

The War Department, the Federal Board for Vocational Education, and the Civil Service Commission will cooperate to facilitate in every way possible the employment under the War Department, in the District of Columbia and elsewhere, of partially disabled soldiers on an equal basis with those who have not sustained physical injury.

The State Department is giving full cooperation regarding the training of disabled men for positions in the consular service.

The Departments of Agriculture, Labor, and Commerce have cooperated fully from the beginning. The secretaries of these departments are members of the Federal Board and early in the negotiations for cooperative arrangements appointed representatives to confer with representatives of the Board and the United States Civil Service Commission in working out the cooperative plans which were finally adopted by all the Government departments.

Hon. F. K. Lane, Secretary of the Department of the Interior, under date of September 8, 1919, wrote to the director of the Federal Board for Vocational Education concerning this matter as follows:

I am heartily in sympathy with the plan, outlined in your letter of August 26, looking to the utilization of Government facilities and the services of Federal officers and employees in behalf of disabled soldiers, sailors, and marines, and assure you that in carrying on this work your Board will have the earnest co-operation of the agencies of this department.

Hon. Franklin D. Roosevelt, Acting Secretary of the Navy, under date of September 8, 1919, wrote to the director of the Board as follows:

It is requested that the Federal Board furnish this department with 2,000 copies of Circular Instructions No. 6, C. L. H. No. 55, and list of addresses of district offices of the Federal Board. The department expects to distribute the circulars received from the Board to the entire Naval Establishment by means of a circular letter of transmittal.

Instructions No. 6, and C. L. H. No. 55, referred to by Mr. Roosevelt, embody the cooperative arrangements agreed to by the Board and the various Government departments. The Secretary of the Navy directed the chiefs of bureaus, commandants of naval districts, commandants and industrial managers of navy yards and naval stations, inspectors of ordnance in charge, and inspectors of machinery, United States Navy, etc., that "the scheme outlined therein meets with the full approval of this department, and you are authorized and directed to cooperate with the Federal Board to the fullest possible extent in the plan for training disabled soldiers, sailors, and marines."

The attitude of the Post Office Department is represented in the following quotation from a letter from the Fourth Assistant Postmaster General, of December 27, 1919, after a conference with a representative of the Board regarding three disabled soldiers, who had suffered the loss of a part of their left arms, and who desired to become rural-mail carriers:

The Post Office Department will accept the applications of disabled soldiers, sailors, and marines for appointment to the positions of rural letter carrier upon certification in due form by the Civil Service Commission of eligibility for such appointment, and by the Federal Board that the respective applicants are physically qualified to perform the duties of the position, including the ability to handle with reasonable facility parcel-post packages weighing, individually, up to 70 pounds; and will give such applications due consideration in connection with existing vacancies, and subject to the provisions of deficiency act of July 11, 1919, under which honorably discharged soldiers, sailors, and marines are entitled to preference in making appointments to the civil service.

The Treasury Department has cooperated in a practical way, as shown by the following extract from a letter of January 20, 1920, regarding a disabled man who desired placement training in the Treasury Department as an internal-revenue inspector for a period of one year:

In connection with the recommendation of the Federal Board for Vocational Education that Mr. ———, a rehabilitated soldier, be assigned in the office

of the collector of internal revenue, St. Paul, Minn., for placement training, you are advised that under date of January 12 the collector in that city was authorized to assign Mr. ——— as a deputy collector in his office.

The terms of the cooperative arrangements between the Federal Board, the Civil Service Commission, and the various Government departments are embodied in a joint departmental circular and authorization, under date of August 1, 1919, which is given in full below:

The Federal civil-service regulations have been amended by an Executive order of the President. The regulations as amended place upon the Federal Board for Vocational Education the responsibility of testing, training, and certifying to the United States Civil Service Commission disabled soldiers, sailors, and marines who desire to enter civil-service employment. The amended regulations permit the fullest cooperation of Government agencies with the Federal Board in the vocational rehabilitation of men disabled in the war against Germany.

Everybody desires to cooperate with the Federal Board in the discharge of its duties to men disabled in the service. Individuals and private institutions are working with the Federal Board in a most patriotic way. The Government departments have been desirous of lending full cooperation. This is now possible because of the removal of certain restrictions.

Arrangements for meeting this changed situation have been worked out by representatives of the Federal Board and the United States Civil Service Commission and stated in a publication of the Federal Board designated as C. L. H. No. 55, copy of which is attached hereto. Additional copies of this circular letter can be obtained by addressing the Federal Board for Vocational Education, Washington, D. C.

The Federal Board proposes to discharge its obligations under the amendments to the civil service regulations through cooperative arrangements with the Government departments and through the expert advice, counsel, and assistance of Government officials and employees.

The amended regulations permit the Civil Service Commission to exempt a disabled soldier, sailor, or marine from the physical requirements providing he has been tested or trained, and certified by the Federal Board for Vocational Education. The Executive order also permits the Federal Board to utilize Government facilities and the services of Federal officers and employees in the execution of this provision.

The Federal Board has outlined the procedure set forth herein to reach the ends desired, and you are hereby authorized to cooperate with its agents in the execution thereof.

You are permitted and authorized to arrange with agents of the Federal Board to try out disabled soldiers, sailors, and marines by a practical test on the job to determine if the disabled man has the physical ability to perform the work required. If the test indicates that the man can qualify physically you are authorized to arrange with the Federal Board to train the man "on the job" for the work he is to perform, provided this kind of training, in the opinion of the Federal Board, is desirable and feasible, and, in your opinion, is not seriously detrimental to the public service. If such training is deemed to be seriously detrimental to the public service, a detailed report giving the reasons for this decision should be made to the Federal Board which may submit this report to the department concerned for conference as to the final disposition of the case.

It is not expected that there will be a large number of placement training cases, which means simply that the man is trained on the job by a Government employee or official. Most cases after a try out for physical ability will be trained in established institutions offering suitable courses. Probably not a very large number of cases will need to be tried out by a practical test of physical ability. This question can usually be determined through the joint action of the Federal Board and the United States Civil Service Commission.

This is simply and solely a "try out" and "training" proposal of the Federal Board and does not imply that the person being tried out for physical ability, or trained to perform the detailed work of a position, will be placed in the specific position in which he is tried out or trained, but in a like position elsewhere by regular methods under the amended civil service regulations and vocational rehabilitation act.

Men being tried out or trained as set forth herein will receive no remuneration from the Government other than the stipulated sums paid by the Federal Board under the provisions of the amended vocational rehabilitation act.

Any arrangements entered into for placement training should be submitted to the Federal Board for Vocational Education, Washington, D. C., through the Federal Board district office. Before any further action is taken, the Federal Board, through a designated representative, will confer with the person delegated by the department concerned to represent it in these matters. If the agreement receives the joint approval of the Department representative and the Federal Board, the placement training can begin under the agreement.

No further formal arrangements will be required to test or "try out" a man's physical ability to do the work of a specified job. This can be done by mutual agreement between the local representatives of the Federal Board and the government agency concerned, acting under this authorization. "Test" and "try out" cases need to be referred to Washington only when it is impossible for local representatives to agree, or when the test is likely to be prolonged so that it amounts in reality to placement training.

The Government machinery administered by the Federal Board in cooperation with other Government agencies is working satisfactorily in the training of disabled ex-service men for civil service positions. There can be no just ground for criticism. The number of disabled ex-service men desiring civil service positions with the Government is small, however, in comparison with the total number of men in training.

#### **TRAINING OPPORTUNITIES AFFORDED EX-SERVICE MEN STILL IN HOSPITALS OR WITH DISABILITIES NOT WARRANTING HOSPITAL TREATMENT, BUT TOO FAR ADVANCED TO ALLOW OF REGULAR TRAINING.**

(This paper deals with developments up to Sept. 1, 1920.)

The Federal Board discovered early in its work that its obligations were many and greatly diversified, for in addition to those disabled men eligible and able to take training there are other ex-service men eligible but physically unable to take either institutional or placement training as customarily provided. The latter divide into two groups—namely, those eligible for training but who are

still patients in hospitals, and those eligible but physically unable, although they may be at home or drifting about the country. These groups comprise principally tuberculous and mental cases. It is the duty of the Federal Board, in so far as possible, to "salvage" these men, not only because the rehabilitation act requires it but because society and economic conditions render it imperative.

The organizers of the rehabilitation division early visualized this problem and worked out a program which was eventually to make provision for these two types of ex-service men—those who could not, because in hospitals, and those who would not, for a variety of reasons, come to the Federal Board.

The Board's realization of the magnitude of this problem caused the help of the National Tuberculosis Association to be sought, for tuberculosis loomed up as one of the greatest causes of disability, with no final figure as to the actual number of cases, but with the certainty that the number of cases was increasing steadily.

At that time the National Tuberculosis Association not only consented to assign its secretary to the Federal Board but also expressed a willingness to create an expert advisory committee. This aid was accepted and has proven very valuable. Through this committee working with the tuberculosis expert of the Federal Board, a program for training the tuberculous ex-service man has been developed. Later the Bureau of War Risk Insurance and the Board of Managers of the National Soldiers' Home solicited the services of this committee, and thereafter, through an arrangement between the Federal Board for Vocational Education, the Bureau of War Risk Insurance, and National Soldiers' Home, a larger committee has been created which is bound to have a common viewpoint as to administrative arrangements in the treatment and training of the tuberculous ex-service man.

A series of communications have passed between the above-named organizations and conferences have been held with the Public Health Service. Definite requests also have been made by the Federal Board for admission into all Public Health Service hospitals for the purpose of organizing training centers where patients, especially those who are ambulatory, can begin to receive the benefits of the rehabilitation act. As a result a definite cooperative policy has been established, as shown in Public Health Service, Hospital Division, Circulars 25, 38, 41, and 65—documents which constitute the present working agreement between the Public Health Service and the Federal Board.

Under these plans five types of training centers have been developed:

(a) Public Health Service hospitals where the nature of the cases under treatment make training feasible and the numbers are sufficient to justify training personnel.



- (b) Private sanatoria where there are over 30 ex-service men as patients.
- (c) Tuberculosis communities where there are sufficient number of ex-service men in boarding houses, hospitals, or sanatoria.
- (d) National soldiers' homes where quiescent and arrested tuberculous cases are to be found who are eligible for training under the rehabilitation act.
- (e) Community centers in localities where ex-service men may be found who are not availing themselves of an award of training under the rehabilitation act, irrespective of the nature of the disability or whether the trainee is eligible for section 2 or section 3 training.

The plan as being carried out for "Group A" in Public Health Service hospitals is very definite; the Public Health Service cares for all occupational therapy, either for bed or semiambulatory patients, the Federal Board arranging all educational and vocational work for ambulatory patients. In other words, a patient able to go to a classroom or a shop and able to be on a "pass status" is taught by teachers provided by the Federal Board.

Placing Federal Board personnel in Public Health Service hospitals is covered by Circulars 25, 41, and 65, which allow the Board to place 1 teacher to every 20 patients taking training. When possible, these teachers are given quarters at the hospital, but subsistence is not furnished. The teachers are guided by an educational director, who in turn is responsible to the Board and to the medical officer in charge of the hospital for the working out of a satisfactory training program in compliance with regulations.

In order to operate these training centers with as little delay as possible, the standing committee of the Federal Board granted an allotment of \$5,000 to each hospital where a center may be established. The whole or the necessary portion of this sum is used for initial expenses, furniture, stationery, stationery supplies, tools, and equipment. As the work has developed, it is becoming apparent that these training centers must be established on a comprehensive vocational basis, so that rehabilitation may be well started when the trainee is discharged from treatment. Such a program requires additional allotments.

The three purposes of training during the man's hospital stay are:

- (1) To furnish educational and prevocational training and so to stimulate the patient that upon his discharge he is ready and anxious to continue vocational rehabilitation.
- (2) To assure that time spent in a hospital shall have a vocational as well as a curative value, thus saving to the patient much time and energy otherwise lost.
- (3) To afford opportunity to compile all information and to do all paper work on the patient's case before he leaves the hospital, thereby assuring quick action and decision regarding his training.

The spirit of cooperation with the Board by officials of the Public Health Service headquarters in Washington and by the medical offi-

cers in charge of the hospitals has been good; there have been few questions which have not been satisfactorily settled.

The plan of cooperation with the Public Health Service is carried out through a committee composed of three officers of the Public Health Service and three officers of the Federal Board. The selection of these men is so made that all phases of the work are represented.

This feature of the Board's work has increased until it has reached such magnitude as to be considered one of its principal activities; it is working out satisfactorily, except in those Public Health Service hospitals where there is a lack of space, which has resulted from crowding many of these hospitals to the limit. Lack of space makes it physically impossible to provide vocational training at all desirable points, but such provision has been made in 23 Public Health Service hospitals where we now have a personnel of 112 teachers with 1,557 men receiving training.

Private sanatoria have been utilized by the Bureau of War Risk Insurance for the treatment of patients who could not be accommodated at the Public Health Service hospitals. Up to September 1, 1920, the Board had provided vocational training in 36 private sanatoria, with a personnel of 59 teachers caring for 877 men in training.

Utilization of the national soldiers' homes as training centers promised to be a successful enterprise, and the centers at Johnson City, Tenn., and Dayton, Ohio, were being established on a sound vocational basis when an arrangement was consummated between the Bureau of War Risk Insurance and the management of the soldiers' homes to use these homes as sanatoria. This led to confusion for a time, but is now adjusted on a broader basis and the Board will do all things necessary, from occupational therapy to vocational training while ex-service men are patients in the national soldiers' homes. Furthermore, adjacent to and under the medical supervision of the officer in charge of the national home (sanatorium), the Board will establish a school whereby arrested tuberculous cases may be trained for such definite period as the medical officer may deem desirable for further medical supervision. Certain soldiers' homes will be entirely vacated by the ex-soldiers of previous wars and be devoted exclusively to World War veterans. The type of case to be assigned to these sanatoria is indicated below:

National Sanatoria, Johnson City, Tenn. (exclusively for tuberculosis).

National Sanatoria, Dayton, Ohio (tuberculosis and mixed cases).

National Sanatorium, Marion, Ind. (principally mental cases).

National Sanatoria, Hot Springs, S. C. (mixed cases).

With this concerted action upon the part of the Bureau of War Risk Insurance and board of managers for soldiers' homes, large units

should be established, thereby offering an opportunity for the Board to do effective work. Up to the present time there have been established 27 training centers, with a personnel of 37 teachers, who are caring for the needs of 595 trainees. A recent joint circular issued by the Public Health Service and the Bureau of War Risk Insurance indicates 94 private sanatoria, the majority of which will need service from the Federal Board. This indicates the magnitude of this phase of the Board's work, which, fully developed, would require for this branch alone a teaching personnel of 282. The Board awaits the result of the proposed concentration of bureau patients at large institutions.

Administrative details now seem to be more easily arranged in private sanatoria than in Public Health Service hospitals. This may be due to the fact that there is usually a superintendent or a medical officer in charge, who is entirely responsible for all the work of the sanatorium both from the managerial and the medical standpoints. This is true of the 9 combined State and county sanatoria, in which we have training centers, with a personnel of 22 teachers instructing 282 trainees. Space is the problem in this kind of an institution. On the whole, our dealings with private sanatoria have been satisfactory.

In the description of community centers above reference has been made to two types, one conveniently located in the neighborhood of several tuberculosis sanatoria, the other located in any community where a number of ex-service men may be assembled for such training as they are able to take. The latter type of center may offer both day and evening classes. At present the Board is conducting 16 community centers of one or the other type, with a personnel of 30 teachers and an enrollment of 431 trainees.

This enumeration of training opportunities presented to the ex-service man shows a healthy growth, the more so when it is considered that the Board's first efforts were necessarily confined to those who were eligible for and able to enter upon institutional and placement training, and that it was not until after this work was well under way that the training-center problem could be attacked. The first center was established in February, 1920, and there are now (September, 1920) in operation 82 training centers, with a personnel of 260 teachers and an enrollment of 3,202.

The further development of community centers and training centers in hospitals requires the attention of the Board as it is probable that this work may eventually require the employment of at least 1,500 teachers, who in turn will care for approximately 20,000 students in hospitals, private sanatoria, and national sanatoria.

The assistant chief in charge of training exercises directs general supervision of the work, and is assisted by a group of six field representatives, each of whom supervises this type of training in one or

more districts, the number of districts assigned being based on the size of the districts. They in turn work through the educational director at each center, and it is his duty to conduct the training center for which he is responsible, in accordance with procedure laid down by central office.

The Board has done everything possible in the way of issuing such bulletins as may be of direct value to persons employed in this kind of work, of which the following which bear upon the training of the tuberculous may be given as examples:

#### TREATMENT AND TRAINING FOR THE TUBERCULOUS.

Bulletin No. 29, Reeducational Series No. 5.

Bulletin No. 32, Reeducational Series No. 6.

Bulletin No. 33, Reeducational Series No. 7.

Occupations in Relation to Tuberculosis, by Bayard T. Crane, M. D.

Employment of Post-Tuberculous Workers, by George M. Price, M. D.

Three Years' Experience in the Employment of Discharged Tuberculous Patients in Factory, by Edward Hochhauser.

Occupation and Industrial Training of Tuberculous Soldiers in Sanatoria, by J. Roddick Byers, D. D.

Problems in Vocational Reeducation of Disabled Men, by C. A. Prosser, Ph. D.

The question of training disabled ex-service men who are still in hospitals is being given consideration by various organizations and especially by the American Legion, which at the annual-convention in 1919 appointed a committee on hospitalization for sick and disabled ex-service men and women. The report of this committee laid special emphasis upon the training of neuropsychiatric cases, declaring "No class of men disabled in war is more in need of occupational therapy and reeducation which will provide a basis for an honorable vocation than the man suffering from mental disorders."

#### Statistical summary of training centers.

Hospital training in—	Oct. 1, 1920.		Aug. 31, 1920.			
	Centers.	Staff.	Enrolled.	Assigned.	Bureau War Risk Insurance patients in hospitals.	Percentage of available patients enrolled.
United States Public Health Service Hospitals.....	24	123	1,557	2,708	6,400	57
National soldiers' homes.....	6	32	337	378	835	80
State, county, and city hospitals.....	9	34	282	298	1,109	94
Private sanatoria.....	27	45	885	728	1,154	81
Community training centers.....	16	36	434	639	1,350	69
Total.....	82	260	2,902	4,751	10,595	67

*Comparison of monthly reports.*

	Centers.	Staff.	Enrolled.	Assigned for training.	Bureau War Risk Insurance patients in hospitals.	Percent- age of available patients enrolled.
1920.						
February.....	3	5	95	109	915	37
March.....	6	24	229	520	1,129	44
April.....	7	41	456	670	1,731	68
May.....	16	98	846	1,303	2,791	65
June.....	25	141	1,396	1,961	3,686	71
July.....	51	194	2,543	3,507	8,739	72.5
August.....	68	231	3,202	4,751	10,595	67

**TRAINING IN TRADES AND INDUSTRIAL PURSUITS—PLACEMENT  
TRAINING.**

The best facilities for training disabled men for occupations in trade and industrial lines have been found in shops, mills, and factories, where the opportunity for employment is reasonably sure to be available at the completion of the training. Of the 18,000 or more who are in training for this kind of employment more than 50 per cent are "on the job"—learning by doing. The others are taking preparatory training in technical schools with a view to finishing up "on the job" or merging the training into employment.

While "placement training" is a very practical and effective method of acquiring skill in these pursuits, close and constant supervision is necessary to insure the desired results. There is a natural tendency in productive establishments to give first consideration to output and to treat the training as incidental thereto. It is somewhat difficult to reverse entirely this order of things and place the emphasis on learning rather than on production, but notwithstanding this apparent difficulty, experience up to this time shows that the men who have been trained "on the job" are more readily placed in employment than those who were trained in schools or on nonproductive operation.

The larger portion of the costs of training men "on the job" is necessarily for supervising, but is found to be fully compensated by the results obtained. A shorter length of time is required, and the training will in most cases merge into employment in the same establishment or with the same concern where the man learns, whereas if trained in an educational institution a period of "adjustment to working conditions" is necessary, during which time such questions as "a fair wage" will arise and sometimes present difficult problems to adjust satisfactorily.

Placement training is feasible and preferable in some cases for other pursuits, but it is more generally and fully applicable to indus-

trial and trade pursuits than to any other general lines. Facilities and opportunities for this type of training are coextensive with the opportunities for employment in the same lines, and therefore at once training and employment may be arranged for.

Of the various types of employment included in the classification "Trade and industrial," more disabled men have chosen auto mechanics and the various machine shop operations than any of the other lines. As these are more or less stable lines, no difficulty is anticipated in securing employment at the conclusion of training.

### INDUSTRIAL RELATIONS.

In the two years since the Board has been handling the rehabilitation of disabled soldiers more than 12,000 men have been placed with industrial concerns for training, and a fourth of that number have entered upon employment with such concerns, and notwithstanding the disturbed industrial conditions of the country no difficulty has been encountered in securing for disabled ex-service men every consideration from employers and labor groups.

The Board has received many offers of opportunities from employers to train and employ the disabled ex-service men. Many resolutions from labor unions express willingness and desire to cooperate to the fullest extent. One of the largest labor organizations offers free membership to disabled men who have been trained by the Board. Others have offered to waive their apprenticeship rules where they have agreements with employers, so that these men may be given the training which best suits their circumstances without the interference of any other consideration.

This attitude of employers and of labor organizations of the country is due to some extent to the fact that in the beginning of the work the Board announced a policy of absolute neutrality in industrial controversies and has kept all parties informed, especially in the industries and in the localities where disabled men have been placed, of its policy and activities.

Miscellaneous No. 38 was drafted and sent out to National Association of Manufacturers, chambers of commerce, and the American Federation of Labor. This publication, excerpts from which are quoted below, forms the foundations of the Board's industrial policy.

Every effort will be made to assist the disabled man toward that occupation in which he is most interested and for which, because of his aptitude and experience on the one hand and his handicap on the other, he is best suited. In order to utilize previous knowledge and skill the disabled man will be advised—other things being equal—to elect training, should he need it, for the industry, business, or pursuit in which he was engaged before the war, or for one akin to it.

As a general policy, a handicapped man will not be directed toward an overcrowded or a waning occupation in which present or future competition might make permanent employment uncertain. In order, however, to realize fully upon the man's interest and ability, he will be given the widest possible range of choice among those desirable occupations in which, in the light of the best medical and vocational knowledge available, he can, with his special handicap, successfully engage. In this connection, the Board will seek advice from those experts in the hospitals who have effected the man's physical rehabilitation.

The disabled man will be given his preliminary training in a variety of ways. As far as possible existing facilities will be utilized. While the plant, equipment, and staff of existing schools and colleges will, in many instances, be used, there will have to be in many cases special arrangements to meet the needs of the disabled man. Manufacturing establishments, offices, and farms will be employed to give preliminary training, especially for those occupations not yet regarded as being within the school or college field. In every case, however, the Federal Board will require the courses of instruction to be adapted to the interests and needs of the disabled man, to be definitely planned for him as a learner, and to be arranged or approved, as well as to be inspected and supervised, by its agents.

The aim of the Board will always be to direct the disabled man toward and to provide him with, training for an occupation in which he can become as proficient as the normal man, yet it must not be overlooked that some of the disabled men will not become fully competent to earn the prevailing wage. Therefore, where a disabled man is unable, because of his handicap, to earn the full prevailing wage for his occupation, an adjustment in accordance with the rules and regulations of the shop is to be made. Where working agreements are in effect between employers and employees, the regulations thereof shall govern the procedure in adjusting such partial wages. Where there are no such facilities, the adjustment is to be made by conference between the man, his employer, and a representative of the Federal Board. It should be fully understood that the disabled man himself, as a free contracting agent, may in every case accept or reject any terms or scale proposed.

The disabled man should, however, receive equal pay for equal work, and under no circumstances will a wage for a disabled man be approved by the Federal Board where it appears that decreases have been made because he is receiving a compensation for his injury from the Government.

## **STATE BOARDS OF ADMINISTRATION OF WORKMEN'S COMPENSATION ACTS.**

### **RELATION TO THE FEDERAL BOARD.**

The relationship between the Federal Board and the various State boards administering the workmen's compensation acts can best be explained by taking into consideration the general intent and ultimate purposes and objects to be gained by these respective agencies. Under the law governing the rehabilitation of disabled soldiers and sailors the intent or ultimate objective is to train the disabled ex-service man in such a manner that he will be enabled to carry on successfully in some gainful occupation in civil life.

The trainee receives training in some school, college, or institution of learning or placement training in some trade, industry, or business, and after being trained the law requires that the man be placed in successful employment. In many instances, if the man has received institutional training there is a period of placement training necessary to fit the trainee so that he can successfully carry on in his vocation.

In either event the trainee is in the status of a learner, beginner, student, or in a state of placement training in the industry before actually being placed in employment by the Federal Board and discontinued as a trainee. When the trainee enters industrial activities as a producer he comes under the provisions of the workmen's compensation laws, and it is necessary to take into consideration the intent of these laws and avoid conflict. The intent of the workmen's compensation law is "to pay compensation to employees who are injured by accident arising out of and in the course of employment," and the law extends only to employees. The following question is immediately raised, "Is the Federal Board trainee an 'employee' and subject to the provision of the act?"

Conferences have been held with the various State boards of administration of the workmen's compensation acts of the 41 States which have laws in operation; in two States, Georgia and Missouri, the law is not yet in force, and in Arkansas, Florida, Mississippi, North Carolina, and South Carolina no laws have been passed.

All of the States with one exception have given a ruling on this question of status of vocational trainees and agree on the following: Trainees who receive training in educational institutions are not employees of such institutions and have no rights under the workmen's compensation acts. Trainees receiving training in business or industry who receive no wages and where there is no actual contract of hire or employment are not employees and have no rights under the compensation act. Trainees receiving training in business or industry who receive wages (either large or small) are employees, and if injured by accident arising out of and in the course of such training (employment) will receive compensation under the compensation laws. Pennsylvania rules that wages are not necessary, and that the trainee comes under the act by entering into industrial training.

The employer generally comes under the provisions of the compensation laws. In many States the law is compulsory; when elective, he usually elects to come under its provisions, since he is thus made free from damage suits. Such suits are not permitted if compensation laws are in force. The employer can also in this manner insure his employees and usually desires the protection for himself



and his employees afforded by the act. The employer quite naturally does not wish a new status created among employees, and while he has no objection to placing a man in employment who comes under the law, and is protected by its provisions, he might have serious objection to permitting the freedom of his shop or industry to students, learners, or beginners who if injured would make him liable for damages.

This objection can readily be overcome by creating the status of employee by the management actually hiring the trainee for wages. In many of the industries where apprentices or beginners are employed the trainee is placed upon entrance at beginner's wages and immediately comes under the provisions of the law.

## **PART VI.**

### **STATISTICAL TABLES AND STUDIES.**

The statistical tables and studies included in this part of the annual report covering the activities of the rehabilitation division represent several independent tabulations. Tables 1 to 10 are based upon central office records as of June 30, 1920; Tables 11 to 17 upon the periodical district office reports during the fiscal year ended June 30, 1920; and Tables 18 to 21 upon special reports secured from the district offices as of September 15, 1920. Table 22 is a list of the 1,696 educational institutions providing systematic training for Federal Board men, and Table 23 is a list of the 8,557 industrial establishments providing rehabilitation training during the fiscal year ended June 30, 1920. Table 7 represents a special central office study of 2,054 cases selected at random from central office files and tabulated to show the educational background upon which special lines of vocational training have been approved by the Federal Board; Table 8, a central office study of 4,976 amputation cases.

It should be pointed out that tabulations based upon the central office records and representing the status of cases on any given date will not produce identical figures with tabulations for the same date based upon district office reports. The explanation of the discrepancy in these two entirely independent sets of figures is that district office reports represent the status of cases in the district office on the date of the report, and the central office figures represent the status of cases in the central office on the same date. On any given date certain cases are in process of being reported to central office on individual case report forms. Such cases are not covered by central office figures, but are included in the district office reports for that date. Furthermore, the process of completing the individual report forms for forwarding to central office necessarily involves in many cases some delay. This is especially true in the case of initiations of training and closures. Completion of forms on which district offices report initiations and closures to central office in individual cases frequently occupies a considerable period. Men are therefore reported as in training or as having discontinued training by the district office, in some cases several days or even weeks, before the individual report is on file in central office. It will be found that figures representing tabulations of the district office reports are generally in excess of the corresponding figures based upon central office records for the reasons which have just been indicated. In any period such

as that covering the close of the school year, however, when discontinuances of training outnumber initiations, the number reported by the districts in active training will fall below the number shown by central office records.

In the early period of activities of the Federal Board under the rehabilitation act, district offices were instructed to register the names of all disabled men brought to their attention from any source whatever. The principal sources from which names were secured were the Bureau of War Risk Insurance, the Red Cross, the exchange offices of the Department of Labor, hospitals, the disabled men themselves and their friends, relatives, and comrades. The policy was adopted by the Board from the beginning of registering the name of every man who might possibly be found upon investigation to be a case eligible for rehabilitation. As a result of this policy, consistently followed throughout the first year, there was a considerable amount of duplication of registrations in the 14 district offices. Every effort was made to avoid this duplication of registrations, but it was felt to be far more important that no disabled man should escape registration than that the possibility of duplicate registration of the name of any man in two separate offices, or from two or more independent sources, should be avoided. It has been pointed out in the text of this report that many thousands of men were discharged with disabilities from Army and Navy hospitals before the Federal Board was authorized to enter the hospitals for the purpose of securing complete records regarding these men. Men discharged in this early period were moving about from one section of the country to another freely, the same man being frequently reported to the Federal Board from various sources and in different localities in the several district offices of the Board. So far as possible duplicate registrations arising under these conditions were cleared through the central office, but in considerable number they accumulated in the district office reports and were carried on from week to week in reports of totals to central office. These duplications and also registrations of cases with which it had been found to be impossible to establish any sort of contact were cleared from the district office records by a special audit of files on March 23, 1920. The effect of this audit was in the case of the districts generally to reduce the net registrations and other accumulated totals and to increase slightly the number of men in training on the date of the audit. The effect of the audit on the accumulated figures is shown in Table 2. It is believed that the district office reports following this audit of files represent fairly the status of cases in the district offices, although undoubtedly errors and duplications will be uncovered in these district office reports in the final auditing of their files.

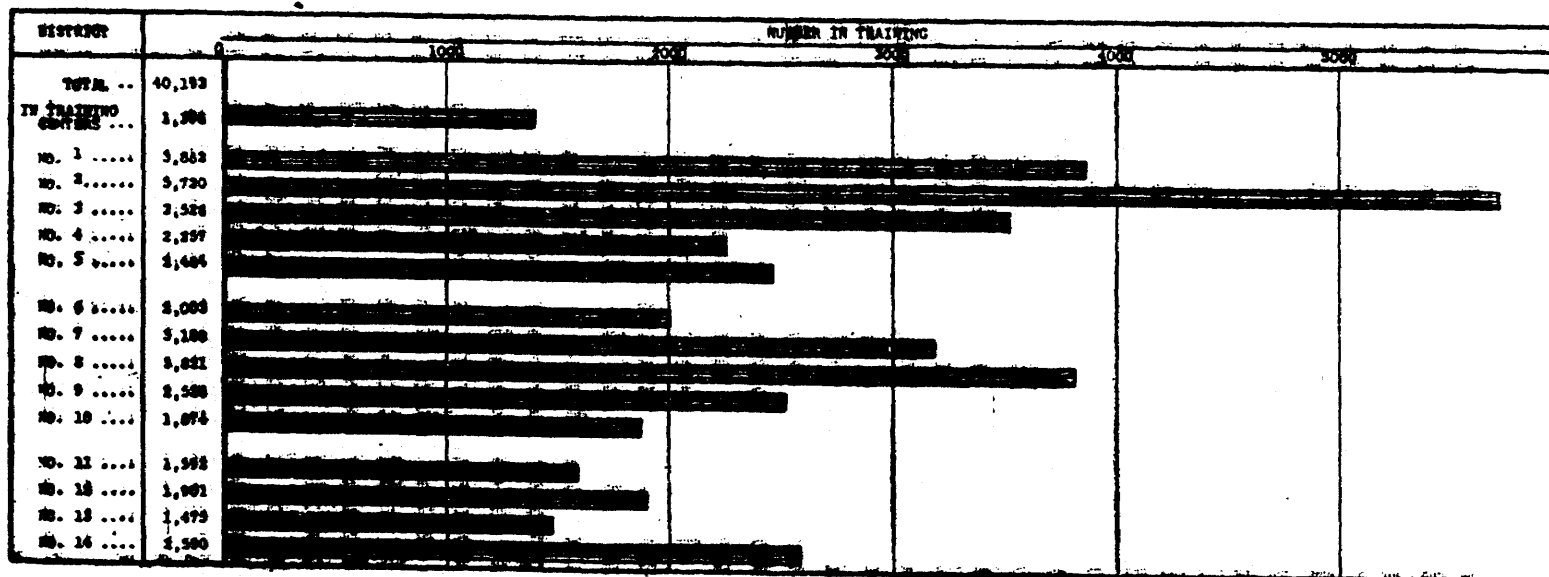


DIAGRAM X.—Number in training June 30, 1920, by districts.

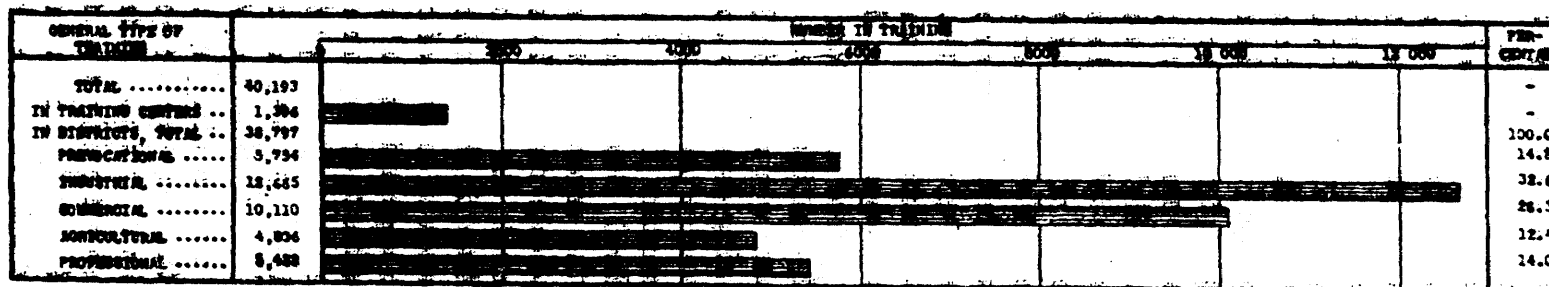


DIAGRAM XI.—Number in training June 30, 1920, classified by general type of training.

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TABLE 1.—Number of trainees classified by general types of training, by districts, June 30, 1920.

District.	Total.	General types of training.				
		Prevoca- tional.	Indus- trial.	Commer- cial.	Agricul- tural.	Profes- sional.
Total.....	40,193					
In training centers.....	1,390					
In districts:						
Number.....	38,797	5,754	12,605	10,110	4,836	5,432
Percentage.....	100.0	14.8	32.6	26.3	12.4	14.0
District:						
No. 1.....	3,862	360	1,462	1,213	269	558
No. 2.....	5,720	692	1,998	1,638	335	757
No. 3.....	3,526	864	1,185	815	231	431
No. 4.....	2,257	310	769	630	259	289
No. 5.....	2,464	426	620	577	522	319
No. 6.....	2,003	450	525	359	402	207
No. 7.....	3,186	437	1,198	845	318	478
No. 8.....	3,821	514	1,312	1,084	411	500
No. 9.....	2,526	171	772	629	429	525
No. 10.....	1,874	248	622	427	315	262
No. 11.....	1,592	211	467	398	277	239
No. 12.....	1,901	105	611	503	243	379
No. 13.....	1,475	200	427	361	280	297
No. 14.....	2,590	406	787	631	485	281

<sup>1</sup> Not classified by general type of training.

TABLE 2.—Number of trainees, by months, for year ended June 30, 1920.

Period.	In period specified.				Net in- crease for period.	In train- ing at end of period.	Cumulated totals to end of period.			
	En- tered train- ing.	Dis- con- tinued train- ing.	At- tain- ed em- ploy- ment objec- tive.	Re- sumed train- ing after dis- contin- ing.			En- tered train- ing.	Dis- con- tinued train- ing.	At- tain- ed em- ploy- ment objec- tive.	Re- sumed train- ing after dis- contin- ing.
Since organization to June 30, 1919.....	3,606	357	46	.....	3,203	3,203	3,606	357	46	.....
Fiscal year 1919-20:										
July 1 to July 26.....	1,328	131	31	.....	1,166	4,369	4,034	488	77	.....
July 27 to Aug. 23.....	2,477	228	58	.....	2,191	6,560	7,411	716	135	.....
Aug. 24 to Sept. 27.....	2,664	306	69	.....	2,466	9,026	10,275	1,045	204	.....
Sept. 27 to Oct. 25.....	5,357	423	34	187	5,067	14,113	15,632	1,468	238	187
Oct. 26 to Nov. 29.....	5,392	522	26	128	4,972	19,085	21,024	1,990	264	315
Nov. 30 to Dec. 27.....	2,630	465	23	126	2,268	21,353	23,654	2,455	287	441
Dec. 28 to Jan. 29.....	3,711	607	25	131	3,210	24,563	27,365	3,062	312	572
Jan. 30 to Feb. 28.....	2,648	287	19	86	2,428	26,991	30,013	3,349	331	658
By audit of files Mar. 23 <sup>1</sup> .....						30	-773	-961	-38	-196
Feb. 29 to Mar. 27.....	4,446	942	39	148	3,613	30,634	33,686	3,330	332	610
Mar. 28 to Apr. 30.....	4,240	1,321	177	277	3,016	33,650	37,928	4,654	509	887
May 1 to May 29.....	4,902	1,708	140	299	3,228	36,943	42,828	6,422	649	1,186
May 30 to June 30.....	3,586	1,999	209	478	1,854	38,797	46,414	8,421	858	1,662
Total reported for fiscal year.....	43,581	9,725	850	1,858	55,564					
Total reported since organ- ization.....	47,187	9,382	896	1,858	38,767					
Correction by audit of files Mar. 23, 1920 <sup>1</sup> .....	-773	-961	-38	-196	30					
Total by audit since organization.....	46,414	8,421	858	1,662	38,797					
In training centers June 30, 1919.....					1,390	1,390				
Total in training June 30, 1919.....					40,193	40,193				

<sup>1</sup> A special audit of files in the district offices on Mar. 23, 1920, increased the number of men in training on that date by 30, from 30,604 (number derived by cumulation of district offices periodical reports since organization to Mar. 27, 1920) to 30,634. This increase resulted from changes in the cumulated totals shown in the table.

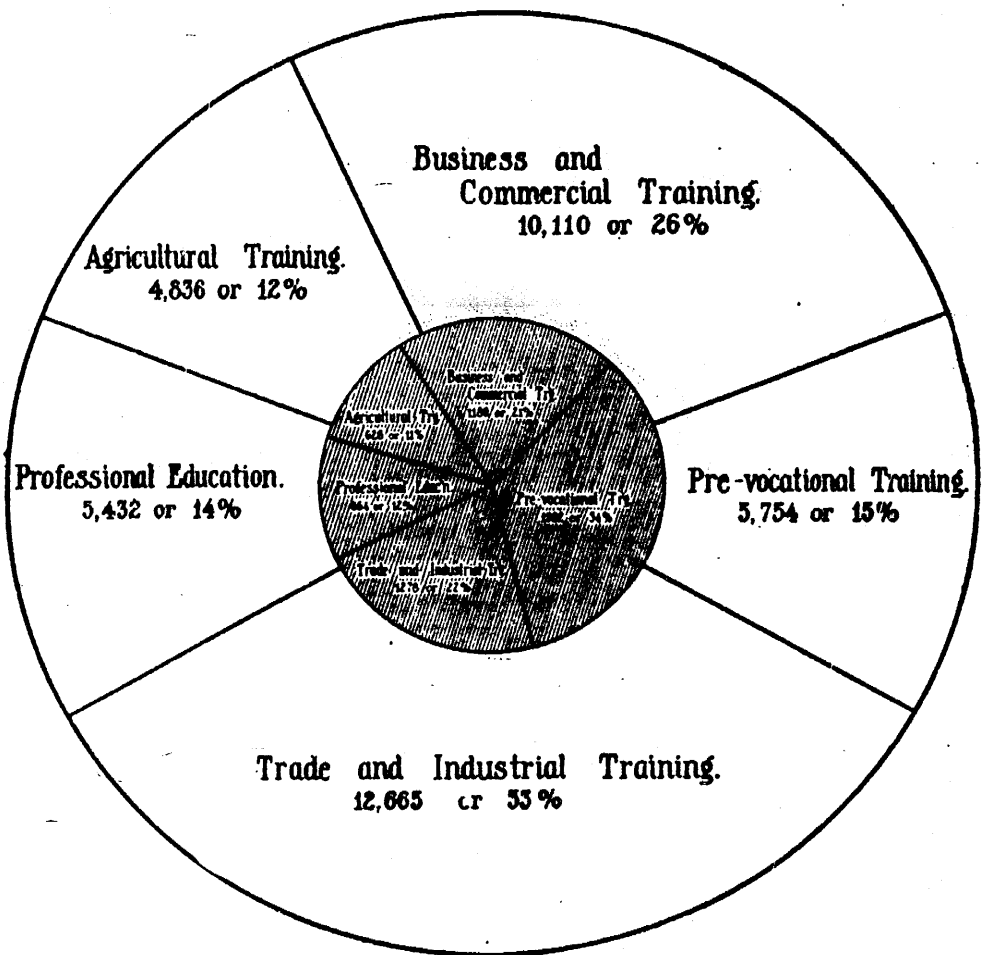


DIAGRAM XII.—Number in training June 30, 1919 (shaded area), and June 30, 1920 (total area of large circle), by general type of training. Does not include 1,398 in training centers June 30, 1920.

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**TABLE 3.—Training agencies: Number of industrial establishments, schools, and colleges providing vocational rehabilitation training for disabled soldiers, sailors, and marines, under direction of the Federal Board for Vocational Education, during the fiscal year ending June 30, 1920, by districts and States.**

District and State.	Number of training agencies.			District and State.	Number of training agencies.		
	Total.	Schools and colleges.	Industrial establishments.		Total.	Schools and colleges.	Industrial establishments.
Total.....	10,253	1,696	8,557	District No. 7.....	955	149	506
District No. 1.....	858	148	710	Ohio.....	618	87	531
Maine.....	65	9	56	Indiana.....	245	42	203
New Hampshire.....	41	7	34	Kentucky.....	92	20	72
Vermont.....	16	4	12	District No. 8.....	924	222	702
Massachusetts.....	695	121	574	Illinois.....	463	128	335
Rhode Island.....	41	7	34	Michigan.....	276	42	234
District No. 2.....	1,367	245	1,122	Wisconsin.....	185	52	133
Connecticut.....	108	29	79	District No. 9.....	527	142	385
New Jersey.....	208	30	178	Kansas.....	73	25	48
New York.....	1,051	186	865	Iowa.....	88	28	60
District No. 3.....	946	153	793	Missouri.....	307	79	228
Delaware.....	14	2	12	Nebraska.....	59	10	49
Pennsylvania.....	932	151	781	District No. 10.....	512	69	443
District No. 4.....	716	93	623	Minnesota.....	378	42	336
Virginia.....	181	26	155	Montana.....	68	10	58
Porto Rico.....	5	2	3	North Dakota.....	46	9	37
Canada.....	6	5	1	South Dakota.....	20	8	12
Hawaii.....	5	2	3	District No. 11.....	496	53	443
West Virginia.....	96	10	86	Colorado.....	359	33	326
Maryland.....	308	24	284	Utah.....	73	8	65
Philippine Islands.....	1	1	.....	Wyoming.....	10	3	7
France.....	1	1	.....	New Mexico.....	54	9	45
District of Columbia.....	113	22	91	District No. 12.....	562	136	426
District No. 5.....	706	96	700	California.....	530	130	400
North Carolina.....	110	13	97	Arizona.....	23	4	19
South Carolina.....	71	12	59	Nevada.....	9	2	7
Georgia.....	347	31	316	District No. 13.....	391	59	332
Florida.....	92	10	82	Washington.....	266	39	227
Tennessee.....	176	30	146	Oregon.....	100	14	86
District No. 6.....	433	39	394	Idaho.....	25	6	19
Alabama.....	147	14	133	District No. 14.....	770	92	678
Mississippi.....	25	7	18	Texas.....	509	47	462
Louisiana.....	261	18	243	Arkansas.....	101	21	80
				Oklahoma.....	160	24	136

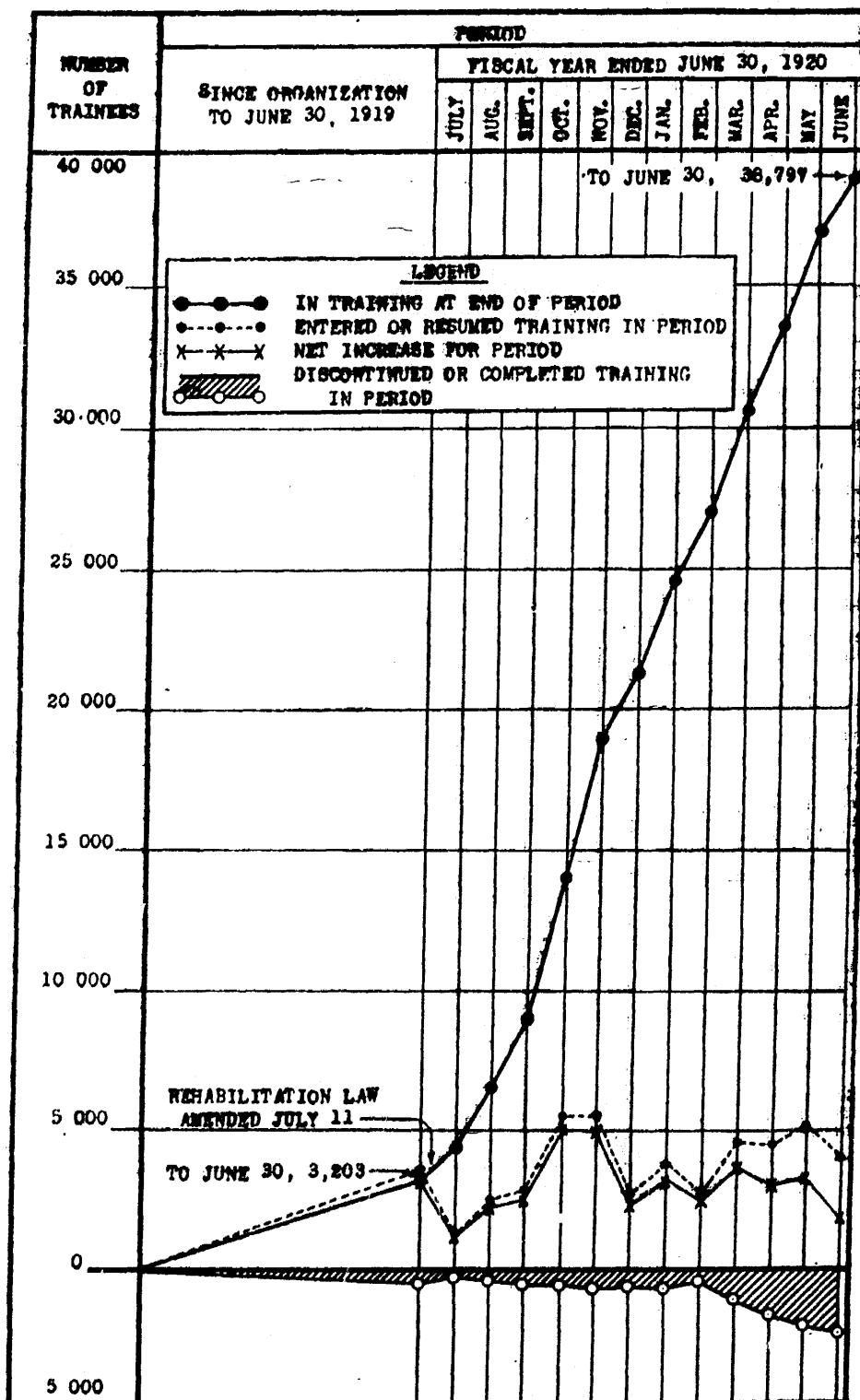


DIAGRAM XIII.—Number entered or resumed training, discontinued or completed training, net increase, and number in training, by months, to June 30, 1920.



TABLE 4.—*Courses pursued by men entered training since organization to June 30, 1920.*

Course.	Number entered course.	Course.	Number entered course.
Total.....	45,218	II. TRADE AND INDUSTRIAL—contd.	
I. Prevocational.....	6,481	E. Food preparation.....	141
II. Trade and Industrial.....	15,559	Baking.....	49
III. Commercial.....	11,661	Candy making.....	8
IV. Agricultural.....	5,397	Canning-factory work.....	4
V. Professional.....	6,150	Coffee blending.....	5
I. PREVOCATIONAL.		Cooking.....	28
Total.....	6,481	Flour milling.....	8
A. Corrective.....	196	Grain testing.....	7
Braille.....	100	Meat cutting.....	20
Lip reading.....	75	Pastry cooking.....	12
Stammering, cure for.....	21	F. Garment and leather trades.....	1,085
B. Fundamental.....	2,637	Cleaning, pressing, and dyeing.....	40
Elementary education.....	1,567	Clothing design and cutting.....	154
English.....	484	Edge trimming (shoes).....	32
Preparatory work.....	582	Garment making (fur, waterproof, etc.).....	42
Review work.....	4	Harness making.....	15
C. Try out.....	3,648	Leather preparation and manufacture.....	20
II. TRADE AND INDUSTRIAL.		Millinery.....	7
Total.....	15,559	Shoe making and repairing.....	549
A. Advertising trades.....	265	Tailoring.....	222
Show-card writing.....	106	G. Manufacturing.....	194
Sign painting.....	111	Auto-top making.....	21
Window trimming.....	48	Cigar making.....	11
B. Building trades.....	892	Dye making.....	5
Bricklaying.....	7	Glass blowing.....	7
Cabinetmaking.....	157	Instrument making.....	23
Carpentry.....	125	Manufacturing (small articles).....	67
Elevator installation.....	1	Model making.....	1
Estimating.....	72	Musical-instrument manufacturing.....	7
General study.....	168	Paper manufacturing.....	6
Heating and ventilating.....	18	Pottery making.....	3
House painting.....	16	Rubber manufacturing.....	4
Masonry, concrete and stone.....	69	Silver plating.....	17
Paper hanging.....	4	Sugar manufacturing.....	8
Plastering.....	2	Typewriter assembling.....	8
Plumbing.....	196	II. Mechanical trades.....	6,462
Road building.....	20	Airplane mechanics.....	5
Steam fitting.....	26	Automobiles:	
Stone cutting.....	11	Auto mechanics.....	2,051
C. Crafts.....	723	Auto driving.....	107
Engraving.....	90	Ignition, starting, and lighting.....	627
Horology.....	189	Vulcanizing and tire repairing.....	412
Jewelry making.....	242	Construction work.....	30
Jewelry and watch repair.....	103	Crane operation.....	20
Lapidary work.....	13	Farm mechanics.....	259
Optics (lens grinding, etc.).....	86	Gas-engine operation.....	36
D. Electrical trades.....	2,102	Machine operation.....	180
Electrician.....	1,658	Machine-shop practice.....	883
Electrical bench work.....	34	Machinist, general course.....	535
Electrical construction.....	3	Marine steam engineering.....	15
Electrical testing and meter work.....	19	Millwright.....	7
Installation.....	199	Motor mechanics.....	156
Motor generator assembly and repair.....	22	Power-plant operation.....	102
Storage-battery work.....	40	Refrigeration.....	28
Switchboard operation.....	20	Safe and lock mechanism.....	5
Telephone and telegraph repairing.....	49	Stationary steam engineering.....	461
Winding, stator, rotor, etc.....	158	Steam firing.....	5
		Tractor operation and repairing.....	357
		Tool design.....	75
		Tool making.....	109
		I. Metal trades.....	624
		Boiler inspection.....	26
		Boiler making.....	9
		Cable splicing.....	5
		Copper working.....	6

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TABLE 4.—Courses pursued by men entered training since organization to June 30, 1920—Continued.

Course.	Number entered course.	Course.	Number entered course.
<b>II. TRADE AND INDUSTRIAL—continued.</b>		<b>II. TRADE AND INDUSTRIAL—continued.</b>	
Die sinking and cutting.....	10	O. Miscellaneous trades and occupations.....	2,074
Forge work.....	30	Barber.....	115
Foundry molding.....	28	Drafting, architectural.....	314
Heat treatment.....	5	Drafting, general.....	1,457
General inspection.....	1	Floral design.....	4
Metal finishing (burnishing, etc.).....	3	Massage work.....	4
Pattern making.....	122	Mining (foremanship, etc.).....	65
Saw filing.....	7	Motion-picture operation.....	40
Sheet-metal work.....	140	Motion-picture manufacture.....	1
Tinsmithing.....	7	Oil refining.....	1
Welding, general.....	17	Spot-light operation.....	1
Welding, electric.....	26	Steward.....	21
Welding, oxy-acetylene.....	183	Taxidermy.....	3
<b>J. Printing trades.....</b>	<b>336</b>	Tobacco inspection.....	3
Bookbinding.....	9	Upholstering.....	43
Linotype operation and repairing.....	167	Waiter.....	2
Lithography.....	26		
Monotype operation and repairing.....	20	<b>III. BUSINESS AND COMMERCIAL TRAINING.</b>	
Paper cutting.....	2	<b>Total.....</b>	<b>11,661</b>
Photoengraving.....	28		
Press operation.....	31	<b>A. Administrative positions (semi-professional).....</b>	<b>6,216</b>
Proof reading.....	1	Accountancy.....	1,110
Printing, general course.....	47	Advertising, general.....	265
Typesetting.....	5	Auctioneering.....	8
<b>K. Railway occupations.....</b>	<b>80</b>	Banking.....	171
Air-brake work.....	20	Business administration.....	910
Car and locomotive work (inspection).....	19	Consular service preparation.....	8
Express messenger.....	1	Detective work.....	15
Locomotive driving.....	13	Employment management.....	3
Railroad building.....	1	Factory management.....	14
Railroad signaling.....	14	Finance.....	22
Railroad yardmaster.....	1	Foreign trade.....	298
Special agent for railroad.....	3	General business course.....	2,003
Station agent.....	2	Hotel management.....	15
Street-car motorman.....	6	Insurance.....	37
<b>L. Repair work.....</b>	<b>177</b>	Investigation work.....	1
Adding machine assembling and repairing.....	19	Library work.....	2
Cash-register repair.....	7	Office management.....	12
Electric-piano repair.....	5	Public-health inspection.....	9
Instrument repair, general.....	15	Real estate.....	41
Elevator operation and repair.....	2	Safety inspection.....	5
Motor cycle repair.....	3	Salesmanship.....	1,064
Piano tuning and repair.....	17	Shop management.....	8
Service man.....	8	Store management.....	20
Sewing-machine repair.....	12	Traffic management.....	145
Talking-machine repair.....	4	Wholesale buying.....	7
Typewriter repair.....	85		
<b>M. Textile work.....</b>	<b>264</b>	<b>B. Subordinate positions.....</b>	<b>4,799</b>
Cotton grading.....	68	Bookkeeping.....	837
Cotton industry.....	23	Civil-service preparation.....	77
Dyeing.....	9	Clerical work.....	92
General textile work.....	99	General commercial course.....	3,429
Lace making.....	6	Office appliance operation.....	10
Loom operation and repair.....	11	Secretarial work.....	165
Weaving.....	33	Shorthand and typewriting.....	178
Wool sorting.....	15		
<b>N. Woodworking and wood-finishing trades.....</b>	<b>140</b>	<b>C. Commercial facilities (business aids).....</b>	<b>646</b>
Artificial-limb making.....	11	Telegraphy:	
Auto and wagon painting.....	55	Commercial.....	175
Furniture making.....	45	Railway.....	30
Wood finishing.....	19	Wireless.....	283
Wood pattern making.....	10	Telephony:	
		Switchboard work.....	10
		Telephone, general.....	25
		Transportation:	
		Aviation.....	4
		Commercial freight.....	3

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TABLE 4.—Courses pursued by men entered training since organization to June 30, 1920—Continued.

Course.	Number entered course.	Course.	Number entered course.
<b>III. BUSINESS AND COMMERCIAL TRAINING—continued.</b>		<b>V. PROFESSIONAL EDUCATION—continued.</b>	
Transportation—Continued		Sanitary engineering.....	7
Navigation.....	45	Structural engineering.....	71
Railway traffic.....	18	Surveying.....	50
Foreign languages:		Textile engineering.....	6
French.....	14		
Italian.....	1	Medical.....	1,494
Spanish.....	26		
<b>IV. AGRICULTURAL TRAINING.</b>		Anesthetics.....	3
Total.....	5,397	Anatomy.....	2
A. General farming courses.....	4,013	Bacteriology.....	37
Agricultural engineering.....	31	Chiropody.....	16
County agent.....	2	Chiropractic.....	45
Farm management.....	105	Dentistry.....	190
General agriculture.....	3,573	Dental mechanics.....	253
Irrigation farming.....	1	Dental surgery.....	24
B. Farm crop and gardening courses	410	Embalming and funeral management.....	127
Agromony.....	35	Eye, ear, nose, and throat.....	67
Berry culture.....	5	Gynecology.....	3
Citriculture.....	11	Hospital work.....	3
Floriculture.....	23	Laboratory work.....	15
General gardening.....	30	Medicine, general practice of.....	283
Horticulture.....	169	Naprapathy.....	1
Landscape gardening.....	45	Neurology.....	3
Plant propagation.....	13	Nursing.....	31
Pomology.....	4	Optometry.....	24
Seed specializing.....	3	Orthopedics.....	5
Sugar-beet culture.....	2	Osteopathy.....	23
Truck gardening.....	64	Pediatrics.....	12
C. Farm-animal courses.....	817	Pharmacy.....	217
Animal husbandry.....	374	Psychology.....	2
Bee culture.....	19	Surgery.....	24
Dairying.....	153	Urology.....	9
Meat inspection.....	14	Veterinary science.....	30
Poultry husbandry.....	229	X-ray science.....	27
Stock grading and buying.....	28		
D. Forestry.....	148	General scientific.....	293
General forestry.....	88	Assaying.....	48
Lumber scaling and grading.....	48	Astronomy.....	1
Tree surgery.....	12	Biology.....	12
E. Fisheries.....	9	Chemistry.....	237
Fish culture.....	5	Entomology.....	2
Fisheries, general study of.....	4	Geology.....	57
<b>V. PROFESSIONAL EDUCATION.</b>		Metallurgy.....	11
Total.....	6,150	Oil technology.....	24
A. Scientific—		Zoology.....	1
Engineering.....	1,741		
Aeronautical engineering.....	7	B. Artistic.....	1,000
Architectural engineering.....	67	Architecture.....	79
Ceramic engineering.....	4	Cartooning.....	50
Chemical engineering.....	4	Commercial designing.....	357
Civil engineering.....	267	Dramatic art and public speaking.....	28
Efficiency engineering.....	2	Interior decorating.....	83
Electrical engineering.....	505	Music, general.....	28
Gas engineering.....	66	Music, instrumental.....	131
Hydraulic engineering.....	2	Music, vocal.....	43
Industrial engineering.....	12	Painting.....	24
Machine design.....	22	Photography, general.....	173
Marine engineering.....	38	Photography, motion-picture.....	28
Mechanical engineering.....	306	Sculpture.....	6
Mining engineering.....	59		
Municipal engineering.....	6	C. Other professional courses.....	1,522
Oil engineering.....	14	Domestic science.....	5
Safety engineering.....	10	Economics.....	43
		General college course.....	134
		Journalism.....	157
		Law.....	816
		Sociology.....	16
		Theology.....	107
		Pedagogical courses:	
		Art teaching.....	1
		Commercial teaching.....	2
		Pedagogy, general.....	156
		Music teaching.....	5
		Manual-training teaching.....	5
		Physical training.....	17
		Playground instructor.....	8

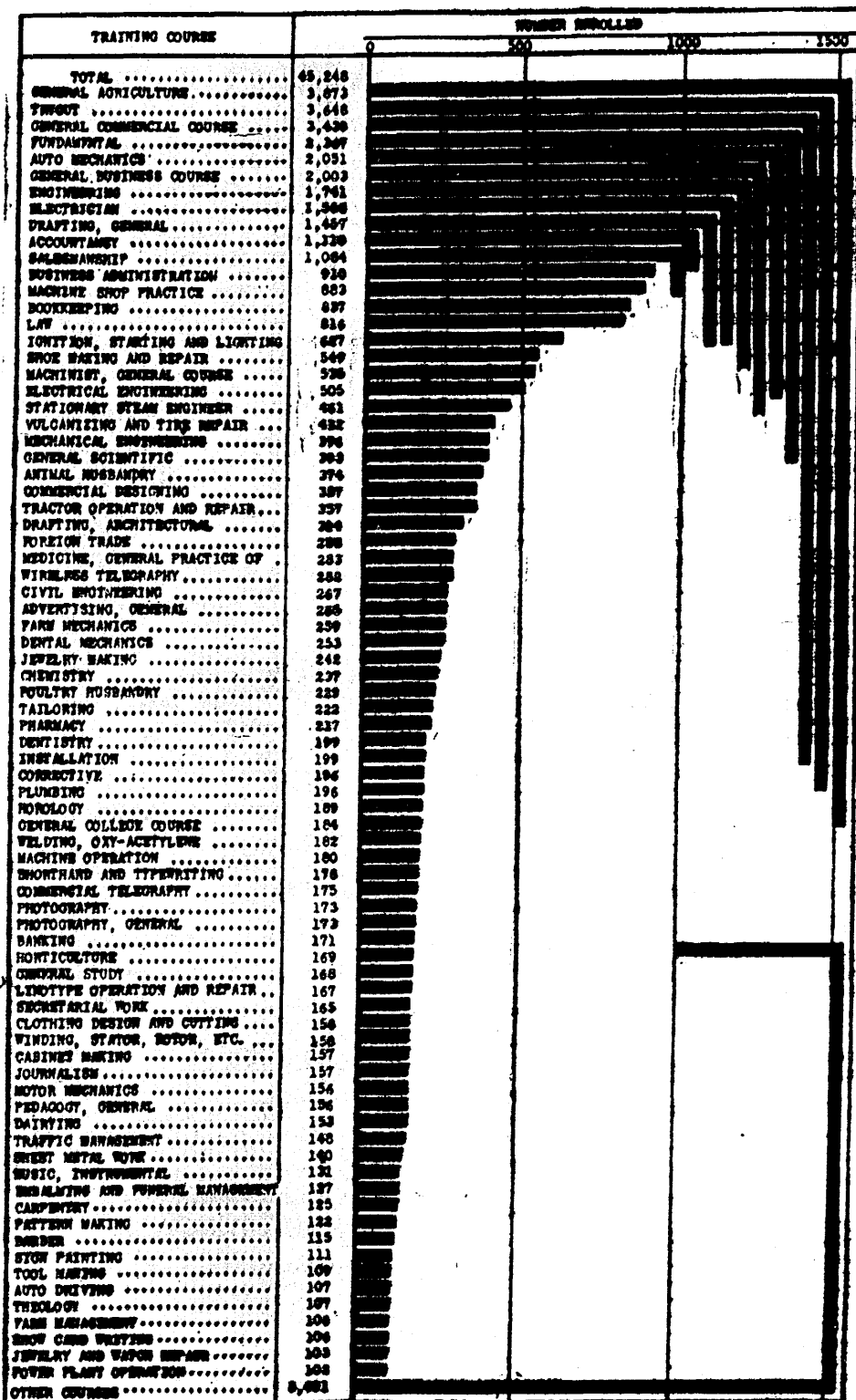


DIAGRAM XIV.—Enrollment in specified training courses for courses registering more than 100 students since organization to June 30, 1920.

**TABLE 5.—Employment objective: Number of occupations for which training is given, classified by general types of training, for the fiscal year ended June 30, 1920.**

General types of training.	Number of occupations.			
	Total.	Usually attained by placement training alone.	Usually attained by institutional training alone.	Attained by either placement or institutional training.
Total.....	252	72	63	117
Trade or industrial.....	128	66	.....	62
Commercial.....	30	6	6	21
Agricultural.....	21	.....	3	21
Professional.....	61	.....	54	19

**TABLE 6.—Employment objective: Occupations for which training is given, classified by general type of placement or institutional training, for the fiscal year ended June 30, 1920.**

Total occupations listed, 252.  
**A. Placement training.**—72 occupations.  
 Employment objective usually attained by placement training alone.

**I. Trade or industrial**—66 occupations.

Air-brake mechanic.  
 Artificial-limb maker.  
 Auto painter.  
 Auto-top maker.  
 Assembler and repair man (on typewriters, adding machines, cash registers, sewing machines, etc.).  
 Baker.  
 Boiler inspector.  
 Bricklayer.  
 Cable splicer.  
 Candy maker.  
 Car inspector.  
 Cigar maker.  
 Construction worker (structural steel, etc.).  
 Cook.  
 Crane operator.  
 Die sinker and cutter.  
 Electric bench worker.  
 Electrical tester and meter worker.  
 Elevator installer and repair man.  
 Estimator, construction work.  
 Floral designer.  
 Flour miller.  
 Forge worker.  
 Foundry molder.  
 Furniture maker.  
 Garment maker.  
 Glass blower.  
 Grain tester.  
 Harness maker.  
 Heating and ventilating expert.  
 Instrument maker.  
 Lace maker.  
 Leather worker.  
 Lens grinder.  
 Lithographer.  
 Loom operator and repair man.  
 Machine operator.  
 Manufacturing, hand, small articles (thermometers, picture frames, leather bags, novelties, etc.).  
 Mason, stone and concrete.  
 Meat cutter.  
 Metal finisher, polisher, enameler, etc.).  
 Millwright.

**A. Placement training**—Continued.

**I. Trade or industrial**—Continued.

Motion-picture operator.  
 Motorman, street-car.  
 Painter (house, wagon, etc.).  
 Paper hanger.  
 Paper manufacturer.  
 Plasterer.  
 Plumber.  
 Potter.  
 Railroad investigator.  
 Railroad yardmaster.  
 Railroad station agent.  
 Road builder.  
 Rubber manufacturer.  
 Safe and lock mechanic.  
 Saw filer.  
 Spot-light operator.  
 Steam fireman.  
 Stone cutter.  
 Sugar manufacturer.  
 Tinsmith.  
 Tobacco inspector.  
 Traffic manager, railway.  
 Upholsterer.  
 Wool sorter.

**II. Commercial**—6 occupations.

Buyer, wholesale.  
 Insurance salesman.  
 Investigation worker.  
 Public health inspector.  
 Real estate agent.  
 Safety inspector.

**III. Agricultural**—(none).

**IV. Professional**—(none).

**B. Institutional training.**—63 occupations.  
 Employment objective usually attained by institutional training alone.

**I. Trade or industrial**—(none).

**II. Commercial**—6 occupations.

Civil-service clerk.  
 Consular agent.  
 Foreign trade agent.  
 Secretary.  
 Stenographer.  
 Typist.

**III. Agricultural**—3 occupations.

Fisheries expert.  
 Plant and soil specialist.  
 Seed specialist.

**IV. Professional**—54 occupations.

Anesthetician.  
 Architect.  
 Bacteriologist.  
 Biologist.

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## B. Institutional training—Continued.

### IV. Professional—54 occupations—Con.

Cartoonist.  
Chemist (includes dyer, laboratory assistant, etc.).  
Chiropractist.  
Chiropractor.  
Commercial teacher.  
Dentist.  
Designer, commercial.  
Engineer:  
Aeronautical.  
Agricultural.  
Architectural.  
Ceramic.  
Chemical.  
Civil.  
Efficiency.  
Electrical.  
Gas.  
Hydraulic.  
Industrial.  
Marine.  
Mechanical.  
Mining.  
Municipal.  
Oil.  
Safety.  
Sanitary.  
Structural.  
Textile.  
Entomologist.  
Geologist.  
Gynecologist.  
Machine designer.  
Manual-training teacher.  
Metallurgist.  
Musician (singer, teacher, etc.).  
Naprathist.  
Nurse.  
Oil technologist.  
Optometrist.  
Orthopedician.  
Osteopathist.  
Painter, portrait.  
Podiatrist.  
Physical trainer (includes playground instructor).  
Physician.  
Surgeon.  
Teacher, general subjects.  
Theologian.  
Urologist.  
Veterinary.  
Zoologist.

## C. Placement or institutional training.—117 occupations. Employment objective attained by either placement or institutional training.

### I. Trade or industrial—62 occupations.

Auto driver.  
Auto electrician (ignition, starting, and lighting expert).  
Auto mechanic.  
Barber.  
Boiler maker.  
Bookbinder.  
Cabinetmaker.  
Carpenter.  
Cleaner, presser, and dyer.  
Clothing designer and grader.  
Contractor.  
Draftsman.  
Electrician.  
Engineer, stationary steam.  
Engineering, marine steam.  
Engraver.  
Farm mechanic.  
Gas-engine operator.  
Horologist (including clock and watch makers and repairers).  
Jewelry maker and repair man.  
Lapidary.

## C. Placement or institutional training—Continued.

### I. Trade or industrial—62 occupations—Continued.

Linotype operator and repair man.  
Locomotive driver.  
Machinist.  
Masseur.  
Milliner.  
Miner and mine foreman.  
Monotype operator and repair man.  
Optician.  
Pattern maker or cutter.  
Photo-engraver.  
Piano tuning and repair.  
Power-plant operator.  
Press operator.  
Printer.  
Proof reader.  
Railroad signalman.  
Refrigeration expert.  
Sheet-metal worker.  
Shoe maker and repairer.  
Show-card writer.  
Sign painter.  
Silver plater.  
Silversmith.  
Steam fitter.  
Steward.  
Storage-battery expert.  
Switchboard operator.  
Tailor.  
Taxidermist.  
Telegrapher (wireless, railway, and commercial).  
Telephone operator.  
Toolmaker.  
Tractor operator.  
Typesetter.  
Vulcanizer and tire-repair man.  
Walter.  
Weaver.  
Welder (electric, oxyacetylene).  
Winder, field and armature.  
Window trimming.  
Wood finisher.

### II. Commercial—24 occupations.

Accountant.  
Advertising expert.  
Auctioneer.  
Banker.  
Bookkeeper.  
Business manager.  
Clerk.  
Commercial traffic expert.  
Detective.  
Employment manager.  
Express messenger.  
Interpreter, for language.  
Librarian.

#### Manager:

Business.  
Employment.  
Factory.  
Hotel.  
Office.  
Shop.  
Store.

Navigator.  
Office appliance operator.  
Salesman.  
Traffic expert, commercial.

### III. Agricultural—21 occupations.

Bee culturist.  
Beet culturist.  
Berry culturist.  
Citriculturist.  
County agent.  
Dairy farmer.  
Farm manager.  
Fish culturist.  
Floriculturist.  
Forester.  
Gardener, truck.

*C. Placement or institutional training—Continued.*

**III. Agricultural—Continued.**

Gardener, general.  
Horticulturist.  
Irrigation expert.  
Landscape gardener.  
Lumber scaler and grader.  
Pomologist.  
Poultry husbandman.  
Stock grader and buyer.  
Stock raiser (animal husbandman).  
Tree surgeon.

*C. Placement or institutional training—Continued.*

**IV. Professional—10 occupations.**

Actor.  
Decorator, interior.  
Dental mechanic.  
Journalist.  
Lawyer.  
Photographer (commercial, motion picture, etc.).  
Sculptor.  
Surveyor.  
Undertaker.  
X-ray specialist.

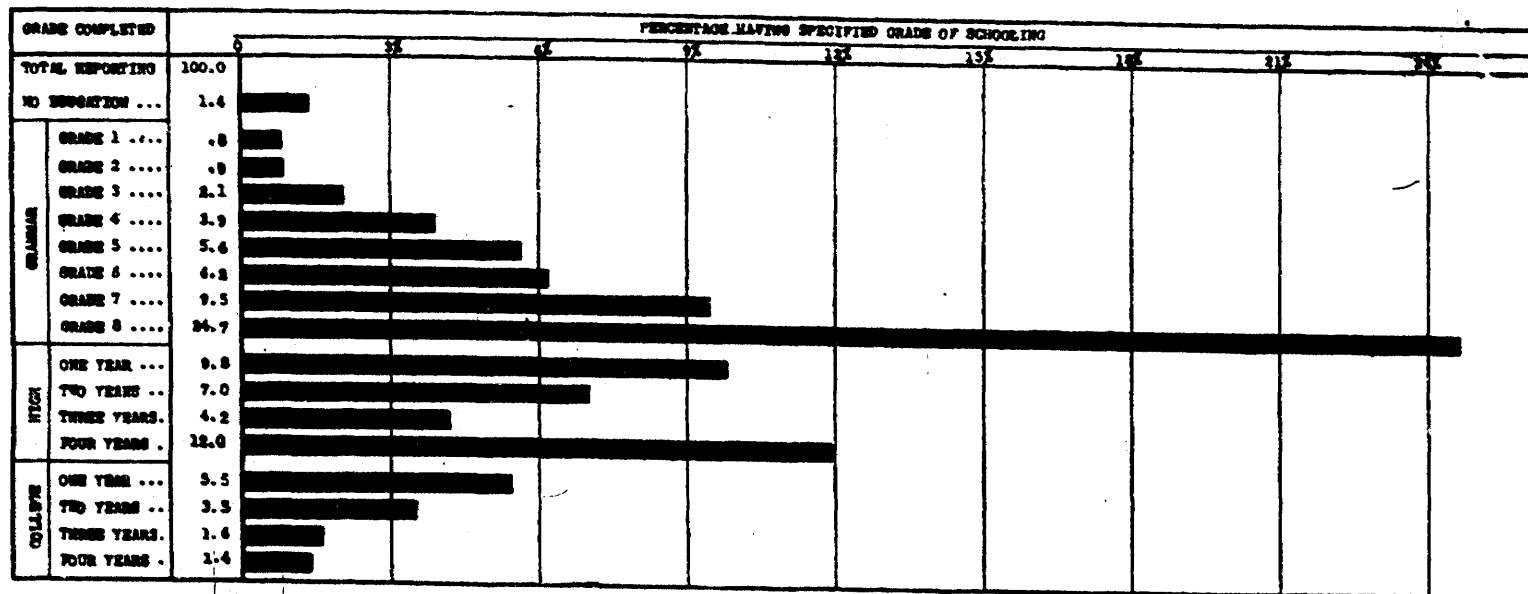


DIAGRAM XV.—Educational background: Percentage distribution of 2,054 training cases selected at random, and classified by grade of schooling completed.



TABLE 7.—Educational background of 2,054 cases, classified by employment objective.

Employment objective.	Total.	No education.	Grade.																Non-report.
			Grammar school.								High school.				College.				
			1	2	3	4	5	6	7	8	9	10	11	12	I	II	III	IV	
Total.....	2,054	24	14	25	47	74	98	108	165	429	171	122	73	208	95	51	17	18	315
Banking.....	95			1			1		5	20	16	7	4	12	3	9	4		13
Secretarial work.....	136				1	1	1	1	6	31	17	19	12	18	4	6		2	17
Electrical bench work.....	163		1	4	6	6	14	14	18	35	18	6	3	5	2		1	1	29
Architectural drafting.....	232				1	2	6	10	20	76	24	22	11	15	6	2	2		35
Mining engineering.....	76				5		1	1	2	6	2	8	2	30	11	7		4	7
Civil engineering.....	184					1		2	2	7	4	8	14	62	30	19	3	6	21
Machine operation.....	156	11	6	3	14	11	14	15	13	22	7	4		4					21
Animal husbandry.....	172	5	3	2	2	0	11	11	17	49	11	5	6	5	5	2		1	32
Dentistry.....	121			10	6	6			1	6			6	5					31
Jewelry making.....	151	2	3	2	4	12	14	14	22	30	2	1	8	39	26				16
Clothing designing and cutting.....	109	4	1	1	2	5	11	6	8	21	10	6	1	6	1			1	19
Telegraphy.....	128					3	7	13	11	48	15	9	3	4	1				26
Horticulture.....	108				3	5	6	6	11	26	9	7	3	8	4	4	2	3	14
Sheet-metal work.....	167	2				6	6	7	11	27	14	7	2	4	1	1			11
Plumbing.....	116			2	3	10	6	8	18	25	12	3		2	1	1			19
														2	1				25
Percentage distribution.																			
Total.....	100	1.2	0.7	1.2	2.3	3.6	4.8	5.2	8.0	20.8	8.3	5.9	3.6	10.1	4.6	2.5	0.8	0.9	15.3
Banking.....	100			1.05			1.05		5.26	21.05	16.84	7.36	4.21	12.63	3.15	9.47	4.21		13.68
Secretarial work.....	100				0.73	0.73	0.73	0.73	4.41	22.80	12.50	13.97	8.82	13.23	2.94	4.41		1.47	12.50
Electrical bench work.....	100		0.62	2.46	3.68	3.68	8.59	8.59	11.04	21.47	11.04	3.68	1.84	3.07	1.28			0.61	17.79
Architectural drafting.....	100				0.40	0.90	2.60	4.30	8.60	32.70	10.30	9.50	4.70	6.50	2.60	9.90	0.90		13.10
Mining engineering.....	100				6.57		1.31	1.31	2.63	7.89	2.63	10.52	2.63	26.31	14.47	9.21		5.26	9.21
Civil engineering.....	100					0.55		1.08	1.08	3.80	2.17	4.35	7.60	33.69	16.30	10.32	4.35	3.26	11.41
Machine operation.....	100	7.10	3.84	1.92	8.97	7.10	8.97	9.61	8.33	14.10	4.48	2.56		2.56					20.51
Animal husbandry.....	100	2.92	1.74	1.17	1.17	3.48	6.39	6.39	9.88	28.49	6.39	2.92	3.48	2.92	2.92	1.17		0.58	18.02
Dentistry.....	100			8.28	4.96	4.96			0.83	4.86	1.65	0.83	6.62	32.23	21.48				13.22
Jewelry making.....	100	1.32	1.88	1.32	2.64	7.94	9.27	9.27	14.56	19.86	6.62	6.62	2.64	2.64				0.66	12.58
Clothing designing and cutting.....	100	3.66	0.91	0.91	1.83	4.58	10.09	5.50	7.33	19.26	9.17	5.50	0.91	5.50	0.91				23.85
Telegraphy.....	100					2.34	5.47	10.15	85.93	37.50	11.72	7.03	2.34	3.12	0.78				10.93
Horticulture.....	100				2.77	4.62	5.55	5.55	10.18	24.07	8.33	6.48	2.77	7.40	3.70	1.85	2.77		10.18
Sheet-metal work.....	100	1.87				5.61	5.61	6.54	10.28	25.24	13.06	6.54	1.87	3.73	0.64	0.64			17.75
Plumbing.....	100			1.72	2.58	3.62	5.17	6.89	15.51	21.55	10.34	2.58		1.72	0.86	0.86			21.55

TABLE 8.—Amputation cases, classified by amputation and by training status. Registrations to June 30, 1920.

[A little the 1,982 men who have not entered training have been offered training. Some of these men are successfully employed, some have deferred training, some have declined training, and in some cases training has been found to be not feasible.]

District or State.	Amputations.								Training status.										
	Total.	Arm.		Double amputation.	Either leg.	Part of foot.	Fingers.		Surveyed but not entered training.	Entered training.									
		Right.	Left.				Right hand.	Left hand.		Total.	In line with previous occupation.	Not in line with previous occupation.	In training.					Discontinued training.	Completed training.
													Prevocational.	Industrial.	Commercial.	Agricultural.	Professional.		
Total.....	4,976	472	552	98	1,865	355	739	895	1,982	2,904	1,158	1,806	244	971	933	345	289	184	58
District No. 1.....	273	31	37	6	85	11	38	63	70	203	97	106	12	83	66	8	16	15	3
Maine.....	18	1	6	1	6	1	2	1	5	13	6	7	1	7	3	1	.....	1	.....
New Hampshire.....	13	.....	3	.....	3	2	.....	5	3	10	4	6	.....	3	4	.....	.....	3	.....
Vermont.....	13	2	1	.....	4	1	3	2	1	12	7	5	1	3	2	.....	1	1	1
Massachusetts.....	208	27	25	4	66	5	29	52	55	153	70	83	9	88	55	7	12	9	2
Rhode Island.....	21	1	2	1	6	2	4	5	6	15	10	5	1	9	1	.....	3	1	.....
District No. 2.....	751	81	90	9	301	47	104	119	199	552	155	397	63	177	206	23	48	39	7
Connecticut.....	84	7	13	1	34	3	8	18	26	58	15	43	8	16	18	7	6	4	.....
New York.....	551	64	65	3	217	40	70	87	146	405	115	290	45	133	153	9	36	22	7
New Jersey.....	116	10	12	.....	50	4	26	14	27	89	25	64	10	28	35	6	7	3	.....
District No. 3.....	479	48	46	5	179	36	81	84	153	326	133	193	25	121	98	17	35	24	6
Pennsylvania.....	473	48	45	5	178	36	79	84	150	323	132	191	25	120	98	17	35	22	6
Delaware.....	6	.....	1	.....	3	.....	2	.....	3	3	1	2	.....	1	.....	.....	2	.....	.....
District No. 4.....	278	29	24	2	114	16	48	45	137	141	49	92	6	52	44	14	3	17	.....
Maryland.....	53	7	3	.....	17	6	9	11	18	35	13	22	1	13	9	2	.....	8	.....
District of Columbia.....	57	8	3	1	37	1	5	2	20	37	12	25	2	13	17	3	1	1	.....
Virginia.....	97	10	9	1	34	7	19	17	51	46	17	29	3	19	9	6	2	5	.....
West Virginia.....	71	4	9	.....	26	2	15	15	48	23	7	16	.....	7	9	3	.....	3	.....

District No. 5.....	416	30	47	4	156	38	60	81	206	210	103	107	20	53	55	52	15	11	4
North Carolina.....	106	13	18	.....	46	3	15	13	54	54	23	31	6	13	14	12	6	3	.....
South Carolina.....	50	2	6	1	17	4	9	11	25	23	11	14	2	6	6	8	1	1	.....
Georgia.....	111	7	8	1	35	14	17	29	42	69	37	32	4	23	12	20	4	4	.....
Florida.....	30	.....	2	.....	10	4	6	8	14	16	11	5	.....	3	5	6	1	1	.....
Tennessee.....	117	8	13	2	48	13	13	20	71	46	21	25	8	8	18	6	3	2	.....
District No. 6.....	285	16	35	9	83	30	49	63	144	141	48	93	26	30	39	28	12	4	2
Alabama.....	126	10	20	5	29	6	25	31	67	59	23	36	10	15	13	13	6	1	.....
Mississippi.....	81	3	5	1	27	16	11	18	36	45	20	25	4	9	14	13	3	2	.....
Louisiana.....	78	3	10	3	27	8	13	14	41	37	5	32	12	6	12	2	3	1	.....
District No. 7.....	448	40	49	10	187	29	59	74	179	209	91	178	13	106	99	36	17	11	6
Ohio.....	250	15	29	5	102	20	33	45	86	164	63	101	11	74	43	16	12	5	.....
Indiana.....	99	9	10	2	49	3	15	11	39	60	18	42	1	20	20	9	3	4	.....
Kentucky.....	99	16	10	3	35	6	11	18	54	45	10	35	1	12	17	11	2	2	.....
District No. 8.....	630	60	67	18	238	49	84	105	264	366	117	249	34	128	112	35	31	22	4
Illinois.....	332	31	35	10	123	31	46	56	152	180	55	125	12	63	60	17	15	12	.....
Wisconsin.....	131	19	17	3	46	7	16	23	52	79	32	47	6	24	25	10	7	5	.....
Michigan.....	167	19	15	5	69	11	22	26	60	107	30	77	16	41	27	8	9	5	.....
District No. 9.....	416	43	45	10	178	25	66	49	191	225	101	124	10	58	71	32	36	12	6
Missouri.....	174	15	24	1	76	12	24	22	65	109	43	66	6	33	36	14	13	6	.....
Iowa.....	121	17	11	4	50	5	15	19	65	56	25	31	2	10	20	8	11	3	.....
Nebraska.....	40	3	2	5	19	1	10	.....	26	14	11	3	.....	2	5	4	1	1	.....
Kansas.....	81	8	8	.....	33	7	17	8	35	46	22	24	2	13	10	6	11	2	.....
District No. 10.....	252	26	24	6	100	24	25	47	117	135	78	57	8	42	46	16	12	9	2
Minnesota.....	141	17	7	3	57	14	16	27	63	78	55	23	6	26	28	8	4	4	.....
North Dakota.....	38	2	6	2	16	2	3	7	16	22	8	14	1	8	6	2	3	2	.....
South Dakota.....	33	2	7	.....	12	2	5	5	21	12	8	4	.....	3	4	3	.....	.....	.....
Montana.....	40	5	4	1	15	6	1	8	17	23	7	16	1	5	8	3	5	1	.....
District No. 11.....	79	11	10	1	19	5	16	17	25	54	26	28	3	16	13	13	2	5	2
Wyoming.....	13	.....	3	.....	5	2	1	4	6	7	4	3	.....	1	.....	4	.....	2	.....
Colorado.....	34	8	2	.....	8	3	5	8	10	24	9	15	.....	7	8	5	2	2	.....
Utah.....	13	.....	.....	.....	4	.....	5	4	5	8	7	1	1	3	2	1	.....	.....	.....
New Mexico.....	19	3	5	1	4	.....	5	1	4	15	6	9	2	5	3	3	.....	1	.....
District No. 12.....	160	12	17	2	71	8	26	24	68	92	37	55	7	27	28	11	7	9	3
California.....	150	12	15	2	66	7	24	24	63	87	36	51	7	27	26	10	7	8	.....
Nevada.....	3	.....	.....	.....	1	1	1	.....	2	1	.....	1	.....	.....	.....	.....	.....	.....	.....
Arizona.....	7	.....	2	.....	4	.....	1	.....	3	4	1	3	.....	.....	2	1	.....	.....	.....

TABLE 8.—Amputation cases, classified by amputation and by training status. Registrations to June 30, 1920—Continued.

District or State.	Amputations.									Training status.									
	Total.	Arm.		Double amputation.	Either leg.	Part of foot.	Fingers.		Surveyed but not entered training.	Entered training.									
		Right.	Left.				Right hand.	Left hand.		Total.	In line with previous occupation.	Not in line with previous occupation.	In training.					Discontinued training.	Completed training.
													Prevocational.	Industrial.	Commercial.	Agricultural.	Professional.		
District No. 13.....	113	10	10	8	40	4	16	25	43	70	21	49	4	18	18	14	10	4	2
Washington.....	63	7	6	3	25	3	6	11	22	41	12	29	2	11	10	10	3	2	1
Oregon.....	27	3	1	2	8	.....	9	4	9	18	8	10	.....	6	5	3	3	1	.....
Idaho.....	23	.....	3	3	7	1	1	8	12	11	1	10	2	1	3	1	12	1	1
District No. 14.....	396	26	51	8	114	33	67	97	196	210	132	108	13	60	57	47	15	12	6
Texas.....	201	13	25	6	62	10	37	49	90	121	48	73	8	38	32	25	8	7	3
Arkansas.....	69	2	10	.....	17	9	15	16	40	29	19	10	.....	8	8	8	3	1	1
Oklahoma.....	126	12	16	2	35	14	15	32	66	60	35	25	5	14	17	14	4	4	2

## TOTAL, UNITED STATES.

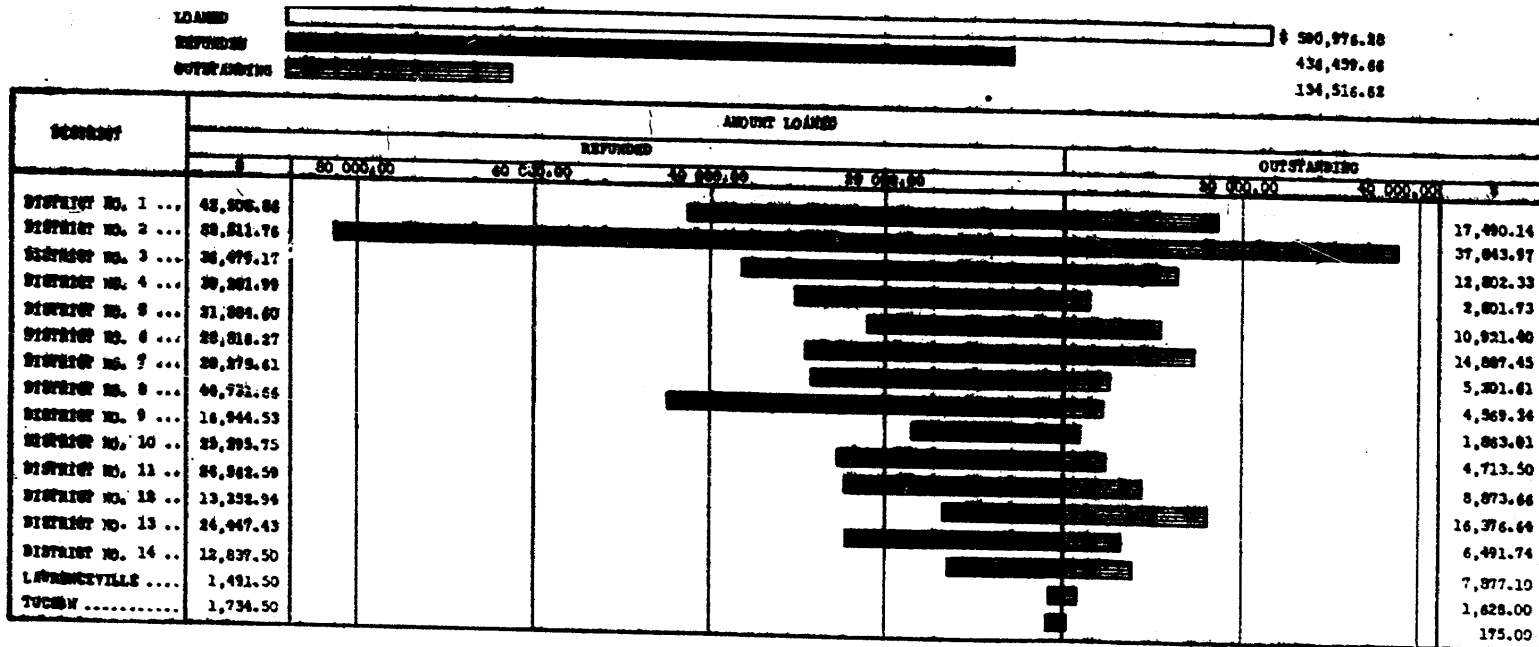


DIAGRAM XVI.—Elks and American Red Cross loans and refunds to June 30, 1920.

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TABLE 9.—*Elks' War Relief Commission fund and American Red Cross fund, loans, and refunds to June 30, 1920.*

	Number of loans.	Number of borrowers.	Amount of loans.	Refunded.	
				Amount.	Per cent.
Total.....	34,354	14,953	\$590,976.28	\$436,459.66	73.8
Elks' fund, Mar. 5, 1919, to June 30, 1920.....	29,442	12,248	519,064.20	411,110.32	79.2
American Red Cross fund, Apr. 12, 1920, to June 30, 1920.....	4,912	2,705	71,922.08	125,349.34	135.2

<sup>1</sup> The relatively smaller amount refunded by the American Red Cross fund loans is explained by the fact that all of these loans were of recent date.

TABLE 10.—*Elks' War Relief Commission fund and American Red Cross loans and refunds to June 30, 1920, by districts.*

[Period: Elks' fund, from Mar. 5, 1919, to June 30, 1920; Red Cross fund, from Apr. 12, 1920, to June 30, 1920.]

District.	Number of loans.			Number of borrowers.		
	Total.	Elks' fund.	Red Cross fund.	Total. <sup>1</sup>	Elks' fund.	Red Cross fund.
Total.....	34,354	29,442	4,912	14,953	12,248	2,705
District:						
No. 1.....	3,721	3,000	721	1,844	1,452	392
No. 2.....	5,635	4,376	1,259	2,703	1,956	747
No. 3.....	3,714	2,298	1,416	1,772	1,113	659
No. 4.....	2,120	2,120	.....	847	847	.....
No. 5.....	1,911	1,606	306	815	606	210
No. 6.....	2,411	2,411	.....	932	932	.....
No. 7.....	2,196	2,196	.....	828	828	.....
No. 8.....	2,645	2,410	235	878	724	154
No. 9.....	1,156	1,156	.....	520	520	.....
No. 10.....	2,001	2,001	.....	798	798	.....
No. 11.....	2,529	2,061	468	970	724	246
No. 12.....	1,437	1,185	252	706	576	129
No. 13.....	1,794	1,539	255	719	651	168
No. 14.....	868	868	.....	567	567	.....
Lawrenceville <sup>1</sup> .....	102	102	.....	17	17	.....
Tucson <sup>2</sup> .....	54	54	.....	38	38	.....

District.	Amount of loans.			Refunded.			
	Total.	Elks' fund.	Red Cross fund.	Total.		Elks' fund.	Red Cross fund.
				Amount.	Per cent.		
Total.....	\$590,976.28	\$519,064.20	\$71,922.08	\$436,459.66	73.8	\$411,110.32	\$25,349.34
District:							
No. 1.....	59,099.00	51,467.00	8,532.00	42,508.86	70.7	40,497.86	2,011.00
No. 2.....	120,655.73	99,378.23	21,277.50	82,611.76	68.7	76,405.26	6,406.50
No. 3.....	49,281.50	31,145.50	18,136.00	36,479.17	73.8	28,499.50	7,999.67
No. 4.....	33,063.72	33,063.72	.....	30,281.99	91.6	30,281.99	.....
No. 5.....	32,806.00	26,435.00	6,371.00	21,994.60	66.6	19,449.93	2,434.67
No. 6.....	43,703.72	43,703.72	.....	28,616.27	66.0	28,616.27	.....
No. 7.....	33,490.22	33,490.22	.....	28,278.61	84.4	28,278.61	.....
No. 8.....	49,301.00	46,420.00	3,871.00	44,731.66	90.6	42,820.66	1,911.00
No. 9.....	18,807.54	18,807.54	.....	16,944.53	90.1	16,944.53	.....
No. 10.....	30,009.25	30,009.25	.....	25,295.75	84.3	25,295.75	.....
No. 11.....	32,426.25	28,265.75	5,070.50	24,562.59	73.3	22,792.59	1,770.00
No. 12.....	29,729.58	28,610.80	4,118.08	12,332.94	45.0	12,107.94	1,245.00
No. 13.....	30,999.17	26,394.17	4,545.00	24,447.43	77.8	22,865.93	1,581.50
No. 14.....	20,714.60	20,714.60	.....	12,857.50	62.0	12,857.50	.....
Lawrenceville <sup>1</sup> .....	3,119.50	3,119.50	.....	1,491.50	47.9	1,491.50	.....
Tucson <sup>2</sup> .....	1,909.50	1,909.50	.....	1,734.50	90.7	1,734.50	.....

<sup>1</sup> Separately reported in District No. 2.

<sup>2</sup> Separately reported in District No. 12.

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TABLE 11.—*Summary of progress of cases since organization to June 30, 1920 and 1919, and in the fiscal year ended June 30, 1920.*

(Data tabulated from district office reports.)

Action taken.	Since organization.		In fiscal year ended June 30, 1920.
	To June 30, 1920.	To June 30, 1919.	
Contact established.....	207,724	108,324	99,400
Surveyed by medical officer.....	126,922	34,407	92,515
Surveyed by vocational adviser.....	151,553	89,560	61,963
Approved as eligible.....	107,846	7,994	99,852
Disapproved as to eligibility.....	2,218	814	1,404
Dropped after investigation.....	19,910	1,206	18,702

<sup>1</sup> Not separately reported.

TABLE 12.—*Number in training, by districts, June 30, 1920.*

(Data tabulated from district office reports.)

Class of training.	Total.	District No.						
		1	2	3	4	5	6	7
Total.....	38,061	3,543	5,590	4,077	2,134	2,168	1,664	2,935
Institutional.....	28,163	2,713	4,278	3,169	1,420	1,563	1,235	1,871
Under Section II.....	23,622	2,497	3,863	2,850	1,128	1,333	1,147	1,410
Under Section III.....	1,403	200	410	315	248	279	85	460
Under Section VI.....	104	2	1	1	43			
Elks, foreign, etc.....	31	14	4	3	1	1	3	1
Placement.....	9,898	830	1,311	908	714	605	419	1,064
Under Section II.....	9,871	828	1,310	908	710	605	418	1,063
Elks, foreign, etc.....	27	2	1		4		1	1

Class of training.	District No.							
	8	9	10	11	12	13	14	Blind.
Total.....	4,546	2,307	1,699	1,771	2,285	1,207	2,036	120
Institutional.....	3,452	1,868	1,203	1,264	1,835	865	1,329	98
Under Section II.....	2,088	1,549	1,099	1,036	1,576	752	1,199	95
Under Section III.....	1,353	318	104	187	254	109	130	1
Under Section VI.....	11			40	5			1
Elks, foreign, etc.....		1		1		1		1
Placement.....	1,094	439	486	507	450	342	707	22
Under Section II.....	1,093	437	485	506	447	342	698	21
Elks, foreign, etc.....	1	2	1	1	3		9	1

NUMBER	NUMBER IN TRAINING						
	INSTITUTIONAL				CLASS OF TRAINING	PLACEMENT	NUMBER
	20 000	15 000	10 000	5 000		5 000	
28,163					TOTAL		9,008
23,622					SECTION II		9,071
4,403					SECTION III		-
104					SECTION VI		-
34					ELKS, FOREIGN, ETC.		27

DIAGRAM XVII.—Number in institutional and placement training June 30, 1920, by class of training.

NUMBER	NUMBER OF CASES APPROVED AS ELIGIBLE FOR TRAINING TO JUNE 30, 1920						
	INSTITUTIONAL				CLASS OF TRAINING	PLACEMENT	NUMBER
	40 000	30 000	20 000	10 000		10 000	
90,547					TOTAL		15,949
45,084					SECTION II		15,914
44,372					SECTION III		-
846					SECTION VI		-
46					ELKS, ETC.		33

DIAGRAM XVIII.—Cases approved as eligible for institutional and placement training under sections 2, 3, and 4 since organization to June 30, 1920.

CLASS OF TRAINING	NUMBER ENTERED TRAINING SINCE ORGANIZATION										
	TOTAL TO SEPT. 15 1920	IN TRAINING SEPT. 15, 1920									
			10 000	20 000	30 000	40 000	50 000	60 000	70 000	80 000	90 000
TOTAL .....	53,754	42,865									
UNDER SECTION 2 ..	48,058	38,180									
UNDER SECTION 3 ..	5,545	4,579									
UNDER SECTION 4 ..	151	106									

DIAGRAM XIX.—Number entered training since organization to Sept. 15, 1920, and in training on that date, by class of training.



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TABLE 13.—*Summary of progress of cases reported by district offices since organization to June 30, 1920, and June 30, 1919, by districts.*

[Data tabulated from district office reports.]

Action taken.	Total.	District No.						
		1	2	3	4	5	6	7
Contact established.....	207,724	11,933	28,406	17,195	10,370	15,437	10,051	22,843
Surveyed by medical officer.....	126,922	8,131	14,746	10,348	6,555	7,093	6,723	8,025
Surveyed by vocational officer.....	151,553	9,187	26,215	13,297	8,630	11,409	6,535	13,008
Approved as eligible.....	107,846	7,139	8,581	14,279	3,931	9,470	3,699	12,121
Disapproved as to eligibility.....	2,218	95	95	.....	.....	235	18	1,363
Dropped after investigation.....	19,910	927	1,591	89	511	4,534	792	1,411
Registered or listed as new cases, including prospects, since organization to June 30, 1919.....	135,676	6,099	19,837	10,769	12,095	16,505	6,636	10,640
Contact established.....	108,324	5,614	17,098	6,708	9,170	12,255	5,136	7,940
Surveyed by medical officer.....	34,407	.....	5,313	2,828	620	2,698	1,728	524
Surveyed by vocational advisor.....	89,590	4,459	15,831	3,604	8,345	10,290	4,044	7,566
Approved as eligible.....	7,994	836	1,001	754	463	513	527	585
Disapproved as to eligibility.....	814	253	165	.....	25	32	110	3
Dropped after investigation.....	1,208	70	2	589	.....	180	91	.....

Action taken.	District No.							Blind.
	8	9	10	11	12	13	14	
Contact established.....	29,107	16,007	9,901	6,703	7,894	6,181	14,747	239
Surveyed by medical officer.....	20,399	15,438	5,711	4,156	7,334	4,113	7,188	239
Surveyed by vocational officer.....	16,505	13,416	5,310	5,701	6,155	5,237	12,681	237
Approved as eligible.....	19,732	6,202	5,819	3,719	3,954	2,882	6,015	253
Disapproved as to eligibility.....	28	2	474	.....	.....	2	.....	1
Dropped after investigation.....	3,490	3,695	516	230	857	106	1,161	.....
Registered or listed as new cases, including prospects, since organization to June 30, 1919.....	15,828	9,630	3,774	4,022	4,509	3,000	11,732	.....
Contact established.....	13,844	10,683	1,009	3,521	3,390	3,113	8,777	.....
Surveyed by medical officer.....	6,990	8,151	1,275	621	368	1,932	1,459	.....
Surveyed by vocational advisor.....	9,982	9,484	1,637	2,397	2,400	2,732	6,769	.....
Approved as eligible.....	759	907	128	220	483	343	349	.....
Disapproved as to eligibility.....	54	119	.....	.....	.....	42	5	.....
Dropped after investigation.....	133	4	.....	48	.....	3	88	.....

TABLE 14.—*Discontinuance of training since organization to June 30, 1920, and for fiscal year ended June 30, 1920, by districts.*

[Data tabulated from district office reports.]

District office.	Total.	In fiscal year ended June 30, 1920.	To June 30, 1919.
Total.....	12,622	12,214	408
District:			
No. 1.....	973	918	25
No. 2.....	1,615	1,531	114
No. 3.....	1,141	1,113	28
No. 4.....	599	578	21
No. 5.....	735	722	13
No. 6.....	502	485	17
No. 7.....	1,113	1,083	30
No. 8.....	1,384	1,338	46
No. 9.....	843	803	40
No. 10.....	496	475	21
No. 11.....	655	640	15
No. 12.....	851	844	7
No. 13.....	565	546	19
No. 14.....	1,055	1,043	12
Blind.....	65	65	.....

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TABLE 15.—Discontinuances of training classified by cause of discontinuance since organization to June 30, 1920.

[Data tabulated from district office reports.]

Cause of discontinuance.	Number.			Percentage distribution by cause of discontinuance.		
	Total.	Institutional training.	Placement training.	Total.	Institutional training.	Placement training.
Total.....	12,622	9,612	3,010	100.0	100.0	100.0
Physical incapacity.....	2,748	2,121	627	21.8	22.1	20.8
Training not feasible.....	695	639	56	5.5	6.6	1.9
Conduct, interest, attendance.....	2,166	1,573	593	17.2	16.4	19.7
Decease of trainee.....	94	71	23	.7	.7	.8
Other reasons.....	1,990	1,694	296	15.0	17.6	6.5
Changed—						
To placement training.....	3,420	3,420		27.1	35.6	
To institutional training.....	555		555	4.4		18.4
Completed—						
Other than Section II.....	94	94		.7	1.0	
As Section II.....	960		960	7.6		31.9

TABLE 16.—Number of discontinuances of training for specific reasons, including transfers, since organization, by districts, to June 30, 1920.

[Data tabulated from district office reports.]

Cause of discontinuance of training.	Total.	District No.						
		1	2	3	4	5	6	7
Total.....	12,622	973	1,645	1,141	599	735	502	1,113
Institutional training.....	9,612	702	1,238	887	375	564	408	821
Physical incapacity.....	2,121	231	218	190	131	133	119	222
Training not feasible.....	639	13	2	1	47	15	23	11
Conduct, interest, or attendance.....	1,573	97	19	128	148	123	18	298
Decease of man.....	71	7	20	6	3	2	5	4
Other reasons.....	1,694	112	345	131	30	83	135	
Changed to placement training.....	3,420	240	574	430	5	208	106	286
Completed other than Section II.....	94	2	40	1	11		2	
Placement training.....	3,010	271	407	254	224	171	94	292
Physical incapacity.....	627	73	158	27	58	41	16	65
Training not feasible.....	56		1	4	1	8	1	1
Conduct, interest, or attendance.....	593	26	106	43	59	44	6	112
Decease of man.....	23	3	3	1	5	1		1
Other reasons.....	196	30	34	29	8		21	2
Changed to institutional training.....	555	67	5	124	23	26	31	35
Completed as Section II.....	960	72	100	26	70	48	19	76

Cause of discontinuance of training.	District No.							Blind.
	8	9	10	11	12	13	14	
Total.....	1,384	843	496	655	881	565	1,055	65
Institutional training.....	1,202	678	367	504	630	379	808	49
Physical incapacity.....	96	153	94	136	180	88	124	0
Training not feasible.....	121	356	2	11	7	7	23	
Conduct, interest, or attendance.....	83	26	37	110	179	92	191	22
Decease of man.....	11	3	1	3	1	2	3	
Other reasons.....	597		128	51	27	33		2
Changed to placement training.....	291	120	103	191	227	154	466	19
Completed other than Section II.....	3	18	2	2	9	3	1	
Placement training.....	182	165	129	151	221	186	247	16
Physical incapacity.....	36	26	21	33	32	15	26	
Training not feasible.....		24			5	8	3	
Conduct, interest, or attendance.....	5	8	11	51	51	30	40	1
Decease of man.....	1	2	1	1	3		1	
Other reasons.....	35		14	5	1	13		1
Changed to institutional training.....	23	33	28	34	58	17	50	1
Completed as Section II.....	82	72	51	27	71	103	127	13

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TABLE 17.—Cases approved as eligible since organization to June 30, 1920, by districts.

[Data tabulated from district office reports.]

Character of training approved.	Total.	District No.						
		1	2	3	4	5	6	7
Total.....	106,496	7,139	7,960	14,279	3,931	9,470	3,609	12,121
Under Section II:								
Institutional.....	45,064	4,457	2,776	7,650	2,141	2,028	2,325	3,588
Placement.....	15,916	1,125	2,229	992	1,242	1,278	482	2,484
Under Section III, institutional.....	44,572	1,542	2,946	5,622	479	6,163	888	6,046
Under Section VI, institutional.....	845	1	1	2	39			1
Elks, foreign, etc.:								
Institutional.....	46	13	8	4	1	1	4	1
Placement.....	33	1			20			1

Character of training approved.	District No.							
	8	9	10	11	12	13	14	Blind.
Total.....	19,322	6,202	5,819	3,719	3,788	2,882	5,912	253
Under Section II:								
Institutional.....	5,672	2,751	3,177	2,179	2,614	1,587	1,890	240
Placement.....	1,412	1,252	662	907	576	357	825	3
Under Section III, institutional.....	12,190	2,199	1,980	513	589	933	2,479	3
Under Section VI, institutional.....	18			55	6		718	4
Elks, foreign, etc.:								
Institutional.....				3	3	5		3
Placement.....				2				

TABLE 18.—Net registration eligible for training under section 2, number and percentage for whom training has been found feasible, and number and percentage entered training of those for whom training has been found feasible since organization to September 15, 1920, by districts.

[Data tabulated from district office telegraphic reports.]

District	Total number.	Training feasible.			
		Number.	Percent of number eligible.	Entered training.	
				Number.	Percent of number for whom training is feasible.
Total.....	82,855	74,926	90.4	48,058	64.1
District:					
No. 1.....	6,527	5,826	89.3	4,500	77.3
No. 2.....	10,650	9,826	92.0	7,501	76.4
No. 3.....	8,881	8,569	96.6	5,448	63.6
No. 4.....	4,713	3,829	77.1	2,650	73.0
No. 5.....	5,349	4,692	87.6	2,907	61.7
No. 6.....	4,478	4,248	94.6	2,666	62.7
No. 7.....	7,344	6,906	94.1	3,670	53.2
No. 8.....	9,247	8,678	94.0	4,375	50.4
No. 9.....	5,429	5,332	98.2	2,506	46.8
No. 10.....	4,407	3,990	89.8	2,147	54.2
No. 11.....	8,759	3,120	83.2	2,202	70.6
No. 12.....	3,694	3,254	88.1	3,207	98.5
No. 13.....	3,204	2,841	88.6	1,761	61.8
No. 14.....	5,179	4,045	78.1	2,518	62.2

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TABLE 19.—*Net registrations and closures since organization to Sept. 15, 1920, and number eligible for training and pending determination of eligibility on that date, by districts.*

[Data tabulated from district office telegraphic reports.]

District.	Total.	Closures.	Live roll Sept. 15, 1920.							
			Total.	Eligible under section 2.			Eligible under section 3.			Pending determination of eligibility.
				Total.	Training feasible.	Training not feasible.	Total.	Unconditionally.	If compensation awarded.	
Number.										
Total.....	270,704	84,148	186,016	82,855	74,926	7,929	71,683	57,738	13,915	32,108
District:										
No. 1.....	15,293	2,606	12,687	6,527	5,826	701	3,478	2,752	726	2,682
No. 2.....	32,816	8,965	23,851	10,650	9,826	824	8,530	6,820	1,710	4,671
No. 3.....	25,220	6,934	18,292	8,881	8,569	312	6,224	6,061	173	3,187
No. 4.....	13,762	5,056	8,706	4,713	3,629	1,084	1,866	1,164	702	2,127
No. 5.....	23,659	9,664	13,995	5,349	4,692	657	5,199	4,416	783	3,447
No. 6.....	13,217	4,497	8,720	4,478	4,248	230	2,305	1,879	426	1,937
No. 7.....	29,031	7,991	21,040	7,344	6,906	438	9,636	8,363	1,273	4,060
No. 8.....	36,148	8,572	27,576	9,247	8,678	569	15,315	11,827	3,488	3,014
No. 9.....	20,769	6,347	14,422	5,429	5,332	97	6,447	5,116	1,331	2,546
No. 10.....	12,589	3,373	9,216	4,407	3,960	447	3,307	2,565	742	1,502
No. 11.....	9,258	2,722	6,536	3,753	3,120	633	1,646	1,400	243	1,137
No. 12.....	12,349	5,651	6,698	3,694	3,254	440	2,872	1,549	1,323	132
No. 13.....	7,899	1,229	6,670	3,204	2,841	363	2,557	1,609	648	909
No. 14.....	18,748	10,541	8,207	5,179	4,045	1,134	2,271	1,927	344	757
Percentage distribution.										
Total.....	100.0	31.1	68.9	30.7	27.7	2.9	26.4	21.3	5.1	11.8
District:										
No. 1.....	100.0	17.1	82.9	42.7	38.1	4.6	22.7	18.0	4.7	17.5
No. 2.....	100.0	27.3	72.7	32.4	30.0	2.5	26.0	20.8	5.2	14.2
No. 3.....	100.0	27.5	72.5	35.2	33.9	1.2	24.7	24.0	.7	12.6
No. 4.....	100.0	36.9	63.1	34.2	26.4	7.8	13.5	8.4	5.1	15.5
No. 5.....	100.0	40.7	59.3	22.7	19.8	2.8	21.9	18.7	3.3	14.6
No. 6.....	100.0	34.0	66.0	33.8	32.1	1.8	17.4	14.2	3.2	14.7
No. 7.....	100.0	27.5	72.5	25.3	23.8	1.5	33.2	28.8	4.4	14.0
No. 8.....	100.0	23.7	76.3	25.6	24.0	1.6	42.4	32.7	9.6	8.3
No. 9.....	100.0	30.5	69.5	26.2	25.7	.5	31.1	24.6	6.4	12.3
No. 10.....	100.0	26.8	73.2	35.0	31.4	3.5	26.3	20.4	5.9	12.0
No. 11.....	100.0	29.4	70.6	40.5	33.7	6.9	17.7	15.2	2.6	12.3
No. 12.....	100.0	45.8	54.2	30.0	26.4	3.6	23.2	12.6	10.7	1.1
No. 13.....	100.0	15.5	84.5	40.6	36.0	4.6	32.3	24.1	8.2	11.5
No. 14.....	100.0	56.2	43.8	27.6	21.6	6.0	12.1	10.3	1.8	4.0

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TABLE 20.—*Number entered training, completed training, and discontinued training since organization to Sept. 15, 1920, and number in training on that date, by districts.*

[Data tabulated from district office telegraphic reports.]

District.	Total.	Under sec. 2.	Under sec. 3.	Under sec. 6.	Completed training.			
					Total.	Under sec. 2.	Under sec. 3.	Under sec. 6.
Total.....	53,754	48,058	5,555	131	1,953	1,513	136	4
District:								
No. 1.....	4,745	4,500	240	5	101	98	2	1
No. 2.....	7,917	7,501	410	6	180	134	46	2
No. 3.....	5,868	5,448	448	2	140	138	2	2
No. 4.....	3,072	2,650	364	58	115	102	10	3
No. 5.....	3,180	2,907	273	.....	88	87	1	.....
No. 6.....	2,818	2,666	152	.....	24	23	1	.....
No. 7.....	4,445	3,670	775	.....	122	118	4	.....
No. 8.....	5,823	4,375	1,438	12	118	73	45	.....
No. 9.....	2,906	2,506	400	.....	69	67	2	.....
No. 10.....	2,282	2,147	135	.....	81	76	5	.....
No. 11.....	2,490	2,202	245	43	39	37	2	.....
No. 12.....	3,524	3,207	313	4	110	97	13	.....
No. 13.....	1,938	1,761	176	1	138	135	3	.....
No. 14.....	2,716	2,518	198	.....	328	328	.....	.....
District.	Discontinued training.				In training Sept. 15, 1920.			
	Total.	Under sec. 2.	Under sec. 3.	Under sec. 6.	Total.	Under sec. 2.	Under sec. 3.	Under sec. 6.
Total.....	9,238	8,365	850	23	42,863	38,180	4,579	104
District:								
No. 1.....	757	757	.....	.....	3,887	3,646	238	4
No. 2.....	1,365	1,255	110	.....	6,372	6,112	254	6
No. 3.....	743	709	32	2	5,015	4,601	414	.....
No. 4.....	714	627	70	17	2,243	1,921	284	38
No. 5.....	566	541	25	.....	2,526	2,279	247	.....
No. 6.....	531	513	18	.....	2,263	2,130	133	.....
No. 7.....	798	731	67	.....	3,525	2,821	701	.....
No. 8.....	1,015	732	283	.....	4,690	3,570	1,108	12
No. 9.....	313	195	118	.....	2,524	2,214	280	.....
No. 10.....	472	472	.....	.....	1,729	1,599	130	.....
No. 11.....	554	522	28	4	1,897	1,643	215	39
No. 12.....	591	556	35	.....	2,823	2,554	265	4
No. 13.....	554	497	57	.....	1,246	1,129	116	1
No. 14.....	265	258	7	.....	2,123	1,932	191	.....

TABLE 21.—*Male ex-service employees on district office staffs and clerical forces Sept. 15, 1920.*

District.	Staff and clerical.			Staff.			Clerical.		
	Total.	Ex-service.	Not ex-service.	Total.	Ex-service.	Not ex-service.	Total.	Ex-service.	Not ex-service.
Total:									
Number.....	1,177	654	523	949	521	428	228	133	95
Percentage.....	100.0	55.6	44.4	100.0	54.9	45.1	100.0	58.3	41.7
District:									
No. 1.....	69	24	45	52	15	37	17	9	8
No. 2.....	132	45	87	108	41	67	24	4	20
No. 3.....	117	77	40	98	62	36	19	15	4
No. 4.....	91	48	43	76	40	36	15	8	7
No. 5.....	122	91	31	97	74	23	25	17	8
No. 6.....	83	62	21	68	50	18	15	12	3
No. 7.....	65	28	37	47	23	24	9	5	4
No. 8.....	97	48	49	67	33	34	30	15	15
No. 9.....	48	17	31	42	11	31	6	6	.....
No. 10.....	81	50	31	70	40	30	11	10	1
No. 11.....	72	26	46	58	29	29	14	7	7
No. 12.....	80	42	38	64	30	34	16	12	4
No. 13.....	56	43	13	55	42	13	1	1	.....
No. 14.....	73	43	30	47	31	16	26	12	14

TABLE 22.—*Training agencies: Schools and colleges providing vocational rehabilitation training for disabled soldiers, sailors, and marines under direction of the Federal Board for Vocational Education during the fiscal year ended June 30, 1920, by districts and States.*

## DISTRICT NO. 1.

## MAINE.

Bates College, Lewiston.  
Bliss College, Lewiston.  
Real Business College, Bangor.  
Bowdoin Medical College, Brunswick.  
Colby College, Waterville.  
Gray's Business College, Portland.  
Shaw's Business College, Bangor.  
Shaw's Business College, Portland.  
University of Maine, Orono.

## NEW HAMPSHIRE.

Bryant & Stratton's College, Manchester.  
Colby Academy, New London.  
Dartmouth College, Hanover.  
Nashua Business College, Nashua.  
New Hampshire College, Durham.  
Phillips-Exeter Academy, Exeter.  
Tilton Seminary, Tilton.

## VERMONT.

Burlington Business School, Burlington.  
Norwich University, Northfield.  
Rutland Business School, Rutland.  
University of Vermont, Burlington.

## MASSACHUSETTS.

Arnold, Miss Vera E., Rutland.  
Babsons Institute, Wellesley Mills.  
Bay Path Institute, Springfield.  
Berkley Preparatory School, Boston.  
Berry Stitching School, Lynn.  
Beverly Industrial School, Beverly.  
Bliss Business College, North Adams.  
Boston City Hospital, Boston.  
Boston College, Boston.  
Boston Institute of Business Administration, Boston.  
Boston School of Anatomy and Embalming, Boston.  
Boston School of Lip Reading, Boston.  
Boston Trade School, Boston.  
Boston Trade School, Roxbury.  
Boston University, Boston.  
Bradford Durfee Textile School, Fall River.  
Bristol Agricultural School, Taunton.  
Bryant & Stratton School, Boston.  
Burdett College, Boston.  
Burdette, College, Lynn.  
Cannon's Commercial School, Lawrence.  
Carney Hospital, South Boston.  
Central High School, Springfield.  
Chauncey Hall School, Boston.  
City Hospital, Worcester.  
Civil Service School, Boston.  
Clark School of Business, Boston.  
Clark College, Worcester.  
Corp. School, Charleston Navy Yard, Boston.  
Curry School of Expression, Boston.  
Dean Academy, Franklin.  
Deerfield Academy, Deerfield.  
Diman Industrial School, Fall River.  
Division of University Extension of Massachusetts, Boston.  
Duff's College, Boston.  
Eastern Radio School, Boston.  
Emerson College of Oratory, Boston.  
Episcopal Theological School, Cambridge.  
Essex County Agricultural School, Danvers.  
Fall River Textile School, Fall River.  
Faust Piano Tuning Institute, Boston.  
Fisher Business College, Boston.  
Fisher Business College, Cambridge.  
Fisher Business College, Roxbury.  
Fisher Business College, Somerville.

Fisher Business College, Waltham.  
Fitchburg Business College, Fitchburg.  
Franklin Union Institute, Boston.  
Grover's School, J. J. Stoneham.  
Hall's Barber Institute, Boston.  
Harvard University, Cambridge.  
Hawley School of Engineering, Boston.  
Holyoke Vocational Institute, Holyoke.  
Holy Cross College, Worcester.  
Herrick's Institute, Fall River.  
Huntington School, Boston.  
Kinyon's Commercial and Shorthand School, New Bedford.  
Lewis, Jessie Dell, Worcester.  
Lowell Commercial College, Lowell.  
Lowell Textile School, Lowell.  
Lowell Vocational School, Lowell.  
Lynn Independent Shoe Manufacturing School, Lynn.  
McCarthy's Navigation School, East Boston.  
McIntosh Business School, Haverhill.  
Malden Commercial College, Malden.  
Massachusetts Agricultural College, Amherst.  
Massachusetts College of Pharmacy, Boston.  
Massachusetts College of Osteopathy, Boston.  
Massachusetts General Hospital, Boston.  
Massachusetts Institute of Technology, Cambridge.  
Massachusetts Normal Art School, Boston.  
Massachusetts Radio and Telegraph School, Boston.  
Massachusetts School of Optometry, Boston.  
Massachusetts School for Feeble-minded, Waverly.  
Mergenthaler Linotype School, Boston.  
Middlesex College of Medicine and Surgery, Cambridge.  
Mount Herman High School, Northfield.  
New Bedford Vocational School, New Bedford.  
New England Conservatory of Music, Boston.  
New England Institute of Embalming, Boston.  
New England Institute of Anatomy and Embalming, Roxbury.  
New England School of Design, Boston.  
New England Vocational School, Rutland.  
Newton Vocational School, Newtonville.  
Norfolk County Agricultural School, Waltham.  
North Bennett State Industrial School, Boston.  
Northampton Commercial College, Northampton.  
Northeastern College, Boston.  
Northwestern College, Boston.  
Northwestern College, Worcester.  
Pace & Pace School of Accounting, Boston.  
Posse Normal School of Accounting, Boston.  
Pound, Prof. Roscoe, Cambridge.  
Post Institute, Worcester.  
Powers School of Spoken Words, Leland, Boston.  
Reddin Shorthand and Civil Service School, Boston.  
Reed, Bertha M., Worcester.  
Rindge Technical School, Cambridge.  
School of Music and Fine Arts, Boston.  
School of Practical Art, Boston.  
Scott, Irving O., Newton.  
Simmons College, Boston.  
Somerville Vocational School, Somerville.  
Springfield Technical High School, Springfield.  
Springfield Vocational School, Springfield.

Suffolk Law School, Boston.  
 Tuft's College, Somerville.  
 Tuft's College, Medford.  
 Tuft's Medical College, Boston.  
 University of Massachusetts, Boston.  
 University School, Boston.  
 Uttmark's Nautical Academy, Boston.  
 Wentworth Institute, Boston.  
 Williams College, Williamstown.  
 Worcester Boys' Training School, Worcester.  
 Worcester Business College, Worcester.  
 Worcester High School (Normal), Worcester.  
 Worcester Polytechnic School, Worcester.  
 Y. M. C. A. Auto School, Boston.  
 Y. M. C. A. (International), Springfield.  
 Tuft's Dental School, Boston.

## RHODE ISLAND.

Brown University, Providence.  
 Bryant & Stratton Business College, Providence.  
 Park School, Providence.  
 Providence Trade School, Providence.  
 Rhode Island College, Kingston.  
 Rhode Island School of Design, Providence.  
 Y. M. C. A., Providence.

## DISTRICT No. 2.

## CONNECTICUT.

Boardman Manual Training Trade School, New Haven.  
 Booth & Bayless Business School, Bridgeport.  
 Danbury Business Institute, Danbury.  
 Hartford High School, Hartford.  
 Manchester Training School, Manchester.  
 Meriden Training School, Meriden.  
 Merrill Business College, Stamford.  
 Middletown Business College, Middletown.  
 Morse Business College, Hartford.  
 New Britain Trade School, New Britain.  
 New Haven Accounting Institute, New Haven.  
 Sheffield Scientific School, New Haven.  
 Stamford Trade School, Stamford.  
 State Trade School, Bridgeport.  
 State Trade School, Danbury.  
 State Trade School, New Britain.  
 State Trade School, Putnam.  
 State Trade Board, Manchester.  
 State Trade School, Meriden.  
 State Trade School, South Dorchester.  
 State Trade School, Torrington.  
 Stone's School, New Haven.  
 Storrs Agricultural School, Storrs.  
 Trinity Engineering Institute, Hartford.  
 United States Public Health Service, New Haven.  
 Wesleyan University, Middletown.  
 Yale University, New Haven.  
 Waterbury Business College, Waterbury.  
 Wright, H. W., Storrs.

## NEW JERSEY.

Camden Commercial School, Camden.  
 Coleman's Business College, Newark.  
 Dickenson High School, Jersey City.  
 Drake's Business College, Jersey City.  
 Drake's Business College, Passaic.  
 Drake's Business College, Paterson.  
 Drake Secretarial School, East Orange.  
 Egan's Business School, Union Hill.  
 Egan's School of Business, Hackensack.  
 Egan's School of Business, Hoboken.  
 Elizabeth Commercial College, Elizabeth.  
 Evening Technical and Industrial High School, Jersey City.  
 Jersey City Public School No. 24, Jersey City.  
 Legion Stores Association, Jersey City.  
 Lexington Vulcanizing School, Jersey City.  
 Manual Training School, Newark.  
 Mecca College, Newark.

Newark Technical School, Newark.  
 New Jersey Agriculture College, New Brunswick.  
 New Jersey Law School, Newark.  
 Princeton University, Princeton.  
 Rider, Moore, Stewart Business College, Trenton.  
 Rutgers Agriculture College, New Brunswick.  
 State University of New Jersey, New Brunswick.  
 Soldiers Agriculture College, Lawrenceville.  
 Spencer Business College, Jersey City.  
 Stevens Institute of Technology, Hoboken.  
 Trenton School of Industrial Arts, Trenton.  
 Wellsville High School, Wellsville.  
 Y. M. C. A., Lakewood.

## NEW YORK.

Albany Academy, Albany.  
 Albany Business School, Albany.  
 Albany Law School, Albany.  
 Alexander Hamilton Institute, New York.  
 Alviene School of Acting, New York.  
 American Academy of Dramatic Arts, New York.  
 American Institution of Applied Music, New York.  
 American Institute of Painting, New York.  
 Art Students' League, New York.  
 Associated Art Studios, New York.  
 Auburn Business College, Auburn.  
 Baron De Hirsch Training School, New York.  
 Batson Institute, New York.  
 Beaux Arts Institute of Design, New York.  
 Bellevue Hospital, New York.  
 Bettinger Institute, New York.  
 Bible Teacher Training School, New York.  
 Board of Education, New York.  
 Bodee's Dental School (Training), New York and Buffalo.  
 Brooklyn Botanical Gardens, Brooklyn.  
 Brooklyn College of Pharmacy, Brooklyn.  
 Brooklyn Law School, Brooklyn.  
 Brooklyn Music Settlement, Brooklyn.  
 Brooklyn Polytechnical Institute, Brooklyn.  
 Brunel Training School of Photography, New York.  
 Bryant & Stratton School, Buffalo.  
 Bryant & Stratton School, New York.  
 Buffalo Board of Education, Buffalo.  
 Buffalo Normal School, Buffalo.  
 Buffalo Technical High School, Buffalo.  
 Business Training Corporation, New York.  
 Butler Business School, Yonkers.  
 Canisius College, Buffalo.  
 Carlson Traffic School, New York.  
 Central Business School, New York.  
 Central City Business High School, Syracuse.  
 Central High School, Buffalo.  
 Clause, Madam Marguerite (tutor), New York.  
 Colby's Telegraphy School, Auburn.  
 Colgate College, New York.  
 Colgate College, Hamilton.  
 College of the City of New York, New York.  
 College of Physicians and Surgeons, New York.  
 Columbus Teachers' College, New York.  
 Columbia University, New York.  
 Cooper Union, New York.  
 Cornell University, Ithaca.  
 Croonberg School, New York.  
 Curtis High School, Staten Island.  
 D'Allise Designing Academy, New York.  
 Department of Education, New York.  
 Donguard Player Piano School, New York.  
 Deposit High School, New York.  
 Eastman-Gaines Business College, New York.  
 Eastman's Business College, Poughkeepsie.  
 Eastman-Gaines Business College, Poughkeepsie.  
 Lincoln Institute for Vocational Education, New York.

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Elm Vocational School, Buffalo.  
 Empire Linotype School, New York.  
 Euclid Business College, Brooklyn.  
 Euclid School, Brooklyn.  
 Excelsior Business School, Brooklyn.  
 Exchange and Training School for Blind, Brooklyn.  
 Export and Import Institute, New York.  
 Fordham University, New York.  
 First Institute of Podiatry, New York.  
 General Theological Seminary, Chelsea Square.  
 Guillemont School, New York.  
 Hamilton College, Clinton.  
 Hamilton Institute for Boys, New York.  
 Hawkins, Haskins (tutor), Warwick.  
 Hefley Institute, Brooklyn.  
 International Correspondence School, New York.  
 Institute of Music, New York.  
 Jacobs, John B., Syracuse.  
 Jamestown Business School, Jamestown.  
 Jefferson Junior High School, Rochester.  
 Jones, J. Ed., New York.  
 La Salle Extension University, New York.  
 Legion Stores Association, New York.  
 Lexington Vulcanizing School, New York.  
 Library Bureau, New York.  
 Lowell School of Business, Binghamton.  
 McBurney School, New York.  
 Manhattan Eye, Ear, and Throat Hospital, New York.  
 Manual Training School, Brooklyn.  
 Marconi Institute, New York.  
 Mechanics Institute, Rochester.  
 Meeker Business Institute, New York.  
 Merchants and Bankers Institute, New York.  
 Mergenthaler Linotype School, Brooklyn.  
 Miller School of Business, New York.  
 Mills School of Nurses, New York.  
 Mitchell School of Designing, New York.  
 Moler Barber College, New York.  
 Mossgraver, Mr. (tutor), Webster.  
 Music School Settlement, Brooklyn.  
 Navigation and Marine Engineering School, New York.  
 New York Academy, New York.  
 New York Botanical Gardens, New York.  
 New York Central School of Telegraphy, Utica.  
 New York Cooperative High School, New York.  
 New York College Chiropractics, New York.  
 New York College of Dental and Oral Surgery, New York.  
 New York Electrical School, New York.  
 New York Eye and Ear Infirmary, New York.  
 New York Grading and Designing School, New York.  
 New York Skin and Cancer Hospital, New York.  
 New York Institute of Photography, New York.  
 New York Institute of Applied Arts, New York.  
 New York Law School, New York.  
 New York Ophthalmic Hospital, New York.  
 New York Post Graduate Medical School, New York.  
 New York Preparatory School, New York.  
 New York School for Fur and Feather, New York.  
 New York School of Hard Hearing, New York.  
 New York School of Industrial Arts, New York.  
 New York State School of Agriculture, Farmingdale.  
 New York State School of Teachers, Albany.  
 New York Trade School, New York.  
 New York University, New York.  
 Old Central High School, Buffalo.  
 Old Central High School, New York.  
 Pace & Pace, New York.  
 Packard Commercial School, New York.  
 Paine Uptown Business College, New York.  
 Payne Business College, New York.  
 Pierce-Arrow Auto Sales School, Buffalo.  
 Plaza School of Business, Brooklyn.  
 Polytechnic School, Brooklyn.  
 Pratt Institute, Brooklyn.  
 Pruneda Studie of Spanish, New York.  
 Public School No. 5, Rochester.  
 Railway Commercial School, Elmira.  
 Red Cross Institute, Brooklyn.  
 Rensselaer Polytechnic Institute, Troy.  
 Renouard Training School, New York.  
 Rochester Board of Education, Rochester.  
 Rochester Business Institute, Rochester.  
 Rochester School of Optometry, Rochester.  
 Rochester Shop School, Rochester.  
 Sargents Drama School, New York.  
 Saunders, Trade School, Yonkers.  
 Schohare School of Agriculture, Cobleskill.  
 Seneca Vocational School, Buffalo.  
 Lincoln Institute for Vocational Education (formerly Seward Park Rehabilitation Center), New York.  
 Sewman's Church Institute, New York.  
 Shaw's Conservatory of Music, Amsterdam.  
 Shelden Commercial School, New York.  
 Spencer Business College, Schenectady.  
 St. Bernard Seminary, Rochester.  
 St. Johns College, Brooklyn.  
 St. Lawrence University, Canton.  
 St. Stephens College, Annandale.  
 State Agriculture College, Alfred.  
 State Agriculture School, Canton.  
 State Normal School, Oswego.  
 State School of Agriculture, Delhi.  
 State School of Agriculture, Morrisville.  
 Sweet, George, New York.  
 Technical High School, Buffalo.  
 Troy Business College, Troy.  
 Troy Conservatory of Music, Troy.  
 Troy Vocational School, Troy.  
 Union College, Schenectady.  
 Union College of Pharmacy, Albany.  
 State Ranger School, Wanakona.  
 Syracuse University, Syracuse.  
 Troy High School, Troy.  
 University of Buffalo, Buffalo.  
 University of Rochester, Rochester.  
 United States Shipping Board Navigation School, New York.  
 Utica Conservatory of Music, Utica.  
 Utica School of Commerce, Utica.  
 Utica State Hospital, Utica.  
 Westbrook Commercial Academy, Olean.  
 Westchester Commercial School, New Rochelle.  
 White Plains High School, White Plains.  
 White School of Photography, New York.  
 Wiltchle School for Hard Hearing, New York.  
 Watervliet Arsenal, Watervliet.  
 Y. M. C. A., Bedford Branch, Brooklyn.  
 Y. M. C. A., East Side, New York.  
 Y. M. C. A., Twenty-third Street, New York.  
 Y. M. C. A., West Side, New York.

## DISTRICT No. 3.

### DELAWARE.

Delaware College, Newark.  
 Goldey Business College, Wilmington.

### PENNSYLVANIA.

Allegheny College, Meadville.  
 Allegheny Vocational School, Pittsburgh.  
 Altoona Business College, Altoona.  
 Altoona High School, Altoona.  
 American Commercial School, Allentown.  
 American Stomach Hospital, Philadelphia.  
 Auto and Aeroplane School, Harrisburg.  
 Bank's Business College, Philadelphia.  
 Bellefonte Academy, Bellefonte.  
 Blake, Miss, Pittsburgh.  
 Bethlehem Preparatory School, Bethlehem.  
 Bloomsburg State Normal School, Bloomsburg.  
 Bodes School of Mechanical Dentistry, Philadelphia.  
 Bowman Technical School, Lancaster.



- Brown's Preparatory School, Philadelphia.  
 Bucknell University, Lewisburg.  
 Butler Business College, Butler.  
 Carlisle High School, Carlisle.  
 Carlisle Commercial School, Carlisle.  
 Carnegie Institute of Technology, Pittsburgh.  
 Cathorman's Business College, Johnstown.  
 Chambers Wireless Institute, B. F., Philadelphia.  
 Cheltenham High School, Elkins Park.  
 Chemical Engineering City College, Grove City.  
 Children's Hospital of Philadelphia, Philadelphia.  
 Cheyney Training School of Teachers, Cheyney.  
 Churchman's Business College, Easton.  
 Comb's Conservatory of Music, Philadelphia.  
 Cumberland Valley State Normal School, Shippensburg.  
 David Lupton School, Philadelphia.  
 Delano Public School, Delano.  
 Dickinson Law School, Carlisle.  
 Dickinson's Seminary, Williamsport.  
 Douglas Business College, Uniontown.  
 Douglas Business College, Connellsville.  
 Drexel Institute, Philadelphia.  
 Duff's Business College, Beaver Falls.  
 Duff's College, McKeesport.  
 Duff's College, Philadelphia.  
 Duff's College, Pittsburgh.  
 Duquesne University, Pittsburgh.  
 Eckels School of Embalming, Philadelphia.  
 Edinboro State Normal School, Edinboro.  
 Erie Business College, Erie.  
 Erie High School, Erie.  
 Erie Conservatory, Erie.  
 Fourier School, Philadelphia.  
 Franklin and Marshall College, Lancaster.  
 Germantown Hospital, Philadelphia.  
 Gettysburg Academy, Gettysburg.  
 Greer Business College, Braddock.  
 Grove City College, Grove City.  
 Hanamann Medical College, Philadelphia.  
 Harrisburg School of Commerce, Harrisburg.  
 Hazeltown Business College, Philadelphia.  
 International Correspondence School, Scranton.  
 International Commercial College, Reading.  
 Interstate Business College, Reading.  
 Jefferson Medical College, Philadelphia.  
 Johnstown Vocational School, Johnstown.  
 Johnstown High School, Johnstown.  
 Keystone State Normal School, Kutztown.  
 Lackawanna Business College, Scranton.  
 Lafayette College, Easton.  
 Lanston Monotype School, Philadelphia.  
 Lebanon Business College, Lebanon.  
 Leech Business College, Latrobe.  
 Legion Stores Association, Philadelphia.  
 Lehigh University, South Bethlehem.  
 Longwood Reconstruction Center, Mendenhall.  
 McCann's Business College, Mahanoy City.  
 Martin School, Pittsburgh.  
 Mechanical Electric School, Philadelphia.  
 Mercersburg Academy, Mercersburg.  
 Mining and Mechanical Institute, Freeland.  
 Moravian Seminary, Bethlehem.  
 Muhlenburg College, Allentown.  
 Neff College of Oratory, Philadelphia.  
 New Castle School, New Castle.  
 Patrick's Business School, York.  
 Pennsylvania Academy of Fine Arts, Philadelphia.  
 Pennsylvania Business College, Lancaster.  
 Pennsylvania College, Gettysburg.  
 Pennsylvania Institute for the Deaf, Mount Airy.  
 Pennsylvania Institute for Instruction of the Blind, Philadelphia.  
 Pennsylvania Museum School of Industrial Arts, Philadelphia.  
 Pennsylvania Railroad School of Telegraphy, Philadelphia.  
 Pennsylvania School of Optometry, Philadelphia.  
 Pennsylvania State College, State College.  
 Pennsylvania State Forest Academy, Mount Alto.  
 Perkiomen School, Pennsburg.  
 Petz Motor School, Philadelphia.  
 Philadelphia College of Horology, Philadelphia.  
 Philadelphia College of Osteopathy, Philadelphia.  
 Philadelphia College of Pharmacy, Philadelphia.  
 Philadelphia Conservatory of Music, Philadelphia.  
 Philadelphia Mechanical and Electrical School, Philadelphia.  
 Philadelphia Optical College, Philadelphia.  
 Philadelphia Post Graduate, Philadelphia.  
 Philadelphia Power Plant Engineering School, Philadelphia.  
 Philadelphia School of Auto Engineering, Philadelphia.  
 Philadelphia School of Mechanical Dentistry, Philadelphia.  
 Philadelphia School of Wireless Telegraphy, Philadelphia.  
 Philadelphia Textile School, Philadelphia.  
 Pierce School, Philadelphia.  
 Pittsburgh Academy, Pittsburgh.  
 Pittsburgh Public School, Pittsburgh.  
 Pittsburgh Business College, Pittsburgh.  
 Pittsburgh Receiving Station, Pittsburgh.  
 Pittsburgh School of Autos, Pittsburgh.  
 Pittsburgh School of Lip Reading, Pittsburgh.  
 Polyclinic Hospital, Philadelphia.  
 Pottsville Business College, Pottsville.  
 Schenley School, Pittsburgh.  
 School of Commerce, Harrisburg.  
 Scranton-Lackawanna Business College, Scranton.  
 Sharon School of Commerce, Sharon.  
 Sleepers Business College, Chester.  
 Slippery Rock State Normal School, Slippery Rock.  
 Southern High School, Philadelphia.  
 Southwestern State Normal, California.  
 Spring Garden Institute, Philadelphia.  
 State Normal School, East Stroudsburg.  
 Steven's Industrial School, Lancaster.  
 State Normal School, West Chester.  
 St. Joseph's Hospital, Philadelphia.  
 St. Thomas College, Scranton.  
 Technical High School, Scranton.  
 Temple University, Philadelphia.  
 Tri-City Barber College, Philadelphia.  
 Universal Chiropractic College, Pittsburgh.  
 University of Pennsylvania, Philadelphia.  
 University of Pittsburgh, Pittsburgh.  
 Villanova College, Villanova.  
 Vocational School, Ariel.  
 Washington & Jefferson College, Washington.  
 Waynesboro College, Waynesboro.  
 Welch's Business College, Oil City.  
 Wellsboro High School, Wellsboro.  
 Wharton School of Commerce, Philadelphia.  
 Wilkes-Barre Business College, Wilkes-Barre.  
 Williamson Trade School, Williamson.  
 Williamsport Commercial College, Williamsport.  
 Wyoming Seminary, Kingston.  
 Y. M. C. A., Central, Philadelphia.  
 Y. M. C. A., Erie.  
 Y. M. C. A., Harrisburg.  
 Y. M. C. A., Lancaster.  
 Y. M. C. A., Scranton.  
 York Cooperative High School, York.

DISTRICT No. 4.

VIRGINIA.

Daleville College, Daleville.  
 Bishop Payne Divinity School, Petersburg.  
 Bridgewater College, Bridgewater.  
 Davis-Wagner Business College, Norfolk.

Eastern College, Manassas.  
Dunsmore Business College, Staunton.  
General Assembly Training School Lay Workers, Richmond.  
Hampton Normal and Agricultural Institute, Hampton.  
Marion Female College, Marion.  
Marshall, Dr. Henry, Richmond.  
Massey's Business College, Richmond.  
Medical College of Virginia, Richmond.  
National Business College, Roanoke.  
Nautical Business College, Roanoke.  
Randolph Macon College, Ashland.  
Reade, Mrs. (tutor), Richmond.  
Richmond Business College, Richmond.  
School of Social Work and Philanthropy, Richmond.  
Smithdeal Business College, Richmond.  
Southern Shorthand and Business University, Norfolk.  
State Normal School, Harrisonburg.  
Virginia College of Pharmacy, Richmond.  
Virginia Polytechnic Institute, Blacksburg.  
Virginia Union University, Richmond.  
Washington and Lee University, Lexington.  
William and Mary College, Williamsburg.

#### PORTO RICO.

College of Agriculture and Mechanic Arts, Mayaguez.  
Pittman College of Shorthand, San Juan.

#### CANADA.

Dominion Business College, Toronto.  
McGill University, Hamilton, Ont.  
Gowling Business College, Ottawa.  
University of Alberta, Alberta.  
Canadian Business College, Hamilton, Ont.

#### HAWAII.

College of Hawaii, Honolulu.  
Y. M. C. A., Honolulu.

#### WEST VIRGINIA.

Boothe Business College, Huntington.  
Capital City Commercial School, Charleston.  
Elliott Commercial College, Wheeling.  
Fairmont State Normal College, Fairmont.  
Marshall College, Huntington.  
Mountain State Business College, Parkersburg.  
National War Council, Y. M. C. A., Clarksburg.  
West Virginia Business College, Clarksburg.  
West Virginia Collegiate Institute, Institute.  
West Virginia University, Morgantown.

#### MARYLAND.

American Red Cross "Evergreen" School for the Blind, Baltimore.  
Baltimore Business College, Baltimore.  
Baltimore College Dental Surgery, Baltimore.  
Baltimore Eye, Ear and Throat Charity Hospital, Baltimore.  
Bay View Hospital, Baltimore.  
Burrough's A. B. C. School, Baltimore.  
Catherman's Business College, Cumberland.  
Elkton High School, Elkton.  
Johns Hopkins University, Baltimore.  
Industrial Teacher Training School, Baltimore.  
Legion Stores Association, Baltimore.  
Leonard Hall Academy, Leonardtown.  
Maryland Institute of Design, Baltimore.  
Maryland State Auto School, Baltimore.  
Merchant Marine School of Navigation, Baltimore.  
Mercy Hospital, Baltimore.

Minot College of Commerce, Minot.  
Pace Institution, Baltimore.  
Peabody Conservatory of Music, Baltimore.  
Sandler's Business College, Baltimore.  
Strayer's Business College, Baltimore.  
United States General Hospital, Fort McHenry.  
University of Maryland, Baltimore.  
Y. M. C. A., Baltimore.

#### PHILIPPINE ISLANDS.

Central Luzon Agricultural School, Nunoa  
Exija.

#### FRANCE.

Ecole Libre Des Sciences Politique, Paris.

#### DISTRICT OF COLUMBIA.

Armstrong Manual Training School, Washington.  
Bliss Electrical School, Washington.  
Catholic University of America, Washington.  
Columbia School of Drafting, Washington.  
Comey's, Edward G. (tutor), Washington.  
Emerson Institute, Washington.  
Freedman's Hospital, Washington.  
Georgetown University, Washington.  
George Washington University, Washington.  
Howard University, Washington.  
Lewis Hotel Training School, Washington.  
National University Law School, Washington.  
Pace Institute, Washington.  
Service Radio School, Washington.  
Steward's Business College, Washington.  
Strayer's Business College, Washington.  
United States College of Veterinary Surgery, Washington.  
United States Naval Medical School, Washington.  
Washington Business and Civil Service School, Washington.  
Washington College Institute, Washington.  
Washington School of Law, Washington.  
Y. M. C. A. (associated), Washington.

#### DISTRICT No. 5.

#### NORTH CAROLINA.

Charlotte Barber College, Charlotte.  
Durham Business College, Durham.  
Emanuel Business College, Asheville.  
King's Business College, Charlotte.  
King's Business College, Raleigh.  
Mars College, Mars Hill.  
North Carolina State College of Agriculture and Engineering, West Raleigh.  
Oak Ridge Institute, Oak Ridge.  
State Agricultural and Technical College, Greensboro.  
Stokes Business College, Charleston.  
Trinity College, Durham.  
University of North Carolina, Chapel Hill.  
Wake Forest College, Wake Forest.

#### SOUTH CAROLINA.

Allen University, Columbia.  
Appalachian Training School, Boone.  
Bowen Business College, Columbia.  
Cecil's Business College, Spartanburg.  
Clemson College, Clemson.  
Draughon's Business College, Columbia.  
Draughon's Business College, Greenville.  
Erskine Theology Seminary, Due West.  
Queen's Barber College, Spartanburg.  
Miller, Miss Augusta (tutor), Georgetown.  
South Carolina Agricultural and Mechanical College, Orangeburg.  
University of South Carolina, Columbia.

GEORGIA.

American Red Cross, Atlanta.  
 Arbaugh's, Miss, School of Lip Reading,  
 Macon.  
 Athens Business College, Athens.  
 Atlanta Business College, Atlanta.  
 Atlanta Dental School, Atlanta.  
 Atlanta Law School, Atlanta.  
 Atlanta Medical College, Atlanta.  
 Atlanta School of Pharmacy, Atlanta.  
 Berry School, Mount Berry.  
 Cecil's Business College, Atlanta.  
 Crichton's Business College, Atlanta.  
 Draughon's Business College, Atlanta.  
 Emory University, Atlanta.  
 Federal Board for Vocational Education,  
 Atlanta.  
 Georgia-Alabama Business College, Macon.  
 Georgia School of the Deaf, Cave Springs.  
 Georgia School of Technology, Atlanta.  
 Grady Hospital, Atlanta.  
 Gregg Art School, Lewis C., Atlanta.  
 Mercer University, Macon.  
 North Georgia Agricultural College, Dahl-  
 nega.  
 Odell, H. D., Institute, Atlanta.  
 Oglethorpe University, Atlanta.  
 Osborne's Business College, Atlanta.  
 Peabody College, Atlanta.  
 Peacock High School, Atlanta.  
 Richard's Business College, Savannah.  
 Southern School of Pharmacy, Atlanta.  
 Southern Dental College, Atlanta.  
 United States Auto Shop, Camp Jesup.  
 University of Georgia, Athens.

FLORIDA.

Federal Board for Vocational Education,  
 Jacksonville.  
 Florida Business University, Pensacola.  
 Florida Conservatory of Music and Art,  
 Miami.  
 Massey Business College, Jacksonville.  
 Montverde Industrial School, Montverde.  
 Orlando Business College, Orlando.  
 Stefon, John B., University, De Land.  
 Tampa Business College, Tampa.  
 University of Florida, Gainesville.  
 United States Naval Hospital, Pensacola.

TENNESSEE.

Bristol Commercial School, Bristol.  
 Carson & Newman College, Jefferson City.  
 Columbia University, Lebanon.  
 Draughon's Business College, Memphis.  
 Draughon's Business College, Knoxville.  
 Draughon's Business College, Nashville.  
 Edmonson's School of Business, Chatta-  
 nooga.  
 Fall's Business College, Nashville.  
 Federal Board School, National Soldiers'  
 Home, Johnson City.  
 Knoxville Business College, Knoxville.  
 Maryville College, Maryville.  
 Memphis Business College, Memphis.  
 Middle Tennessee State Normal, Mur-  
 phreesboro.  
 Mountain City Business College, Chatta-  
 nooga.  
 Nashville Agricultural and Industrial Col-  
 lege, Nashville.  
 Nelson's Business College, Memphis.  
 Office Training School, Memphis.  
 Peabody School for Teachers, Nashville.  
 Printing Trade School, Rogersville.  
 Southern School of Photography, McKindie.  
 Technical Trade School, Memphis.  
 Tennessee College of Medicine, Memphis.  
 Tennessee College of Polytechnic, Coko-  
 ville.  
 Tennessee Military Institute, Sewanee.  
 East Tennessee State Normal School, John-  
 son City.  
 Union University School of Commerce,  
 Jackson.  
 University of the South, Sewanee.

University of Tennessee, Knoxville.  
 Vanderbilt University, Nashville.  
 Vocational High School, Memphis.

DISTRICT No. 6.

ALABAMA.

Alabama Polytechnic Institute, Auburn.  
 Albertville High School, Albertville.  
 Campbell Institute, Dothan.  
 Jefferson School of Dental Mechanics, Bir-  
 mingham.  
 Massey Business College, Birmingham.  
 Massey Business College, Montgomery.  
 Mobile Business College, Mobile.  
 Southern College, Birmingham.  
 State Agricultural and Mechanical College,  
 Normal.  
 State Normal College, Florence.  
 State Normal School, Troy.  
 Tuskegee Institute, Tuskegee.  
 University of Alabama, Mobile.  
 Wheeler Business College, Birmingham.

MISSISSIPPI.

Draughon's Business College, Jackson.  
 Mississippi Agricultural and Mechanical  
 College, Starkville.  
 Mississippi College, Clinton.  
 Standland's Southern Business College,  
 Jackson.  
 State Insane Hospital, Jackson.  
 Utica Normal School, Utica.  
 University of Mississippi, Oxford.

LOUISIANA.

Baton Rouge Business College, Baton  
 Rouge.  
 Baptists' Bible Institute, New Orleans.  
 Charity Hospital, New Orleans.  
 Delgado Trade School, New Orleans.  
 Draughon's Business College, Shreveport.  
 Eye, Ear, Nose, and Throat Hospital, New  
 Orleans.  
 Federal Department of Vocational Educa-  
 tion, New Orleans.  
 Louisiana State University, Baton Rouge.  
 Loyola University, New Orleans.  
 Iergenthaler Linotype School, New Orleans.  
 Moler Barber College, New Orleans.  
 New Orleans Conservatory of Music, New  
 Orleans.  
 Nola Radio School, New Orleans.  
 Soule's Business College, New Orleans.  
 Southwestern Louisiana Industrial Insti-  
 tute, La Fayette.  
 Southern University, Baton Rouge.  
 Tulane University, New Orleans.  
 Warren Eatons High School, New Orleans.

DISTRICT No. 7.

OHIO.

Actual Business College, Akron.  
 Art Academy of Cincinnati, Cincinnati.  
 Bliss Business School, Columbus.  
 Campbell Business College, Cincinnati.  
 Canton Actual Business College, Canton.  
 Capitol University, Columbus.  
 Case School of Applied Science, Cleveland.  
 Cedarville College, Cedarville.  
 Central Institute, Cleveland.  
 Charity Hospital, Cleveland.  
 Cincinnati Academy of Fine Arts, Cincin-  
 nati.  
 Cincinnati Colored Industrial School, Cin-  
 cinnati.  
 Cincinnati College of Embalming, Cincin-  
 nati.  
 Cincinnati College of Liberal Arts, Cin-  
 cinnati.  
 Cincinnati College of Music, Cincinnati.  
 Cincinnati Dental College, Cincinnati.  
 Cincinnati Law School, Cincinnati.  
 Cincinnati Veterinary College, Cincinnati.

Cleveland Art School, Cleveland.  
 Cleveland Auto School, Cleveland.  
 Cleveland Law School, Cleveland.  
 Cleveland Preparatory School, Cleveland.  
 Colored Industrial School, Columbus.  
 Columbus Training School of Embalming, Columbus.  
 Columbus High School, Columbus.  
 Davey Institute of Tree Surgery, Kent.  
 Davidson Business College, Ironton.  
 David Business College, Toledo.  
 Defiance College, Defiance.  
 Dennison University, Granville.  
 Dyke School of Business, Cleveland.  
 Eclectic College of Medicine, Cincinnati.  
 Elyria School of Business, Elyria.  
 East High School, Columbus.  
 Eastern Technical High School, Cleveland.  
 Federal Board School, National Soldiers' Home, Dayton.  
 Firestone Tractor School, Akron.  
 God's Bible School, Cincinnati.  
 Hall's Business College, Youngstown.  
 Hebrew Union College, Cincinnati.  
 Kenyon College, Gambier.  
 Ironton High School, Ironton.  
 Landon School of Illustrating, Cleveland.  
 Littleford School of Business, Cincinnati.  
 Lima Business College, Lima.  
 McCall Industrial School, Cincinnati.  
 Marietta Commercial College, Marietta.  
 Marshall Law School, Cleveland.  
 Meredith Business College, Zanesville.  
 Miami-Jacobs Business College, Dayton.  
 Miami University, Oxford.  
 Miller School of Business, Cincinnati.  
 Moler's Barber College, Cincinnati.  
 Mount Union College, Alliance.  
 Oberlin College, Oberlin.  
 Office Training School, Columbus.  
 Ohio College of Chiropractic, Cleveland.  
 Ohio College of Dental Surgery, Cincinnati.  
 Ohio Mechanics Institute, Cincinnati.  
 Ohio Medical Institute, Cincinnati.  
 Ohio Northern University, Ada.  
 Ohio State University, Columbus.  
 Ohio University, Athens.  
 Ohio Wesleyan University, Delaware.  
 Otter University, Westerville.  
 Plain City High School, Plain City.  
 Queen City Business College, Cincinnati.  
 Sandusky Business College, Sandusky.  
 School of Applied Science, Cleveland.  
 School of Steam Engineering, Cleveland.  
 Spencerian Commercial School, Cleveland.  
 St. Xavier's College, Cincinnati.  
 Stiver's High School Institute, Dayton.  
 Toledo University, Toledo.  
 United Telegraphic Institute, Cincinnati.  
 University of Cincinnati, Cincinnati.  
 Washington, A. H., Miss, Wilberforce.  
 West Technical High School, Cleveland.  
 Western Reserve University, Cleveland.  
 Wilberforce University, Wilberforce.  
 Willis Business University, Springfield.  
 Wittenburg College, Springfield.  
 Wooster College, Wooster.  
 Y. M. C. A., Cleveland.  
 Y. M. C. A., Columbus.  
 Y. M. C. A. Auto School, Cincinnati.  
 Y. M. C. A., Youngstown.

## INDIANA.

Anderson Business College, Anderson.  
 Art Association of Indianapolis, Indianapolis.  
 Askin Training School of Embalming, Indianapolis.  
 Barnes Business College, Indianapolis.  
 Benjamin Harrison School of Law, Indianapolis.  
 Brown's Business College, Terre Haute.  
 Butler College, Irvington.  
 Central Business College, Indianapolis.  
 Central Normal College, Danville.  
 Concordia College, Fort Wayne.  
 Depauw University, Green Castle.  
 Dodge Institute of Telegraphy, Valparaiso.

Herron Art Institute, John, Indianapolis.  
 Hoosier Institute, Fort Wayne.  
 Indiana Business College, New Castle.  
 Indiana Central University, Indianapolis.  
 Indiana State Normal School, Terre Haute.  
 Indiana University, Bloomington.  
 Indiana Veterinary School, Indianapolis.  
 International Business College, Fort Wayne.  
 Kokomo Business College, Kokomo.  
 La Fayette Business College, La Fayette.  
 Lain Business College, Indianapolis.  
 Lockear's Business College, Evansville.  
 Muncie Business College, Muncie.  
 New Albany Business College, New Albany.  
 New Castle School, Indianapolis.  
 Notre Dame University, Notre Dame.  
 Oakland City College, Oakland City.  
 Purdue University, La Fayette.  
 Richmond Business College, Richmond.  
 Rose Polytechnic Institute, Terre Haute.  
 Ross College, Fort Wayne.  
 Shortridge School of Indianapolis, Indianapolis.  
 South Bend Business College, South Bend.  
 Stammers Institute, Vincennes.  
 Tri-State College, Angola.  
 Union Christian College, Merom.  
 United Typothetas of America School of Training, Indianapolis.  
 Valparaiso University, Valparaiso.  
 Vincennes University, Vincennes.  
 Wabash College, Crawfordsville.

## KENTUCKY.

Berea College, Berea.  
 Bowling Green Business College, Bowling Green.  
 Bryant & Stratton, Louisville.  
 Conservatory of Music, Louisville.  
 Cumberland College, Williamsburg.  
 Draughan's Business College, Paducah.  
 Eastern Kentucky State Normal, Richmond.  
 Georgetown College, Georgetown.  
 Jefferson School of Law, Louisville.  
 Kentucky Wesleyan College, Winchester.  
 Lexington Business University, Lexington.  
 Louisville College of Pharmacy, Louisville.  
 Presbyterian Theological Seminary, Louisville.  
 Smith Business College, Lexington.  
 Spencerian Commercial School, Louisville.  
 Southern Baptist Theological Seminary, Louisville.  
 University of Kentucky, Lexington.  
 University of Louisville, Louisville.  
 Western Kentucky State Normal School, Bowling Green.  
 Y. M. C. A., Louisville.

## DISTRICT NO. 8.

## ILLINOIS.

Ambulance Engineering Institute, Chicago.  
 American College of Physics and Education, Chicago.  
 American Commerce Association, Chicago.  
 American Correspondence School, Chicago.  
 American Ladies' and Gentlemen Design School, Chicago.  
 Armour Institution, Chicago.  
 Art Institute of Chicago, Chicago.  
 Auto Continuation School, Chicago.  
 Augustana Theological Seminary, Rock Island.  
 Balfour Johnson School, Chicago.  
 Blackstone Institute, Chicago.  
 Board of Education, Chicago.  
 Bodée School of Dentistry, Chicago.  
 Bowen High School, Chicago.  
 Bradley Polytechnic School, Peoria.  
 Branch School of Engineering, Chicago.  
 Brown's Business College, Bloomington.  
 Brown's Business College, Champaign.  
 Brown's Business College, Decatur.  
 Brown's Business College, Kankakee.  
 Brown's Business College, Peoria.  
 Brown's Business College, Rock Island.

Brown's Business College, Danville.  
 Brown's Business College, Springfield.  
 Bryant & Stratton Business College, Chicago.  
 Bush Conservatory of Music, Chicago.  
 Cass Technical School, Chicago.  
 Central Continuation School, Chicago.  
 Central State College of Pharmacy, Chicago.  
 Chicago Academy of Fine Arts, Chicago.  
 Chicago Business College, Chicago.  
 Chicago College of Dental Surgery, Chicago.  
 Chicago College of Osteopathy, Chicago.  
 Chicago Commercial Institute, Chicago.  
 Chicago Conservatory of Music, Chicago.  
 Chicago Eye, Ear, and Throat College, Chicago.  
 Chicago League of Hard Hearing, Chicago.  
 Chicago Lutheran Seminary, Maywood.  
 Chicago Medical College, Chicago.  
 Chicago Monotype School, Chicago.  
 Chicago Polytechnic School, Chicago.  
 Chicago Musical College, Chicago.  
 Chicago Post Graduate School, Chicago.  
 Chicago School of Naprapathy, Chicago.  
 Chicago School of Watchmaking, Chicago.  
 Chicago School of Civics and Philanthropy, Chicago.  
 Chicago School of Painting, Chicago.  
 Chicago Technical College, Chicago.  
 Chicago Telegraphy Institute, Chicago.  
 Chicago Veterinary College, Chicago.  
 Commercial Art School, Chicago.  
 Commonwealth Steel Corporation School, Granite City.  
 Cook County Hospital, Chicago.  
 Cope's Business College, Pontiac.  
 Coppins Commercial School, Dixon.  
 Coyne Trade and Engineering School, Chicago.  
 Crane Technical High School, Chicago.  
 Dalpe School of Piano Tuning, Chicago.  
 De Paul School of Commerce, Chicago.  
 Gem City Business College, Quincy.  
 Greer College of Motoring, Chicago.  
 Gregg-Aurora Business College, Aurora.  
 Gregg School of Commerce, Chicago.  
 Haven School, Chicago.  
 Illinois Normal School, Normal.  
 Illinois School of Chiropody, Chicago.  
 Illinois School of Pharmacy, Chicago.  
 Illinois School of Photography, Effingham.  
 Illinois Wesleyan University, Bloomington.  
 International Accounting Society, Chicago.  
 John Marshall Law School, Chicago.  
 Jones National School of Auctioneering, Chicago.  
 Kent College of Law, Chicago.  
 Knights of Columbus School, Chicago.  
 Koester School, Chicago.  
 La Salle Extension University, Chicago.  
 Lane Technical School, Chicago.  
 Lewis Institute, Chicago.  
 Lyceum Art Conservatory, Chicago.  
 McCormack School, Chicago.  
 McKendree School, Lebanon.  
 McKeon Auto School, Chicago.  
 McKillup Veterinary College, Chicago.  
 Mayo College of Commerce, Chicago.  
 Mergenthaler Linotype School, Chicago.  
 Metropolitan Business College, Chicago.  
 Metropolitan Business College, Joliet.  
 Michael Reese Hospital, Chicago.  
 Milliken University, James, Decatur.  
 Molar Barber College, Chicago.  
 Moody Bible Institute, Chicago.  
 Mooseheart Institute, Mooseheart.  
 National Salesman Association, Chicago.  
 National School of Chiropractic, Chicago.  
 National School of Mechanical Dentistry, Chicago.  
 Normal College of Optomology, Chicago.  
 Northern Illinois College of Optometry, Chicago.  
 Northwestern Business College, Chicago.  
 Northwestern College, Naperville.  
 Northwestern University, Chicago.

Ohio Telegraphy Institute, Chicago.  
 Parsons, Mrs. Fannie (tutor), Chicago.  
 Pierson Business College, Chicago.  
 Reese (Charles) Auto School, Chicago.  
 Reynolds' Electrical College, Chicago.  
 Rush Medical College, Chicago.  
 Sheldon Correspondence School, Chicago.  
 Sheldon School, Area.  
 Siebel Institute, Technical, Chicago.  
 Southern Illinois Normal School, Carbondale.  
 Stafford School of Retouching, Chicago.  
 Success Shorthand School, Chicago.  
 Summer's College of Commerce, East St. Louis.  
 Tanner Gilman School, Chicago.  
 Technical High School, Chicago.  
 University of Chicago, Chicago.  
 University of Illinois, Champaign.  
 University of Illinois, Chicago.  
 University of Illinois, Peoria.  
 University of Illinois, Urbana.  
 United Presbyterian College, Monmouth.  
 Venard Photo Institute, Peoria.  
 Walton School of Commerce, Chicago.  
 Washburn School, Chicago.  
 Western University, Chicago.  
 Wheaton College, Wheaton.  
 Worham School, Chicago.  
 Y. M. C. A., Chicago.

## MICHIGAN.

Bliss Alger College, Saginaw.  
 Butterworth Hospital, Grand Rapids.  
 Cass Technical School, Detroit.  
 Commercial Art School, Detroit.  
 Detroit Business Institute, Pontiac.  
 Detroit Business University, Detroit.  
 Detroit College of Law, Detroit.  
 Detroit Commercial College, Detroit.  
 Detroit Conservatory of Music, Detroit.  
 Detroit Institute of Musical Arts, Detroit.  
 Detroit High School of Commerce, Detroit.  
 Ferris Institute, Big Rapids.  
 Grace Hospital, Detroit.  
 Grand Rapids Upholstering School, Grand Rapids.  
 Hackley Manual Training School, Muskegon.  
 Highland Park High School, Highland Park.  
 Hillsdale College, Hillsdale.  
 Holland Business College, Holland.  
 Hope College, Holland.  
 International Correspondence School, Ionia.  
 Junior College, Grand Rapids.  
 Lansing Business University, Lansing.  
 Lewis School for Stammerers, Detroit.  
 McLachlan Business College, Grand Rapids.  
 McLean Business University, Grand Rapids.  
 Mechanical School of Dentistry, Detroit.  
 Marquette Business College, Marquette.  
 Michigan Agricultural School, East Lansing.  
 Michigan Business and Normal School, Battle Creek.  
 Michigan College of Mines, Houghton.  
 Michigan State Auto School, Detroit.  
 Muskegon Commercial College, Muskegon.  
 Northern State Normal School, Marquette.  
 Parsons College, Kalamazoo.  
 Port Huron Business College, Port Huron.  
 Practical Institute of Pharmacy, Sandusky.  
 Reed School of Stammering, Detroit.  
 School of Commerce, Detroit.  
 South Side High School, Grand Rapids.  
 University of Detroit, Detroit.  
 University of Michigan, Ann Arbor.  
 Western State Normal School, Kalamazoo.

## WISCONSIN.

Actual Business College, Appleton.  
 Appleton Business College, Appleton.  
 Auburndale High School, Auburndale.

Beloit Business College, Beloit.  
Brown's Business College, Beloit.  
Bushby's Business College, Appleton.  
Capitol City Commercial College, Madison.  
Carroll College, Waukesha.  
Central Continuation School, Milwaukee.  
Champion College, Prairie du Chien.  
Dunn County Agricultural School, Menomonie.  
Fond du Lac Business College, Fond du Lac.  
Fountain City Business College, Fond du Lac.  
Green Bay Business College, Green Bay.  
Hunt's Business School, Eau Claire.  
Lawrence College, Appleton.  
Luther Hospital, Eau Claire.  
Lyndon Station High School, Lyndon Station.  
Manston High School, Manston.  
Marquette University, Milwaukee.  
Menomonie High School, Menomonie.  
Merrill High School, Merrill.  
Milwaukee Continuation, Milwaukee.  
Milwaukee County School of Agriculture, Wauwatosa.  
Milwaukee Agricultural School, Milwaukee.  
Milwaukee Motor School, Milwaukee.  
Milwaukee Normal School, Milwaukee.  
Milwaukee Trade School, Milwaukee.  
Moler Barber College, Milwaukee.  
Nashotah House, Nashotah.  
New Era Business College, Superior.  
Northwestern School of Stammering, Milwaukee.  
Northwestern Telegraph School, Eau Claire.  
Oshkosh William Business College, Oshkosh.  
Plymouth High School, Plymouth.  
Prairie State School, Milwaukee.  
Ripon College, Ripon.  
School of Engineering of Milwaukee, Milwaukee.  
Sheldon School, Milwaukee.  
State Normal School, Oshkosh.  
State Normal School, River Falls.  
State Normal School, White Water.  
Stout University Institute, Menomonie.  
Superior State Normal School, Superior.  
Technical High School, Milwaukee.  
Universal Foundry College, Oshkosh.  
University of Wisconsin, Madison.  
Wausau Business College, Wausau.  
Wisconsin Business University, La Crosse.  
Wisconsin Commercial Academy, Milwaukee.  
Wisconsin Conservatory of Music, Milwaukee.  
Wisconsin School of Horology, Milwaukee.

DISTRICT NO. 9.

KANSAS.

Atchison Business College, Atchison.  
Baker University Academy, Baldwin City.  
Chanute Business College, Chanute.  
Coffeyville Business College, Coffeyville.  
Concordia Business and Normal School, Concordia.  
Fort Schott High School, Fort Schott.  
Friends University, Wichita.  
Hutchinson Auto and Tractor School, Hutchinson.  
Kansas City College of Medicine and Surgery, Kansas.  
Kansas State Agricultural College, Manhattan.  
Kansas State Normal School, Emporia.  
Kansas University, Kansas.  
Kansas Wesleyan Business College, Salina.  
Lawrence Business College, Lawrence.  
Newton Business College, Newton.  
Oread Training School, Parsons.  
Parsons Business College, Salina.  
Pittsburg Business College, Pittsburg.  
Ransomian Business College, Kansas City.  
Salt City Business College, Hutchinson.  
State Manual Training School, Pittsburg.  
Topeka Business College, Topeka.

University of Kansas, Lawrence.  
Western University of Tailoring, Oriednare.  
Wichita Business College, Wichita.

IOWA.

Bayless Business College, Dubuque.  
Bitter, Mr., Dubuque.  
Boyles Commercial College, Council Bluffs.  
Brown's Business College, Davenport.  
Capital City Commercial College, Des Moines.  
Cedar Rapids Business College, Cedar Rapids.  
Central Iowa Business College, Marshalltown.  
Coe College, Cedar Rapids.  
Cornell College, Mount Vernon.  
Council Bluffs High School, Council Bluffs.  
Des Moines College, Des Moines.  
Drake University, Des Moines.  
Fort Dodge Business College, Fort Dodge.  
Grinnell College, Grinnell.  
Hamilton University of Commerce, Mason City.  
Iowa State Agricultural College, Ames.  
Iowa State Teachers' College, Cedar Falls.  
Iowa State University, Iowa City.  
Luana Consolidated School, Luana.  
Morningside College, Sioux City.  
National Business Training School, Sioux City.  
Palmer Business Training School, Davenport.  
Simpson School, Indianola.  
Tobin College, Fort Dodge.  
Tri-City Barber College, Des Moines.  
University of Iowa High School, Iowa City.  
Warsor, Moss Hyra (tutor), Ames.  
Waterloo Business College, Waterloo.

MISSOURI.

Academy of Architecture and Industrial Science, St. Louis.  
American School of Osteopathy, Kirksville.  
Bonton College of Law, St. Louis.  
Botany College, Mankato.  
Blowett High School, Ben, St. Louis.  
Brown's Business College, St. Louis.  
Campbell School of Prosthetic Technology, St. Louis.  
Cape Girardeau Business College, Cape Girardeau.  
Central Business College, Sedalia.  
Central Business College (high school), St. Louis.  
Central Institute for Deaf, St. Louis.  
Chillicothe Business College, Chillicothe.  
City College of Law and Finance, St. Louis.  
Cranton School of Music, Kansas City.  
Draughton's Business College, Springfield.  
Drury Business College, Springfield.  
Eden Theological Seminary, St. Louis.  
Fine Arts Institute, Kansas City.  
Finlay Engineering School, Kansas City.  
Fuchs, Ralph (tutor), St. Louis.  
Gutierrez, R. J. (tutor), St. Louis.  
Henninger's School of Music, St. Louis.  
Hogan Auto and Tractor School, Kansas City.  
Huff's School Expert Business Training, Kansas City.  
International Accountants' Society, St. Louis.  
Jewell College, William, Liberty.  
Jones Business School, St. Louis.  
Joiner School, Joplin.  
Joplin Business College, Joplin.  
Junior College, Kansas City.  
Kansas City Business College, Kansas City.  
Kansas City Fine Arts Institute, Kansas City.  
Kansas City Polytechnical Institute, Kansas City.  
Kansas City School of Medicine and Surgery, Kansas City.  
Kansas City School of Law, Kansas City.

Kansas City School of Mechanical Dentistry, Kansas City.  
 Kelster Ladies Tailoring College, Kansas City.  
 Kirkstusok Bros. (tutor), St. Louis.  
 Kreeger Conservatory of Music, St. Louis.  
 La Grange College, La Grange.  
 Lathrop Trade School, Kansas City.  
 Lincoln Institute, Jefferson City.  
 Missouri Agricultural College, Columbia.  
 Missouri Auction School, Kansas City.  
 Missouri Botanical Society, St. Louis.  
 Missouri School of Mines, Rolla.  
 Missouri Valley College, Marshall.  
 Moler Barber College, Kansas City.  
 Moler Barber College, St. Louis.  
 Needles Institute, Kansas City.  
 Nevada Business College, Nevada.  
 Park College, Parkville.  
 Patterson, Mr. Everett W., St. Louis.  
 Patterson, Mrs. Alice M. G., St. Louis.  
 Patterson School, St. Louis.  
 Lincoln High School, Kansas City.  
 Platt's Commercial College, St. Joseph.  
 Popular Bluff School, Poplar Bluff.  
 Rahe Auto School, Kansas City.  
 Rankin Trade School, St. Louis.  
 Rubicon Business College, St. Louis.  
 Southwest Missouri State Teacher College, Springfield.  
 Spaulding's Commercial College, Kansas City.  
 Springfield Business College, Springfield.  
 Springfield Chiropractic College, Springfield.  
 State Normal School, Kirksville.  
 State Normal School, Warrensburg.  
 St. Joseph's Veterinary School, St. Joseph.  
 St. Louis College of Pharmacy, St. Louis.  
 St. Louis College Chiropractic, St. Louis.  
 St. Louis School of Fine Arts, St. Louis.  
 St. Louis University, St. Louis.  
 St. Louis Watchmaking School, St. Louis.  
 Stiches Institute, Kansas City.  
 Sweeney Auto Tractor School, Kansas City.  
 University of Missouri, Columbia.  
 Warrensburg Teachers' College, Warrensburg.  
 Washington University, St. Louis.  
 Y. M. C. A. (Ralph Sellev), St. Louis.

## NEBRASKA.

Boyle's Commercial College, Omaha.  
 Creighton University, Omaha.  
 Dana College and Trinity Seminary, Blair.  
 Hastings Business College, Hastings.  
 Kearney Normal School, Kearney.  
 Lincoln Business College, Lincoln.  
 Moler Barber College, Omaha.  
 School of Agriculture, Lincoln.  
 University of Nebraska, Lincoln.  
 Y. M. C. A., Omaha.

## DISTRICT NO. 10.

## MINNESOTA.

Albert Lee Commercial College, Albert Lee.  
 American Business College, Minneapolis.  
 American Farmers' School, Minneapolis.  
 American Telegraph College, Minneapolis.  
 American Vocational Institute, Minneapolis.  
 Augsburg Seminary, Minneapolis.  
 Bible Institute and Academy, Minneapolis.  
 Central Business Institute, Duluth.  
 College of St. Thomas, St. Paul.  
 Collegiate Business Institute, Minneapolis.  
 De Mars School of Optics, Minneapolis.  
 Duluth Business University, Duluth.  
 Dunwoody Institute, Minneapolis.  
 Federal School of Commercial Designing, Minneapolis.  
 Hamline University, St. Paul.  
 Janney Semple School, Minneapolis.  
 La Salle Extension University, Minneapolis.  
 Little Falls Business College, Little Falls.

Lutheran Theological Seminary, St. Paul.  
 MacPhail School of Music, St. Paul.  
 Mankato Commercial College, Mankato.  
 Mayo Clinic, Rochester.  
 Minnehaha Academy, Minneapolis.  
 Minneapolis Auto and Tractor School, Minneapolis.  
 Minneapolis School of Art, Minneapolis.  
 Minnesota School of Business, Minneapolis.  
 Minnesota School of Lip Reading, Minneapolis.  
 Minnesota College, Minneapolis.  
 Minnesota Institute of Pharmacy, Minneapolis.  
 Nicholas Expert School, St. Paul.  
 Northwestern College of Law, Minneapolis.  
 Rasmussen Business College, St. Paul.  
 St. Cloud Normal School, St. Cloud.  
 St. Paul College of Law, St. Paul.  
 St. Paul Sanatorium, St. Paul.  
 Smeby School, Minneapolis.  
 Stone's Practical School of Watchmaking, St. Paul.  
 Twin City Barber College, Minneapolis.  
 University of Minnesota, Minneapolis.  
 Winona Business College, Winona.  
 Y. M. C. A., Minneapolis.  
 Y. M. C. A., St. Paul.

## MONTANA.

Billings Business College, Billings.  
 Butte Business College, Butte.  
 Fergus High School, Lewiston.  
 Great Falls Business College, Great Falls.  
 Helena Business College, Helena.  
 Missoula Business College, Missoula.  
 Montana School of Mines, Butte.  
 Montana Wesleyan College, Helena.  
 University of Montana, Missoula.  
 University of Montana, Bozeman.

## NORTH DAKOTA.

Asker's Business College, Grand Forks.  
 Bismarck Business College, Bismarck.  
 College of Commerce, Minot.  
 Dakota Business College, Fargo.  
 Fargo School of Auto Engineering, Fargo.  
 Fargo School of Business, Fargo.  
 Hanson Auto and Tractor School, Fargo.  
 North Dakota Agricultural School, Fargo.  
 State Normal and Industrial School, Ellendale.  
 University of North Dakota, Grand Forks.

## SOUTH DAKOTA.

Aberdeen Business College, Aberdeen.  
 Dakota Wesleyan University, Mitchell.  
 Northern Normal and Industrial School, Aberdeen.  
 Sioux Business College, Sioux Falls.  
 Spearfish Normal School, Spearfish.  
 South Dakota State College of Agriculture and Mechanic Arts, Brookings.  
 South Dakota School of Business, Watertown.  
 University of South Dakota, Vermillion.

## DISTRICT NO. 11.

## COLORADO.

American Business College, Pueblo.  
 Barnes Commercial School, Denver.  
 Boulder Preparatory School, Denver.  
 Brown Business College, Colorado Springs.  
 Colorado Agricultural College, Deer Trail.  
 Colorado Agricultural College, Fort Collins.  
 Colorado Agricultural College, Windsor.  
 Colorado Business College, Boulder.  
 Colorado School of Dental Surgery, Denver.  
 Colorado School of Mines, Golden.  
 Colorado Springs College, Colorado Springs.  
 Colorado Springs High School, Colorado Springs.

Denver Academy of Applied Arts, Denver.  
 Denver Opportunity School, Denver.  
 Hoel-Ross Business College, Grand Junction.  
 Johnson Automotive Electric School, Denver.  
 Lewis Hotel School, Denver.  
 Manual Training High School, Denver.  
 Modern Auto and Tractor School, Denver.  
 Modern Business College, Denver.  
 Moler Barber College, Denver.  
 Miss Muriel Studio (tutor), Denver.  
 State Teacher's College, Greeley.  
 St. Johns College, Greeley.  
 St. Marys Academy, Denver.  
 Trinidad Business College, Trinidad.  
 University of Colorado, Boulder.  
 University of Denver, Denver.  
 United States Naval Hospital, Fort Lyon.  
 Western Institution of Music and Art, Denver.  
 Western School of Estimating and Plan Reading, Denver.  
 Whittaker School of Speechmaking, Denver.  
 Y. M. C. A., Denver.

## UTAH.

Brigham Young University, Provo.  
 Hemphill's Auto and Tractor School, Salt Lake City.  
 Henagers Business College, Salt Lake City.  
 Latter Day Saints Business College, Salt Lake City.  
 Rions Cooperation Merchantile Institute, Salt Lake City.  
 Salt Lake City High School, Salt Lake City.  
 University of Utah, Salt Lake City.  
 Utah Agricultural College, Logan.

## WYOMING.

Cheyenne Business College, Cheyenne.  
 Spencer Business College, Sheridan.  
 University of Wyoming, Laramie.

## NEW MEXICO.

Albuquerque Business College, Albuquerque.  
 New Mexico Agriculture and Mechanic College, Los Cruces.  
 New Mexico Agriculture and Mechanic College, Mesilla Park.  
 New Mexico Agriculture and Mechanic College of Arts, State College.  
 New Mexico School of Mines, Socorro.  
 Receiving Station, Albuquerque.  
 Silver City Normal School, Silver City.  
 State Normal School, Las Vegas.  
 Western School for Secretaries, Albuquerque.

## DISTRICT NO. 12.

## CALIFORNIA.

Accountant Educational Institute, Los Angeles.  
 Alameda High School, Alameda.  
 American Tire Repair School, San Francisco.  
 Anglo Post Graduate School, Pasadena.  
 Antelope Valley Union School, Lancaster.  
 Armstrong School for Private Secretaries, Berkeley.  
 Arrington Musical College, San Francisco.  
 Brownberger Business College, Los Angeles.  
 Butler School of Commerce, San Francisco.  
 California Academy of Science, San Francisco.  
 California Commercial School, San Diego.  
 California Conservatory of Music, San Francisco.  
 California School of Arts and Crafts, Berkeley.  
 California School of Arts and Crafts, Oakland.

California School of Arts and Crafts, San Francisco.  
 California School of Chiropody, Los Angeles.  
 California School of Lip Reading, San Francisco.  
 California College of Optometry, San Francisco.  
 California Polytechnic School, San Luis Obispo.  
 California School of Mechanic Arts, San Francisco.  
 California School of Fine Arts, San Francisco.  
 California State Library School, Los Angeles.  
 Cannon School of Arts and Designing, Los Angeles.  
 Chaffey Junior College of Agriculture, San Francisco.  
 Chaffey Union High School, Ontario.  
 Chaplin Air Craft School, Los Angeles.  
 Chico State Normal, Chico.  
 Chiropactice College, San Francisco.  
 Church Divinity School, San Francisco.  
 Coast College of Lettering, Los Angeles.  
 College of Pharmacy, Los Angeles.  
 College of Physicians and Surgery, San Francisco.  
 Commercial Experts' Training Institute, Los Angeles.  
 De Chauvert School of Music, Los Angeles.  
 Drew's Coaching School, San Francisco.  
 Egan School of Dramatics, Los Angeles.  
 Eureka Business College, Eureka.  
 Fulton Players' School, Oakland.  
 Gardiner School of Commercial Arts, Los Angeles.  
 Gibson's Assaying School, Oakland.  
 Hastings College of Law, San Francisco.  
 Heald's Business College, San Jose.  
 Heald's Business College, Los Angeles.  
 Heald's Business College, Sacramento.  
 Heald's Business College, Fresno.  
 Heald's Business College, Oakland.  
 Heald's Business College, San Francisco.  
 Heald's Business College, Santa Cruz.  
 Heald's Auto and Engineering School, San Francisco.  
 Heald's Commercial College, Stockton.  
 Hiles Watchmaking and Engraving School, San Francisco.  
 Hill's Business College, Oakland.  
 International Correspondence School, El Centro.  
 Interstate Civil Service School, Los Angeles.  
 Institute of Music, San Francisco.  
 Kelsey Jenney Commercial College, San Diego.  
 Lano Hospital, San Francisco.  
 Lazarus, Alfred J., San Francisco.  
 Leland Stanford Junior University, Palo Alto.  
 Letterman General Hospital, San Francisco.  
 Los Angeles Auto Engineering School, Los Angeles.  
 Los Angeles Bible Institute, Los Angeles.  
 Los Angeles College of Fine Arts, Los Angeles.  
 Los Angeles College of Laboratory Technique, Los Angeles.  
 Los Angeles College of Osteopathy, Los Angeles.  
 Los Angeles Hospital, Los Angeles.  
 Los Angeles Medical College of Ophthalmology, Los Angeles.  
 Los Angeles Normal School, Los Angeles.  
 Los Angeles Polytechnic High School, Los Angeles.  
 Los Angeles School of Anatomy and Embalming, Los Angeles.  
 Los Angeles School of Lip Reading, Los Angeles.  
 Marconi School, San Francisco.  
 Modesto High School, Modesto.  
 Moler Barber College, San Francisco.  
 Munsen School of Private Secretaries, San Francisco.



Napa Business College, Napa.  
 National Auto School, Los Angeles.  
 Oakland Polytechnic Institute, Oakland.  
 O'Neil, Miss Kate, Riverside.  
 Otis Art Institute, Los Angeles.  
 Pacific Auto and Engineering School, San Francisco.  
 Pacific School of Fine Arts, Los Angeles.  
 Pacific Union College, St. Helena.  
 Palmer School, Los Angeles.  
 Pomona College, Pomona.  
 Polytechnic College of Engineering, Oakland.  
 Potts Business College, Pasadena.  
 Rattledge School of Chiropractic, Los Angeles.  
 Receiving Station, Los Angeles.  
 Receiving Station, San Francisco.  
 Richmond Commercial School, Richmond.  
 Sacramento Auto School, Sacramento.  
 San Diego High School, San Diego.  
 San Francisco Hospital, San Francisco.  
 San Francisco Institute of Accounting, San Francisco.  
 San Francisco Show Card School, San Francisco.  
 Santa Barbara Business College, Santa Barbara.  
 Santa Barbara High School, Santa Barbara.  
 Santa Clara University, Santa Clara.  
 Santa Fe Hospital, Santa Fe.  
 Santa Fe Telegraphic School, Los Angeles.  
 Santa Maria High School, Santa Maria.  
 Sawyer School of Secretaries, Los Angeles.  
 Siskiyou High School, Yreka.  
 Southwestern University, Los Angeles.  
 Southwest School of Industrial Arts, Los Angeles.  
 Southwest School of Engraving and Watchmaking, Los Angeles.  
 Standard Secretarial School, San Francisco.  
 State Normal School, Santa Barbara.  
 Stockton High School, Stockton.  
 Taylor School of Navigation, San Francisco.  
 Thropp College of Teachers, Pasadena.  
 United States H. S. Hospital, Palo Alto.  
 University Farm School, Davis.  
 University of California, Berkeley.  
 University of California Dental College, San Francisco.  
 University of California Hospital, San Francisco.  
 University of California Medical School, San Francisco.  
 University of Redlands, Redlands.  
 University of Southern California, Los Angeles.  
 University of California, Los Angeles.  
 United States Marine Hospital, San Francisco.  
 United States Shipping Board, Berkeley.  
 Walden's Massage College, Los Angeles.  
 Weigle, N. G. G. (tutor), San Francisco.  
 Willis Woodbury Business College, Los Angeles.  
 Willits Union High School, Willits.  
 Y. M. C. A., Los Angeles.  
 Y. M. C. A., Oakland.  
 Y. M. C. A., San Francisco.

## ARIZONA.

Lamsons Business College, Phoenix.  
 Receiving Station, Globe.  
 Receiving Station, Phoenix.  
 University of Arizona, Tucson.

## NEVADA.

Heald's Business College, Reno.  
 University of Nevada, Reno.

## DISTRICT No. 13.

## WASHINGTON.

Alaska Business College, Bellingham.  
 Arlington High School, Arlington.  
 Baker Business College, Seattle.  
 Bellingham Business Institute, Bellingham.  
 Beutal Business College Tacoma.  
 Broadway High School, Broadway.  
 Federal Board, Seattle.  
 Gonzaga University, Spokane.  
 Hall's Business College, Seattle.  
 International Correspondence School, Seattle.  
 Knox School for Salesmen, Seattle.  
 Lewis Clark High School, Spokane.  
 McKerrell School of Lip-Reading, Seattle.  
 Modern Auto and Tractor School, Seattle.  
 Modern Auto and Tractor School, Spokane.  
 Moler Barber College, Seattle.  
 Moler Barber College, Tacoma.  
 Nelson Modern Business School, Seattle.  
 Northwestern Business College, Spokane.  
 North Yakima Business College, Yakima.  
 Pacific City High School, Seattle.  
 Puget Sound Nautical School, Seattle.  
 Puget Sound Navy Yard, Bremerton.  
 Receiving Station, Hamilton.  
 Seattle Engineering School, Seattle.  
 Smith's Navigation School, Seattle.  
 Spokane High School, Spokane.  
 Spokane Expert School, Spokane.  
 Success Shorthand School, Seattle.  
 Success Business College, Everett.  
 Union High School, Gresham.  
 University of Washington, Seattle.  
 Washington State College, Pullman.  
 Wenatchee Business College, Wenatchee.  
 West Seattle High School, Seattle.  
 Western Institute of Accounting, Spokane.  
 Whitman College, Walla Walla.  
 Wilson's Modern Business College, Seattle.  
 Y. M. C. A., Seattle.

## OREGON.

Adeco School, Portland.  
 Behnke-Walker Business College, Portland.  
 Benson Polytechnic Institute, Portland and Seattle.  
 Capital Business College, Salem.  
 Enterprise High School, Enterprise.  
 Eugene Bible University, Eugene.  
 Northern Pacific College of Dentistry, Portland.  
 Northwestern College of Law, Portland.  
 Oregon Agriculture College, Corvallis.  
 Railway Telegraph Institute, Portland.  
 Reed College, Portland.  
 University of Oregon, Eugene.  
 Willamette University, Salem.  
 Y. M. C. A., Portland.

## IDAHO.

Boise High School, Boise City.  
 Idaho Technical Institute, Pocatello.  
 Lewiston Business College, Lewiston.  
 Links Business College, Boise City.  
 State Normal School, Lewiston.  
 University of Idaho, Moscow.

## DISTRICT No. 14.

## TEXAS.

Alamo City Business College, San Antonio.  
 American Automotive School, Dallas.  
 Baptist Seminary, Fort Worth.  
 Baylor University Medical College, Dallas.  
 Baylor University Medical College, Waco.  
 Brokenbridge High School, San Antonio.  
 Burford Reed Business College, Dallas.  
 Brantley Draughton's Business College, Fort Worth.

Clarendon College, Clarendon.  
 Dallas City Hospital, Dallas.  
 Draughton's Business College, Abilene.  
 Draughton's Business College, Galveston.  
 East Texas Normal School, Commerce.  
 El Paso High School, El Paso.  
 J. Wesley Graham's Conservatory of Music, Houston.  
 Grubb's Vocational School, Arlington.  
 Gunter Bible College, Gunter.  
 Houston Conservatory of Music, Houston.  
 Howard-Payne College, Brownwood.  
 International Business College, El Paso.  
 Knights of Columbus School, Dallas.  
 Metropolitan Business College, Dallas.  
 Massey's Business College, Houston.  
 Moler Barber College, Dallas.  
 Moler Barber College, Houston.  
 Moler Barber College, San Antonio.  
 Nixon Clay Business College, Austin.  
 North Texas State Normal, Denton.  
 Port Arthur Business College, Port Arthur.  
 Prairie View State Normal and Indian School, Prairie View.  
 Receiving Station, Dallas.  
 Rice Institute, Houston.  
 Sam Houston Institute, Huntsville.  
 State Normal School, Commerce.  
 Sherman Business College, Sherman.  
 Southern Methodist University, Dallas.  
 Southwestern College, Keene.  
 Southwestern Texas State Normal, San Marcus.  
 Tarlton, John, College, Stephenville.  
 Texas School of Mines, El Paso.  
 Texas Agricultural and Mechanics College, College Station.  
 Toby's Business College, Waco.  
 Tyler Commercial College, Tyler.  
 University of Texas, Austin.  
 University of Texas, Galveston.  
 Washington's, Miss, School Lip Reading, Dallas.  
 Y. M. C. A., Dallas.

## ARKANSAS.

Arkansas Baptist College, Little Rock.  
 Branch Normal College, Pine Bluff.  
 Dinwiddie Art Studio, Little Rock.  
 Draughton's Business College, Fort Smith.  
 Draughton's Business College, Little Rock.

Fayetteville Business College, Fayetteville.  
 Hot Springs Business College, Hot Springs.  
 Fort Smith Commercial College, Fort Smith.  
 James Business College, Pine Bluff.  
 Receiving Station, Fayetteville.  
 Palmer Barber College, Little Rock.  
 St. Luke's Hospital, Little Rock.  
 Shorter College, Little Rock.  
 State District 1, Agricultural School, Jonesboro.  
 State District 2, Agricultural School, Russellville.  
 State District 3, Agricultural School, Magnolia.  
 State District 4, Agricultural School, Monticello.  
 State Normal School, Conway.  
 Toby's Practical Business College, Little Rock.  
 University of Arkansas, Fayetteville.  
 Y. M. C. A., Little Rock.

## OKLAHOMA.

Carter Chiropractics College, Oklahoma City.  
 Central State Normal College, Elmond.  
 Chillico School of Indians, Chillico.  
 Draughton's Business College, Muskogee.  
 Draughton's Business College, Shawnee.  
 Enid Business College, Enid.  
 Guthrie Business College, Guthrie.  
 Hill's Business College, Oklahoma City.  
 Kendall College, Henry, Tulsa.  
 Kingfisher High School, Kingfisher.  
 McAllister Business College, McAllister.  
 Mraz Violin School, Oklahoma City.  
 Northwestern State Training Normal School, Tahlequah.  
 Oakland School for Blind, Muskogee.  
 Oklahoma Agricultural and Mechanics College, Stillwater.  
 Oklahoma Barber College, Oklahoma City.  
 Oklahoma City Auto School, Oklahoma City.  
 Oklahoma City College, Oklahoma City.  
 Oklahoma State School of Mines, Wilburton.  
 State Normal School, Weatherford.  
 Tulsa Business College, Tulsa.  
 University of Oklahoma, Oklahoma City.  
 Valentine Business College, Vinta.  
 Y. M. C. A., Oklahoma.

TABLE 23.—*Training agencies: Industrial establishments providing vocational rehabilitation training for disabled soldiers, sailors, and marines under direction of the Federal Board for Vocational Education, in the fiscal year ended June 30, 1920, by districts and States.*

## DISTRICT NO. 1.

## MAINE.

Adams Studio, Portland.  
 Akron Tire Co., Portland.  
 Androscoggin Electric Co., Lewiston.  
 Bangor & Aroostook Railroad, Bangor.  
 Bodell Co., V. C., Sanford.  
 Canel Street Garage, Rumford.  
 Carey Motor Repair Co., B. F., Portland.  
 Central Maine Power Co., Waterville.  
 Commonwealth Shoe & Leather Co., Gardiner.  
 Cressey, George M., Houlton.  
 Dodge Bros. Co., Portland.  
 Ebbeson, A. L., Bangor.  
 Fay & Scott, Dexter.  
 Fish River Lumber Co., Eagle Lake.  
 Folsom, J. J., Foxcroft.  
 Garand, Oscar N., Portland.  
 Goodyear Repairing Co., Augusta.  
 Great Northern Paper Co., Millinocket.  
 Guilford Woolen Co., Guilford.  
 Henley Kimbal Co., Portland.

Hill Co., John F., Waterville.  
 Hollingsworth & Whitney Co., Waterville.  
 Hotel, Falmouth, Portland.  
 Harrington Hotel, Harrington.  
 Johnson & Whitcomb, Bangor.  
 Kennebec Greenhouse, Bath.  
 King & Dexter Co., Portland.  
 Littlefield Garage, Rumford.  
 Lunn & Sweet Co., Auburn.  
 McDonald Manufacturing Co., Portland.  
 Maine Central Railroad Shops, Waterville.  
 Maine Dental Supply Co., Portland.  
 Maine Electric Co., Portland.  
 Marcoux, Jos., Rumford.  
 Marston & Brooks, Hallowell.  
 Myers, Epstein Co., Westbrook.  
 New Franklin Laundry, Brewer.  
 Norton, Arthur R., Farmington.  
 O'Neil, W. J., Portland.  
 Oxford Paper Co., Rumford.  
 Portland Garage Co., Portland.  
 Portland Shoe Manufacturing Co., Portland.  
 Randall & McAllister, Portland.  
 Richardson Dental Laboratory, Bangor.

Sears, Roebuck Co., Springvale.  
 Smith & Rumery Co., Portland.  
 Union Iron Works, Bangor.  
 Union Mutual Life Insurance Co., Portland.  
 Utterbeek & Gleason Co., Bangor.  
 Wade & Dutton Motor Car Co., Lewiston.  
 Warren Co., S. D., Cumberland Mills.  
 Willard & Young, Portland.  
 Williams Bros. Co., Portland.  
 Wood Smith Co., Auburn.  
 Woodbury Shoe Co., Calais.  
 Wyandotte Worsted Co., Waterville.

## NEW HAMPSHIRE.

Amoskeag Manufacturing Co., M. G., Manchester.  
 Brodie Electric & Auto Co., Manchester.  
 Brown & Co., Berlin.  
 Bryant & Co., E. M., Manchester.  
 Chauncy-Williams Needle Manufacturing Co., Manchester.  
 Claremont Garage, Claremont.  
 Craft Shoe Co., George P., Manchester.  
 Dame & Sleeper, Manchester.  
 Finney's Upholstering Co., Manchester.  
 Fountaine, W. J. Co., Manchester.  
 Hall Bros., Llewellyn County.  
 Hickey Plumbing and Heating Co., George F., Manchester.  
 Highway Construction Engineering Co., Manchester.  
 Ireland & Grafton, Dover.  
 Leighton, Frank D., Manchester.  
 Lord's Garage, Tilton.  
 McElwain Co., W. H., Manchester.  
 Manchester Auto Garage, Manchester.  
 Manchester Machine Works, Manchester.  
 Marinott Battery Co., The, Manchester.  
 Mitchie, William, Manchester.  
 Morrison, W. N., Rochester.  
 Murphy, William F., Manchester.  
 New Hampshire Typewriter Co., Manchester.  
 Odde, John, Stratham.  
 Peerless Manufacturing Co., Newport.  
 Perkins Co., M. S., Keene.  
 Railroad Square Garage, Manchester.  
 State of New Hampshire Forestry Department, Concord.  
 Stevens, John H., Manchester.  
 Stevens Machine Shops, Winooski.  
 Transfer Shoe Repair Co., Manchester.  
 Vandas, Primo, Newmarket.  
 Williams Manufacturing Co., Chauncy A., Manchester.

## VERMONT.

Fairbanks, E. & T., & Co., St. Johnsbury.  
 French & Bean Co., St. Johnsbury.  
 Hastings, W. G., Montpelier.  
 Hathorn, R. C., White River.  
 Lane Manufacturing Co., Montpelier.  
 National Acme Co., Windsor.  
 National Machine Co., Brattleboro.  
 Norwalk Iron Works Co., Norwalk.  
 Patch Manufacturing Co., Rutland.  
 Romano Electric Shoe Shop, Rutland.  
 Shepard & Morse, Burlington.  
 Stickney, Sargent & Skeels, Ludlow.

## MASSACHUSETTS.

A. & A. Railroad Co., Springfield.  
 Abbott Worsted Mills, Granthamville.  
 Acme Motor Truck Co., Cambridge.  
 Ahorolan, John, Boston.  
 Allen Co., C. E. Fay, Boston.  
 Ambrose Farms, Newburyport.  
 American Architectural Iron Works, Boston.  
 American Dental Laboratory, Boston.  
 American Electric Co., Springfield.  
 American Optical Co., Southbridge.  
 American Sign Co., Boston.  
 American Welding Co., Boston.  
 American Woolen Co., Fitchburg.  
 American Writing Paper Co., Holyoke.  
 Andrews-Wasgatt Co., Everett.

Apostoles, George D., Boston.  
 Arlington Mills, Lawrence.  
 Armour & Co., Woburn.  
 Arnold, M. N., Shoe Co., North Arlington.  
 Auburn Worsted Co., Auburn.  
 Auburn Last Co., Framingham.  
 Averson, Louis, Worcester.  
 Boston & Maine Railroad, Boston.  
 B. P. G. Electric Co., Boston.  
 Baker Electrical Co., Boston.  
 Bancroft Walker Shoe Co., Boston.  
 Barnstedt Manufacturing Co., Boston.  
 Barry Shoe Co., Lowell.  
 Bartelsen & Peterson, Boston.  
 Bascom's (Inc.), Boston.  
 Baster, Whitney Co., M., Winchendon.  
 Bay State Cigar Co., Roxbury.  
 Bay State Machine Co., Springfield.  
 Bay State Upholstery Co., Boston.  
 Beacon Auto Machine Works, Roxbury.  
 Beacon Auto Machine Co., Boston.  
 Beacon Oil Co., Everett.  
 Becker Milling Co., Hyde Park.  
 Belvidere Garage, Lowell.  
 Bentley & Co., G. William, Boston.  
 Berch & Cadigan, Boston.  
 Berkshire Cotton Co., Adams.  
 Berkshire Electric Co., Pittsfield.  
 Berkshire Magneto Co., Pittsfield.  
 Berry, Dr. C. B., Somerville.  
 Berry Shoe Co., Lowell.  
 Bethlehem Shipbuilding Co., Quincy.  
 Beylick, Myron J., Boston.  
 Bigelow & Kennard Co., Boston.  
 Billings Garage, Springfield.  
 Birlingame Co., A., Worcester.  
 Blake Electric Co., Boston.  
 Blanchard Machine Co., Cambridge.  
 Bliss & Perry, Newburyport.  
 Boltz, A. E., Norfolk Downs.  
 Boston American, Boston.  
 Boston Brazing & Welding Co., Boston.  
 Boston Bulck Co., Allston.  
 Boston Bulck Co., Boston.  
 Boston City Club, Boston.  
 Boston Elevated Railroad Co., Boston.  
 Boston Dental Laboratory, Boston.  
 Boston Engr. Co., Boston.  
 Boston Fruit & Supply Co., Boston.  
 Boston Lapidary, Boston.  
 Boston Machine Screw Co., Cambridge.  
 Boston Optical Co., Boston.  
 Boston Pen Co., West Somerville.  
 Boston Post, Boston.  
 Boston Printing Co., Boston.  
 Boston Rebuilt Typewriter Co., Boston.  
 Boston Rubber Shoe Co., Malden.  
 Boston Woodworking Co., Boston.  
 Bowen Bros., Boston.  
 Eowilles, George W., Watertown.  
 Bradlee & Chapman Co., Boston.  
 Braintree Rubber Cement Co., South Braintree.  
 Brigham Engraving Co., Attleboro.  
 Brightman, A., & Sons, Boston.  
 Brink (Inc.), C. I., Boston.  
 Broadway Ignition & Battery Co., Boston.  
 Broadway Iron Foundry, Cambridge.  
 Brow Co., W. J., Fall River.  
 Brown Association, A. L., Boston.  
 Bruce Electric Co., Fitchburg.  
 Buff & Buff Manufacturing Co., Jamaica Plain.  
 Buskman Leather Co., Woburn.  
 Butler's (Inc.), Boston.  
 Butler & Linemann, Roxbury.  
 Cahill, John, Boston.  
 Cambridge Rubber Co., Cambridge.  
 Camire Welding Co., Lawrence.  
 Campisi & Castellapa Co., West Newton.  
 Canton Publishing Co., Canton.  
 Caravaty, Louis, Pittsfield.  
 Carey & Curran Plumbing Co., East Weymouth.  
 Cardarelli, E., & Son, Boston.  
 Carro, Charles, Boston.  
 Caspar-Ranger Construction Co., Holyoke.  
 Central Building Co., Worcester.  
 Central Garage, East Boston.

- Central Typesetting Co., Worcester.  
 Centrigraph, Boston.  
 Century Upholstering Co., Boston.  
 Chain Leather Co., Peabody.  
 Chandler & Farguhar, Boston.  
 Chandler Motors Co., Boston.  
 Chauncey Fur Co., Boston.  
 Chelsea Watch Hospital, Chelsea.  
 City of Brockton, Brockton.  
 Clark, Harrison G., Gloucester.  
 Clark Engraving Co., F. O., Boston.  
 Clydesdale Garage, Brighton.  
 Cogan & Co., B., Stoneham.  
 Cogswell & Tewksbury, Winthrop.  
 Commonwealth Shoe & Leather Co., Whitman.  
 Condit Electric Manufacturing Co., South Boston.  
 Connolly, T. H., Roxbury.  
 Converse Rubber Shoe Co., Malden.  
 Cooper-Williams Co., Boston.  
 Corbin Co., B. A., Marlboro.  
 Corbin & Son Co., B. A., Webster.  
 Cotshall, Thos. D. & Co., Jamaica Plain.  
 Courtney, James, Boston.  
 Cowdrey Machine Works, Fitchburg.  
 Cowen Truck Co., Holyoke.  
 Craddock Garage, Medford.  
 Crimmins & Pierce, Boston.  
 Crimmins & Pierce Co., Roxbury.  
 Crosby Steam Gauge & Valve Co., Charlestown.  
 Cross Co., E. J., Worcester.  
 Crossen Palm Garden, Nantasket.  
 Crossman Plating Co., Boston.  
 Croughwell, E. A., Peabody.  
 Cummings Machine Works, Boston.  
 Cundy-Bettoney Co., Jamaica Plain.  
 Currier, J. V., Haverhill.  
 Curry Co., H. J., Salem.  
 Dadman Co., Boston.  
 Daley, Williams Co., Boston.  
 Dalton Shoe Co., Brockton.  
 Davenport, S. S., Boston.  
 Davis & Farnum Manufacturing Co., Waltham.  
 Deane, J. W., Millers Falls.  
 Demers, Jerry L., Attleboro.  
 Department of Public Works, Middleboro.  
 De Rego, Sylvian, Fall River.  
 Dereyshire, F. W., Waltham.  
 Devoe & Reynolds, Boston.  
 Diamond Shop Co., Brockton.  
 Diehl, F. C., Wellesley.  
 Di Fenselo, D., Lawrence.  
 Dix, D. M., Roxbury.  
 Dobinson, W. J., Boston.  
 Dodge Plating Works, Boston.  
 Donnelly Manufacturing Co., Malden.  
 Donovan Motor Co., Boston.  
 Douglas, W. L., Shoe Co., Brockton.  
 Dunbar Pattern Co., Brockton.  
 Durable Wire Rope Co., Boston.  
 Durand Co., Boston.  
 Eagle Shoe Manufacturing Co., Everett.  
 Eastern Gem Co., Boston.  
 Economy Garage, Haverhill.  
 Economic Machine Co., Worcester.  
 Eldam Motor Co., Lawrence.  
 Emery & Marshall Shoe Co., Haverhill.  
 Employer Liability Assurance Co., Boston.  
 Enos & Co., Chas. J., Boston.  
 Essex Sign Co., Haverhill.  
 Evans Co., L. B., Wakefield.  
 Evenson & Co., A. J., Boston.  
 Everett National Bank, Everett.  
 Fagin, Thos. J., Boston.  
 Farrell's Garage, Dorchester.  
 Fay-Allen Co., C. E., Boston.  
 Fay, Barry Motor Co., Worcester.  
 Felton Furnace Heating Co., Roxbury.  
 Filene Sons, Wm., Boston.  
 Fitchburg Daily News, Fitchburg.  
 Fitchburg Grinder Co., Fitchburg.  
 Flanagan, L. P., Cambridge.  
 Florence Manufacturing Co., Florence.  
 Flynn, Jos. J., Lawrence.  
 Foley, D. J., Roxbury.  
 Folsom Engraving Co., Boston.  
 Ford's Wawbeck Springs (Inc.), Springfield.  
 Fore River Shipbuilding Co., Quincy.  
 Foster, Adams & Gibbs Co., Boston.  
 Franklin Motor Car Co., Boston.  
 French, Frank R., Brockton.  
 French Hubbard Co., Boston.  
 Friggen Co., Geo., Boston.  
 Fuller Co., Seth W., Boston.  
 Fuller Chandler Co., Hudson.  
 Fulton Tire Corporation, Boston.  
 G. & G. Manufacturing Co., Boston.  
 Gale Shoe Manufacturing Co., Haverhill.  
 Gamewell Fire Telephone Co., Newton.  
 Gardiner Co., T. W., Lynn.  
 Gardner Bros., Lowell.  
 Gately, J. M., Awning Manufacturing, Charlestown.  
 General Electric Co., West Lynn.  
 General Electric Co., Lynn.  
 General Electric Co., Pittsfield.  
 General Supply Co., Malden.  
 Gibby Foundry Co., Wakefield.  
 Gilbert, Arthur W., Brookfield.  
 Gilbert & Co., Geo. H., Wale.  
 Ginn & Co., Cambridge.  
 Ginter Company, Boston.  
 Globe Company, Roxbury.  
 Glover Sons Co., J. J., Stoneham.  
 Goodwin & Co., C. L., Worcester.  
 Gotshal & Co., Jamaica Plain.  
 Graham, W. H., Roxbury.  
 Green Shoe Co., Boston.  
 Greenfield Electric Light & Power Co., Greenfield.  
 Greenfield Tap & Die Co., Greenfield.  
 Greens Co., H. V., Boston.  
 Griffith Stillings Press, Boston.  
 Grover's Sons Co., J. J., Stoneham.  
 Gunning Auto Co., New Bedford.  
 H. & J. Shoe Co., Boston.  
 Hallet & Davis Piano Co., Boston.  
 Hallstone Reddin Co., Brockton.  
 Ham, L. G., Chelsea.  
 Hancock Mutual Life Insurance Co., John, Boston.  
 Hanley Electric Co., Lawrence.  
 Harrison Shoe Co., Boston.  
 Hart & Co., Thos. H., Boston.  
 Hare's Motor Co., of New England, Boston.  
 Harvard Machine Co., Cambridge.  
 Henley-Kimball Co., Boston.  
 Henley-Kimball Co., Cambridge.  
 Hennigan, Thos. J., Charlestown.  
 Henshaw Motor Co., Boston.  
 Herndon Bros., Boston.  
 Hicks, E. F., Somerville.  
 Hicky, George F., Manchester.  
 Hillard & Tabor, Haverhill.  
 Hixon Electric Co., Boston.  
 Hobart & Farrell, Brockton.  
 Hobbs-Taft Co., Boston.  
 Hogue, Raswell A., Boston.  
 Holtzer Cabot Electric Co., Jamaica Plain.  
 Holtzer Cabot Electric Co., Roxbury.  
 Holyoke Street Railway Co., Holyoke.  
 Hood & Sons, H. P., Charlestown.  
 Hood Rubber Co., Watertown.  
 Hornes & Sons, J. H., Co., Lawrence.  
 Horton Co., Worcester.  
 Hotel Brunswick, Boston.  
 Hotel, Young's, Boston.  
 Houghton & Dutton Co., Boston.  
 Houle Brothers, Lawrence.  
 Hovey Co., C. F., Boston.  
 Howard & Sons, Brockton.  
 Howard Auto Repair Co., Hyde Park.  
 Howard Clock Co., Boston.  
 Howard, Edward H., Framingham.  
 Howard Watch Works, Waltham.  
 Howlett Shoe Co., Malden.  
 Howorth, Ernest & Co., New Bedford.  
 Hoyt Welding Co., Boston.  
 Hucking & Co., Boston.  
 Hume Carriage Co., Boston.  
 Hume Body Corporation, Boston.  
 Hunt Machine Co., Orange.  
 Hunter, William, Fitchburg.  
 Hyde Park Garage, Hyde Park.

- Ideal Fruit Co., Boston.  
 Imberger, P. M., Jamaica Plain.  
 Imperial Upholstery Co., Everett.  
 Industrial Machine Works, Fitchburg.  
 Ingalls & Kendrickson, Boston.  
 Ionite Storage Battery Co., Worcester.  
 Irving-Casson & Davenport, East Cambridge.  
 Inner & Shannon Co., Boston.  
 John & Arthur, Boston.  
 Joyce Dental Laboratory, R. E., Boston.  
 Julia, S. S. of the Luckenbach Line, Framingham.  
 K. & K. Garage, Beverly.  
 Kanavos, Louis, Roxbury.  
 Keating, J. P., Westboro.  
 Keith, George E., Brockton.  
 Keither, George E., Shoe Co., Boston.  
 Kerby, F. D., Boston.  
 Keystone Watch Case Co., Waltham.  
 Kilgore, Dwight F., Boston.  
 Kimbal System (Inc.), Lowell.  
 Kimball Co., Henley, Cambridge.  
 Kirwain, Fred H., Waltham.  
 Knopp, Max E., Roxbury.  
 Knott & Co., Cambridge.  
 Knox Street Garage, Lawrence.  
 Kries Typewriter Co., Boston.  
 Kumbhardt, George E., Lawrence.  
 Labounty, Leonard S., Boston.  
 Lamson, The Co., Boston.  
 Lang, P. A., East Boston.  
 Lapham, George H., Boston.  
 La Pointe Machine Tool Co., Hudson.  
 Lapsley, J. E., Boston.  
 Laughlin, Thomas, Wakefield.  
 Lawley, George & Sons, Corporation, Neponset.  
 Lawlor, David S., Boston.  
 Lawton, Albert V., Dorchester.  
 Le Blanc & De Long, Cambridge.  
 Leavitt, Luther, Co., Framingham.  
 Lewis, E. C., Boston.  
 Lewis Co., E. Frank, Lawrence.  
 Ley, Fred, T., Co., Boston.  
 Lev, Fred, T., Co., Worcester.  
 Liberty Mutual Insurance Co., Boston.  
 Library Bureau, Cambridge.  
 Linscott Motor Co., Boston.  
 Long Co., R. H., Framingham.  
 Loose-Wiles Biscuit Co., Boston.  
 Lord Electric Co., Boston.  
 Lualdi, Angelo, East Cambridge.  
 Ludden, J. E., Weymouth.  
 Lynn Gas & Electric Co., Lynn.  
 Lyons & Hersehnson (Inc.), Chelsea.  
 McCarron & Shepard Co., Lawrence.  
 McCarthy, J. F., Lawrence.  
 McCue, Thomas J., Watertown.  
 McCulloch, L., Holyoke.  
 McDonald, Boston.  
 McElwain Co., W. H., Manchester.  
 McElwain, Hutchinson & Wing Co., Boston.  
 McGovern, Patrick, Quincy.  
 McGrath, J., Lynn.  
 McKenna Bros. Dental Laboratory, Boston.  
 McKennon, Dr. J. R., Boston.  
 McKennie Engraving Co., Boston.  
 Machine Composition Co., Boston.  
 MacKinnon & Nicholson, Attleboro.  
 MacMulkin's Garage, Wollaston.  
 Maguire Co., J. W., Boston.  
 Malden Elec. Co., Malden.  
 Maloney Drug Co., Worcester.  
 Malton Specialty Co., Boston.  
 Mangera Garage, Wellesley Hills.  
 Mann Bros., Jamaica Plain.  
 Mann, Green, Bone Cutter Co., Milford.  
 Mann Leather Co., Harry, Boston.  
 Manning, Joe, P., Boston.  
 Manning Maxwell & Moore (Inc.), Boston.  
 Maragakis, Chas., Lynn.  
 Marceau Studio, Boston.  
 Mason Machine Works, Taunton.  
 Mason Regulating Valve Co., Milton.  
 Mason Regulator Co., Dorchester.  
 Massachusetts Elec. Laboratory Co., Boston.  
 Massachusetts Highway Commission, State House, Boston.  
 Mastercraft Film Corporation, Medford.  
 Mathews, Thos. A., Dorchester.  
 Maynard Garage, Maynard.  
 Medford Hillside Repair Shop, Medford.  
 Merrill, J. J., Newburyport.  
 Merrimac Woolen Mills, Dracut.  
 Metcalf, Frank M., New Bedford.  
 Metz Auto Company, Waltham.  
 Middlesex Leather & Tanning Co., Malden.  
 Miles Son, James, Worcester.  
 Miller & Wholfer, Chelsea.  
 Mills Motor Car Co., Lawrence.  
 Moller (Inc.), C. B., Cambridge.  
 Monotype Composition Co., Boston.  
 Moore, B. W. Sons, Peabody.  
 Morandi-Procter Co., Boston.  
 Moriarty Electric Co., Fitchburg.  
 Morse Co., Leopold, Boston.  
 Mosite & Co., Charlestown.  
 Moss Pump & Engine Works, Wakefield.  
 Motor Ace, Boston.  
 Munson, Forester, Boston.  
 Murphy, A. F., Machine Co., Boston.  
 Murphy, John J., Boston.  
 Murray, Raymond A., W. Roxbury.  
 Murray & Tragertha, Neponset.  
 Natick Tag & Leather Co., Natick.  
 National Typewriter Co., Boston.  
 Nelson, V. A., & Co., Boston.  
 Nelson, Andrew, Malden.  
 Nelson Machine Co., John H., Neponset.  
 New England Adding Machine Co., Boston.  
 New England Engineering Co., Boston.  
 New England Scales Co., Boston.  
 New England Telephone & Telegraph Co., Boston.  
 Newman, A., Boston.  
 Newman Welding Co., Cambridge.  
 New York, New Haven & Hart. R. R. Co., N. Brewster.  
 Noonan, Frank, Boston.  
 Norcross Camerson Co., Springfield.  
 North Atlantic & Western Steamship Co., Boston.  
 North Shore Shoe Trimming Co., Lynn.  
 Northway Motor Salesman Co., Boston.  
 Norton Grinder Co., Worcester.  
 Norwell Co., Shepard, Boston.  
 Noys Buick Co., Boston.  
 O'Brien, Thomas J., Cambridge.  
 O'Keefe's Shoe Co., Marlboro.  
 Oxford Garage, Somerville.  
 Oxford Paper Co., Boston.  
 Pacific Worsted Mills, Lawrence.  
 Packard Motor Co., Boston.  
 Page Detroit Co. of New England, Boston.  
 Park Rubber Co., Cambridge.  
 Park Square Garage, Westfield.  
 Parke, Davis & Co., Boston.  
 Peerless Leather Goods Co., Boston.  
 Perillo, Chas. B., New Bedford.  
 Perkins, Dana W., Medford.  
 Perry & Elliot Co., Lynn.  
 Pilgrim Press, Boston.  
 Pillings Shoe Co., John, Lowell.  
 Plant Co., Thomas G., Boston.  
 Plant Co., Thomas G., Jamaica Plain.  
 Pneumatic Scales, Norfolk Downs.  
 Pontoosuc Woolen Co., Pittsfield.  
 Priggen Co., Geo., Boston.  
 Princess Garage, Roxbury.  
 Prouty & Co., Isaac (Inc.), Spencer.  
 Public Works Department, Charlestown.  
 Putnam Machine Works, Fitchburg.  
 Queen's Work, The, Boston.  
 Quigley & Co., E., Boston.  
 R. & G. Co., Attleboro.  
 Rand Studio, Brockton.  
 Rapid Shoe Repair Co., Haverhill.  
 Reading's Garage, Maynard.  
 Reason, William P., Lawrence.  
 Redding Bros. Oxycetylene & Electric Welding Co., Lewiston.  
 Reed & Barton Co., Taunton.  
 Regal Shoe Co., Whitman.  
 Remick, C. A., Roxbury.

Remington Typewriter Co., Boston.  
 Reo Garage, Northampton.  
 Rice & Hutchins Co., South Braintree.  
 Rice & Hutchins Co., Rockland.  
 Rice & Hutchins Co., Cambridge.  
 Ridlin, Frank, Co., South Boston.  
 Riverside Boiler Works, Cambridge.  
 Robbins Body Shop, Boston.  
 Robbins & Ganwell, Pittsfield.  
 Roberts Co., C. B., Boston.  
 Robinson, Andrew, Clinton.  
 Robinson, Joseph P., Boston.  
 Robison Garage, Roxbury.  
 Rogers Plumbing Co., Geo. I., Brookline.  
 Rollins, Chas. A., Boston.  
 Rooney's Tannery, Stoneham.  
 Rounds, J. S., Boston.  
 Royal Typewriter Co., Boston.  
 St. James Theater, Boston.  
 Saco-Lowell Shops, Lowell.  
 Samuels, Jos. N., Boston.  
 Sauveur & Baylston, Cambridge.  
 Sayer & Sons, H. M., Cambridge.  
 Sawyer Carriage Co., Lowell.  
 Scanlon & Grammatino, Boston.  
 Scherber, John J., Boston.  
 School Department of Boston, Boston.  
 Scoloponta, John B., Boston.  
 Searles, S. W., Springfield.  
 Seavey's Garage, Dorchester.  
 Seller, Henry J., Boston.  
 Seventh Avenue Garage, Haverhill.  
 Shaw Furniture Co., Cambridge.  
 Shawmut Theater, Roxbury.  
 Shepard, Norwell Co., Boston.  
 Simmons, Philip, Boston.  
 Singer Sewing Machine Co., Boston.  
 Slater & Sons (Inc.), South Webster.  
 Smith & Son, James, Worcester.  
 Smith Motor Co., Lawrence.  
 Sorosis Farm, Marblehead.  
 Spears Co., Allan, Cambridge.  
 Spence Co., Geo. W., Boston.  
 Sprague & Son, C. H., Boston.  
 Spring Co., F. B., Milton.  
 Springfield Brazing & Welding Station, Springfield.  
 Standard, Chas. E., Boston.  
 Standard Shoe Co., Boston.  
 Standard Thermometer Co., Boston.  
 Star Brass Co., Boston.  
 State Mutual Life Insurance Co., Worcester.  
 Stone & Webster, Boston.  
 Sturtevant Co., R. F., Reedville.  
 Suburban Gas & Electric Co., Revere.  
 Suffolk Engraving Co., Boston.  
 Sullivan, James J., Dorchester.  
 Sullivan, Dr. T. P., Fall River.  
 Sun American, Lawrence.  
 Swift & Co., Provision Department, Boston.  
 Talbot Co., Boston.  
 Taylor & Percival, Waltham.  
 Taylor, E. E., Shoe Co., Brockton.  
 Taylor Co., F. E., New Bedford.  
 Telautograph Corporation, Boston.  
 Texas Co., Chelsea.  
 Thompson-Crocker Shoe Co., Boston.  
 Thompson-Crocker Shoe Co., Roxbury.  
 Times Square Auto Supply Co., Pittsfield.  
 Tobias & Co., Boston.  
 Tooley's Lunch, Boston.  
 Traveler's Insurance Co., Boston.  
 Travers, T. P., Boston.  
 Tuck & Gilman, Boston.  
 Turner & Co., R. A., Springfield.  
 Tuttle Silver Co., Boston.  
 Underwood Typewriter Co., Boston.  
 Union Mutual Life Insurance Co., Boston.  
 Union Wool Co., Boston.  
 United Fruit Co., Boston.  
 United Limb & Brace Co., Boston.  
 United Motor Co., Boston.  
 United Shoe Machine Co., Beverly.  
 United Shoe Repair Co., Lowell.  
 United States Armory, Springfield.  
 United Typewriter Exchange, Boston.  
 Upham's Corner Vulcanizing Co., Dorchester.  
 Vachon, L. A., Brookline.  
 Wakefield Motor Mart, Wakefield.  
 Walker, H. J., Toburn.  
 Walker Carriage Co., Merrimac.  
 Walker-Wells Co., Amesbury.  
 Waltham Evening News, Waltham.  
 Waltham Goat Dairy, Waltham.  
 Waltham Watch Co., Waltham.  
 Walton Shoe Co., Lawrence.  
 Walton Shoe Co., A. J., Chelsea.  
 Walworth English Felt Co., Boston.  
 Warren, P. R., Everett.  
 Warren Leather Goods Co., Worcester.  
 Wasgat, Andrew Co., Everett.  
 Wash Avenue Upholstery Co., Chelsea.  
 Washington Mills, Lawrence.  
 Watertown Arsenal, Watertown.  
 Webber Manufacturing Co., Boston.  
 Welch Co., William, Andover.  
 Welcome, Harvey, Turner Falls.  
 Welsh, Michael B., Plymouth.  
 West & Dodge Manufacturing Co., Brighton.  
 Weston, H. F., D. M. C., Brockton.  
 Wheelock Lovejoy & Co., Cambridge.  
 Whitcomb Co., H. C., Boston.  
 White Hall Garage, Andover.  
 White Rebuilt Truck Co., Hyde Park.  
 Whiting & Harvey Co., Jamaica.  
 Whitman Piano Co., Stoneham.  
 Whitney Carriage Co., Leominster.  
 Wilbur Co., Earl T., New Bedford.  
 Willard Storage Battery Co., Boston.  
 Williams & Clarke, Lynn.  
 Witmore Garage, Mattapan.  
 Winnisimmet Ship Yard, Chelsea.  
 Woburn Auto Co., Woburn.  
 Wood Worsted Mills, Lawrence.  
 Woods & Sons (Inc.), Dorchester.  
 Woodstock Lumber Co., Boston.  
 Woonsocket Motor Mart, Boston.  
 Worcester Buick Co., Worcester.  
 Worcester Gazette, Worcester.  
 Worthen, R. V., Leominster.  
 Wright, C. E., Roxbury.  
 Wright, H. A., Boston.  
 Wright Engraving Co., Boston.  
 Wyman, Bert, Boston.  
 Yankee Brow Co., Roxbury.

## RHODE ISLAND.

American & British Manufacturing Corporation, Providence.  
 American Woolen Co., Toneyville.  
 Bentley Clarke Auto Co., Westerly.  
 Bryant & Stratton, Providence.  
 Cadillac Auto Co., Providence.  
 County Times, Olneyville.  
 Daniel & Abel, Providence.  
 Demarels, photographer, Woonsocket.  
 Dupuis Co., Frank, Pawtucket.  
 Foster & Bros. Co., F. W., Providence.  
 Gagnons Garage, Warren.  
 Glenlyen Dye Works Plant Co., Phillipsdale.  
 Grinnell & Co. (Inc.), Providence.  
 Hayden Co., T. F. & T. J., Providence.  
 Jenckes Spinning Co., Pawtucket.  
 Mellon, Benjamin, Providence.  
 Narragansett Machine Co., Pawtucket.  
 Nellen Typewriter Exchange, Providence.  
 Nuttle Roofing Co., Providence.  
 Ostby & Barton Co., Providence.  
 Oswegatchie Textile Co., Pawtucket.  
 Packard Motor Car Co., Providence.  
 Pugh Bros. Co., Providence.  
 Riley, William C., Washington.  
 Riverside Worsted Mills, Providence.  
 Shop, A. A., Newport.  
 Taft Pierce Manufacturing Co., Providence.  
 United States Finishing Co., Providence.  
 Waite Thresher Co., Providence.  
 Washington Shoe Repair, Providence.  
 Western Union Telegraph Co., Providence.  
 What Cheer Braid Co., Peace Dale.  
 Wilkinson, E. & Co., Providence.  
 Woonsocket Motor Mart, Woonsocket.

## DISTRICT No. 2.

## NEW YORK.

Abram & Strauss (Inc.), Brooklyn.  
 Acker, Ed. H., New York City.  
 Acme Die Casting Co., Brooklyn.  
 Acme Pattern & Machine Co., Buffalo.  
 Adding Machine Resales Co., Brooklyn.  
 Adler Clothing Co., Rochester.  
 Adlex Advertising Agency, New York City.  
 Adriaance Machine Co., New York City.  
 Advertising Artists, New York City.  
 Aeolian Co., Long Island City.  
 Aetna Marine Insurance Co., New York City.  
 Agricultural Equipment Corporation, New York City.  
 Air Fleet Co., New York City.  
 Alaska Products Co., New York City.  
 Alberger & Condens Co., New Berg.  
 Albert & Son, J., Brooklyn.  
 Alberta Pearl Button Co., New York City.  
 Alexander, D., Lock Co., Buffalo.  
 Alexander, J., New York City.  
 Alexander, S. S., & Co., New York City.  
 Alias Co., New York City.  
 Allen, E. C., New York City.  
 Allen Advertising Agency, New York City.  
 Allen Manufacturing & Welding Co., Buffalo.  
 Allison, A. M., New York City.  
 Altro Manufacturing Co., Bronx.  
 American Bosch Magneto Co., New York City.  
 American Can Co., New York City.  
 American Express Co., New York City.  
 American Grocery Society (Inc.), New York City.  
 American Guild of Organists, New York City.  
 American Lithograph Co., New York City.  
 American Locomotive Co., Dunkirk.  
 American Locomotive Co., Schenectady.  
 American Machine & Foundry Co., Bay Ridge.  
 American Manufacturing Co., Brooklyn.  
 American Telephone & Telegraph Co., New York City.  
 American Webbing Manufacturing Export Co., New York City.  
 American Welding Co., New York City.  
 American Woolen Products Co., New York City.  
 Amos, E. R., Buffalo.  
 Amplion Piano Co., Syracuse.  
 Amshnick & Co., New York City.  
 Andrew O. Oho, New York City.  
 Ansonia Clock Co., Brooklyn.  
 Anti Corrosion Co., New York City.  
 Appleton & Cox, New York City.  
 Appollo Magneto Co., Kingston.  
 Armory Garage, Brooklyn.  
 Armour & Co., New York City.  
 Armstrong, James, New York City.  
 Aronson, Jacob, New York City.  
 Art Sign Co., New York City.  
 Artistic Shoe Co., New York City.  
 Atlantic Basin Iron Works, New York City.  
 Auerback, Inc., L., New York City.  
 Autocar Sales & Service Co., New York City.  
 Auto Motive & Rethreading Co., New York City.  
 Auto Motive Service Station, New York City.  
 Auto Pneumatic Action Piano Co., New York City.  
 Babbitts, B. T., New York City.  
 Babson's Statistical Organization, New York City.  
 Bacote, N. D., Buffalo.  
 Baldwin, Leonard S., Buffalo.  
 Ball, S., Shoe Repair Co., Rochester.  
 Balsam & Rosenfeld, New York City.  
 Bank & Weller, New York City.  
 Barber Bros., Syracuse.

Barth, Gross Motor Repair Co., New York City.  
 Battery & Auto Supply Co., Buffalo.  
 Battery & Starter Co., Buffalo.  
 Baumel, D. W. & Co., New York City.  
 Bumgarden Studios, Brooklyn.  
 Bay Ridge Auto Repairing, Brooklyn.  
 Bayley & Sons, Brooklyn.  
 Beaver Shoe Co., New York City.  
 Bedford Electric Co., Brooklyn.  
 Begoon Trading Co., New York City.  
 Bellamy's Green House, Syracuse.  
 Belmonts, A., estate, New York City.  
 Bentley Garage Inc., Bronx.  
 Berenholtz, Brooklyn.  
 Bergereau, Wynn, Brooklyn.  
 Bergeson Machine Co., Syracuse.  
 Berglunder, E., Corona.  
 Bessemer, Truck Sales Co., Buffalo.  
 Bielecky Bros., New York City.  
 Birdsell & Ward, New York City.  
 Black & Boyd Manufacturing Co., New York City.  
 Block, Henry, Jamestown.  
 Bloom, Dr., New York City.  
 Bloomingdale Bros., New York City.  
 Boche, J. S., New York City.  
 Bonnas Art Works, New York City.  
 Bonner Manufacturing Co., New York City.  
 Bopp & Morganstein, Brooklyn.  
 Borden's Milk Co., Westmoreland.  
 Borne Co., Chas. A. (Inc.), New York City.  
 Borough, Theodore, Sons, New York City.  
 Bournoville Welding Co., New York City.  
 Bow and Arrow, New York City.  
 Boyajian Bros., New York City.  
 Brady & Horovitz, New York City.  
 Brandherst Pharmacy, Schenectady.  
 Braunstein, M., New York City.  
 Bridges, S. W., Co. (Inc.), New York City.  
 Brienza, G., New York City.  
 Broad Meadow Farms, Pauling.  
 Broadacre Farm, Pauling.  
 Broadway Art Co., New York City.  
 Broadway Studio, New York City.  
 Brogan, Paul F., Flushing, Long Island.  
 Brokaw Estate, Glen Cove, Long Island.  
 Brooklyn Edison Co., Brooklyn.  
 Brooklyn Navy Yard, Brooklyn.  
 Brooks Green House, Rochester.  
 Brown Line Chapin Co., Syracuse.  
 Brown Typewriter Co., New York City.  
 Browning King Co., New York City.  
 Buick Auto Co., Buffalo.  
 Bryant, Walter H., Ogdensburg.  
 Buch, William, New York City.  
 Buck, Dudley, New York City.  
 Buffalo Department of Health, Buffalo.  
 Buffalo Fargo Co., Buffalo.  
 Buick Garage, New York City.  
 Buick Motor Car Co., New York City.  
 Buick Motor Sales Co., Buffalo.  
 Buick Repair Station, New York City.  
 Burdicks Machine Co., Albany.  
 Bureau of Industrial Research, New York City.  
 Bureau of Municipal Research, New York City.  
 Burger Sign Co., New York City.  
 Burhern, Edw., New York City.  
 Burlingame-Wescott Co., Albany.  
 Burr Printing Co., New York City.  
 Bush Grocery Co., Syracuse.  
 Bushwick Auto Repair Shop, Brooklyn.  
 Byers Hayes Co., New York City.  
 Byneto Electric Co., Syracuse.  
 Cadillac Co., New York City.  
 Caldwell & Co., C. P., New York City.  
 Caldwell & Co., New York City.  
 Caldwell Lawn Mower Co., Newburgh.  
 Camera Works, E. R. Kodak Co., Rochester.  
 Cameron Machine Co., Brooklyn.  
 Campbell, Dr., Buffalo.  
 Campbell Studio, New York City.  
 Canham & Marcy, Chatham.  
 Capezio, S., New York City.  
 Capitol Refining Co., New York City.  
 Carborundum Co., Niagara Falls.

- Carlotta Co., Jos. J., New York City.  
 Carsett, Harry, Glenn Falls.  
 Caserta Importing Co., New York City.  
 Cassidy Manufacturing Co., Long Island, N. Y.  
 Central Clothes Shop, New York City.  
 Certified Accountant Co., New York City.  
 Chadburn, Samuel, Yonkers.  
 Chain Shirt Shops (Inc.), New York City.  
 Chain Stores Co., Brooklyn.  
 Chalmers, Harvey & Co., New York City.  
 Chesterfield Furniture Co., New York City.  
 Chevrolet Motor Co., Brooklyn.  
 Chivelle Garage, Rockaway Beach.  
 Christenson, Incorporated, New York City.  
 Christman Bros., Yonkers.  
 Cimorelli, M., Catskill.  
 City of Manchester, Manchester.  
 Clark, A. L., & Co., New York City.  
 Clarke Loose Leaf Co., New York City.  
 Cleveland Dental Manufacturing Co., Albany.  
 Cliffside Pearl Button Co., Cliffside.  
 Clute's Garage, Cohoes.  
 Cobban, G. & J., New York City.  
 Cobblat, Jules, New York City.  
 Cohen & Abrams Co., New York City.  
 Coleman, W. P. Bros., New York City.  
 Collins, P. D., & Co., New York City.  
 Colonial Art Works, New York City.  
 Colson Pattern Works, Buffalo.  
 Columbia Bronze Corporation, Long Island.  
 Columbia Lamp Works, New York City.  
 Columbus Circle, New York City.  
 Combs, W. L., Syracuse.  
 Comstock Association Co., New York City.  
 Consolidated Ship Building Co., New York City.  
 Continental Can Co., Syracuse.  
 Continental Trust Co., New York City.  
 Convent of Our Lady of Lourdes, Phenicia.  
 Cook, S. H., & Son, Medina.  
 Copeland & Sons, New York City.  
 Cornell, W. G., New York City.  
 Corso, August, Oswego.  
 Cotten, H. W., & Co., Brooklyn.  
 County Auto Co., New York City.  
 Crane Shipyard, Brooklyn.  
 Crane & Co., New York City.  
 Crowell & Thurley, New York City.  
 Cummings, M. A., New York City.  
 Cuuard Steamship Co., New York City.  
 Cunill De Jose Co., Figuerola.  
 Curtis Aeroplane Co., Buffalo.  
 Curtis Engineer Corporations, Garden City.  
 Curtiss, W. R., Co., Ransomville.  
 Cutting Laison Co., New York City.  
 Cuttler Hammer Manufacturing Co., Bronx.  
 Daily News Record, New York City.  
 Dalessios Fashions (Inc.), New York City.  
 Davis-Bourneville Co., New York City.  
 Davis & Dunn, New York City.  
 Dr. J. Cook (John), New York City.  
 Deskowit & Fisher, New York City.  
 Dehling, E., Co., Buffalo.  
 Deknata & Sons, John A., Brooklyn.  
 Delaware & Hudson R. R. Shops, Colonil.  
 Delco Garage, Rochester.  
 Delco Laboratories, A., New York City.  
 De Mott, J. R., Patterson.  
 De Muth Co., W. C. Richmond Hill.  
 Deneckil, N. F., New York City.  
 Denton & Son, Oswego.  
 Department of Parks, Buffalo.  
 Derfman & Weisen, New York City.  
 De Voe & Reynolds, Brooklyn.  
 Dexter Folder Co., Pearlkiner.  
 Dey Bros. Co., Syracuse.  
 Diamond Toy Co., Oswego.  
 Dietzgen, Eugene, & Co., New York City.  
 Di Gregario & Co., New York City.  
 Dinguld Bros., New York City.  
 Distillator, H. L., & Sons, New York City.  
 Dodd, Wilbur (Inc.), Brooklyn.  
 Dodd & Welker, Brooklyn.  
 Dods, H. B., New York City.  
 Dods, M. R., Brooklyn.  
 Donaldson Manufacturing Co., New York City.  
 Doty, C. W., Auburn, N. Y.  
 Dougall, Charles, Syracuse.  
 Doust, J. B., & Co., Syracuse.  
 Dressler, J. N., New York City.  
 Drimmer & Co., New York City.  
 Drutman, J. W., Coxsackie.  
 Dugundji Import & Export Co., New York City.  
 Dultz, J. D., New York City.  
 Dunn & Weinman, New York City.  
 Durham, P. J., Brooklyn.  
 Durham Hosiery Co., New York City.  
 Dynamo & Motor Exchange (Inc.), Buffalo.  
 Dynato Electric Co., Syracuse.  
 Eastman Kodak Co., Rochester.  
 Easton, H. A., Scarborough.  
 Edelstein, Mr., Utica.  
 Elseman Corporation, Simon, New York City.  
 Elston, Walter F., Kingston.  
 Emay Ford Auto Co., Brooklyn.  
 Emmet, D., Fort James.  
 Emmet, E., Rocknele.  
 Empire Express Co., New York City.  
 Empire State Dairy Co., Brooklyn.  
 Emporium Lumber Co., Cranberry Lake.  
 Endicott Johnson Co., Endicott.  
 Epstein, Charles Douglas, New York City.  
 Equitable Accident Co., New York City.  
 Equitable Life Insurance Co., New York City.  
 Equitable Optical Co., New York City.  
 Erlandson & Crowell, Brooklyn.  
 Erlanger Estate, New York City.  
 Ess & Em. Novelty Co., New York City.  
 Evangelists Bros., New York City.  
 Factory Street Garage & Machine Shop, Watertown.  
 Fahys Co., Jos., Sag Harbor.  
 Fahys Co., Leo, New York City.  
 Falconry, G., & Co., New York City.  
 Fairview Farm, Lake Katrine.  
 Falkenstein, F., Bronx.  
 Famous Players Picture Corporation, New York City.  
 Fashion Academy, New York City.  
 Faultless Pants Co., Buffalo.  
 Federal Hat Co., New York City.  
 Federal Sign Co., New York City.  
 Fenig Clothing Co., Rochester.  
 Ferguson, Julia A., Estate, Huntington.  
 Ferguson Ship Building Co., Buffalo.  
 Ferlegal Lamp Co., New York City.  
 Ficks-Reed Co., New York City.  
 Fiestial, Harry, New York City.  
 Figuerola Co., Jose Cunill De, New York City.  
 Finkel, Jack, Brooklyn.  
 Finn, John G., New York City.  
 Fisher & Levy, Brooklyn.  
 Ford Instruction Co., New York City.  
 Forstom, A., New York City.  
 Foss Mainid Co., Brooklyn.  
 Fownes Bros., Gloversville.  
 Fox Film Corporation, New York City.  
 Fox Studio, New York City.  
 Frank & Co., Arthur, New York City.  
 Frank, S. M., & Co., Bronx.  
 Franklin, H. H., Co., Syracuse.  
 Franklin Manufacturing Co., Syracuse.  
 Franklin Motor Car Co., Syracuse.  
 Franklin Sales Co., Syracuse.  
 Franklin Service Station, Oswego.  
 Frederick, Candy T., Albany.  
 Friedlander, Louis, New York City.  
 Fruit Dispatch Co., New York City.  
 Fulton Dental Laboratory, Brooklyn.  
 Fusco, Joseph, Glens Falls.  
 Garford Motor Truck Co., New York City.  
 Garvin Machinery Co., New York City.  
 Geller, Andrew, Brooklyn.  
 Gem Electric Co., Schenectady.  
 General Electric Co. Inspection, New York City.  
 General Machine Works, New York City.  
 General Railroad Signal Co., Rochester.  
 Georgia Shoe Repairing Co., Buffalo.  
 Gerard & Den Santl, Brooklyn.  
 Getlen Jewelry Store, Rochester.



- Gillette Safety Razor Co., New York City.  
 Gilsleider Sign Co., New York City.  
 Glasser, H., & Co., New York City.  
 Globe Dental Laboratory, Brooklyn.  
 Goldberg, O., Long Island City.  
 Goldberg Quick Shoe Repairing Co., Utica.  
 Goodyear Knitting Co., New York City.  
 Gotham Leather Goods Co., Brooklyn.  
 Gotham Press, New York City.  
 Gould, J. W., New York City.  
 Grace, W. R., & Co., New York City.  
 Greenberg & Wellg Co., New York City.  
 Greenpoint Dry Goods Corporation, Brooklyn.  
 Grosser, Saul B., Brooklyn.  
 Grovo Electric Co., New York City.  
 Guarantee Dental Co., New York City.  
 H. B. K. Electric Co., Long Island City.  
 Halleck, A., Sheen, Long Island.  
 Hamilton, Mrs., New York City.  
 Harding & Co., F. A., New York City.  
 Hardman Pacific Corporation, New York City.  
 Harlem Electric Co., New York City.  
 Harper Bros., New York City.  
 Harrolds Motor Car Co., Long Island City.  
 Hart, Frederick & Co., Poughkeepsie.  
 Hathaway, I. S., theater, Middletown.  
 Hayes, Jerome, New York City.  
 Hayes & Beade, New York City.  
 Heights Dental Laboratory, New York City.  
 Heints Bros., Jewelers, Buffalo.  
 Helmsman Bros., New York City.  
 Herman & Co., New York City.  
 Herrman Motor Co., New York City.  
 Heyman & Co., G., New York City.  
 Hickey-Fueman Co., Rochester.  
 Hicks, Jefferson, New York City.  
 Highgate Auto Service Station, Buffalo.  
 Hikok, Theodore P., & Co., Syracuse.  
 Hill, W. A., Palisades.  
 Hirschberg & Co., New York City.  
 Hoffman Chas. B., New York City.  
 Hofstat Estate, Port Washington.  
 Holden Lumber Co., Gloversville.  
 Homestead Farm, Cold Spring Harbor.  
 Hotel Belmont, New York City.  
 Hotel Biltmore, New York City.  
 Hotel Bristol, New York City.  
 Hotel Commodore, New York City.  
 Hotel Manhattan, New York City.  
 Hotel Murray, New York City.  
 Hotel Sherman, New York City.  
 Hotel Vanderbilt, New York City.  
 Houpert Machine Co., New York City.  
 Houston & Sons, New York City.  
 Howth Co., Delvon, New York City.  
 Hoyt Service (Inc.), New York City.  
 Hubbard Lub., Silvester.  
 Hudson Motor Co., New York City.  
 Hudson Terminal Building, New York City.  
 Hunt, N. W., Co., New York City.  
 Hunt, Robt. H., New York City.  
 Hunter, Arms W., Fulton.  
 "Huron" Steamship, New York City.  
 Hutton & Co., E. & P., New York City.  
 Imet (Corporation), New York City.  
 Imperate Bros. & Co., New York City.  
 Ingersoll Watch Co., Robert, New York City.  
 Inkograph Co., New York City.  
 Interborough Railroad, New York City.  
 International Garage, New York City.  
 International Motor, New York City.  
 International Tailoring Co., New York City.  
 Ishinsky, N., New York City.  
 Jackman, A. H., Buffalo.  
 Jacobs, M., New York City.  
 Jakusz, Anthony E., Buffalo.  
 James Advertising Agency, New York City.  
 Janis, Henry, Brooklyn.  
 Jankelesky, B., New York City.  
 Jarnet, John, Buffalo.  
 Jay, W. A., Co., Rochester.  
 Johnson, J. S., New York City.  
 Johnson & Higgins, New York City.  
 Jonas, Alvin Co., New York City.  
 Jorganson, Julius & Son, New York City.  
 Kadek & Bros., New York City.  
 Kallscher, L., Brooklyn.  
 Karle & Sons, Buffalo.  
 Karn, H. I., & Co., New York City.  
 Karpen Bros., Brooklyn.  
 Kay-Gee Co., New York City.  
 Kayser, Julius, New York City.  
 Kelch, J. W., Co., Brooklyn.  
 Kelly, Edward, Estate of, Brooklyn.  
 Kelting Electric Co., New York City.  
 Kenjorn Co., New York City.  
 Kestler Bros., garage, Brooklyn.  
 Kestner, Mr., Brooklyn.  
 Keystone Motor Co., New York City.  
 Kimer, Lee, Commission, Brooklyn.  
 Kimmelman, B., New York City.  
 Kincaid Kimball Clothing Manufacturers, Utica.  
 King & Elsels Co., Buffalo.  
 King Sewing Machine Co., Buffalo.  
 Kingston Gas & Electric Co., Kingston.  
 Kinney, A. N., New York City.  
 Klafsky, Arthur, Huntington.  
 Klausner, Julius, New York City.  
 Klepper Bros., Buffalo.  
 Kline, Frank W., Hudson.  
 Knapp Engineering Co., New York City.  
 Knapp, Frank W., New York City.  
 Knox & Hazelton Garage, Great Mills.  
 Kollmorgan Co., Brooklyn.  
 Korb & Dwyer, New York City.  
 Krantz Manufacturing Co. (Inc.), Brooklyn.  
 Kurtzmann Piano Co., Buffalo.  
 L. & J. Dress Co., New York City.  
 L. & S. Starter & Ignition Co., New York City.  
 Lake, S. S. Beacon, New York City.  
 Lamb, Thos., New York City.  
 Lambert, A., Brooklyn.  
 Larson, Street A., New York City.  
 La Spina, Peter, Co., New York City.  
 Last Right Shoe Co., New York City.  
 Lauraine Magneto Co., New York City.  
 Laure, George, Utica.  
 Law, Robert, New York City.  
 Lawrence Brothers, New York City.  
 Lay Bred Leghorn Farms, Phoenix.  
 Legion Jewelers (Inc.), New York City.  
 Lewis, Benj. J., Long Island City.  
 Lewis, Zigmund, New York City.  
 Lewis & Valentine, New York City.  
 Lexington Motor Co., New York City.  
 Lexington Vulcanizing Co., New York City.  
 Liberty Garage, New York City.  
 Library Bureau, New York City.  
 Liberty Found & Gold Pen Co., New York City.  
 Lille, Phillip, Brooklyn.  
 Lincoln Typewriter Co., New York City.  
 Lindermann & Son, New York City.  
 Linden Dental Laboratory, Brooklyn.  
 Linc-A Time Co., New York City.  
 Litvin, I. K., New York City.  
 Little, Wm. B., Johnston.  
 Litwin, Roman, Babylon.  
 Loch & Trapen, New York City.  
 Lofromento, Jos., New York City.  
 Logan & Byron, New York City.  
 Long Island Forging Co., Long Island City.  
 Long Island Railroad, Long Island.  
 Loose-Wiles Biscuit Co., Long Island.  
 Looser & Anslander, New York City.  
 Loppe & Co. (Inc.), New York City.  
 Lord Electric Co., New York City.  
 Lord & Taylor, New York City.  
 Lerner, G. S., & Co., Bronx.  
 Lyon, J. W., & Sons, New York City.  
 McAndie Press (Inc.), New York City.  
 McCaffrey Garage, New York City.  
 McCarthy Bros. & Ford, Buffalo.  
 McCaskie, Banknote, New York City.  
 McCormack Shoe Repair Co., Watertown.  
 McCreedy, James, Co., New York City.  
 McDougal & Potter, New York City.  
 McFadden, Geo. G. & Bros., New York City.  
 McGibbon & Co., New York City.  
 McLean & Clinch, New York City.  
 McMillan Co., New York City.  
 McMurray House Wiring Co., Tonawanda.

- McLeod, Knauth, Khenne.  
 Mabre Todd Co., New York City.  
 Maculon, Wilson Co., New York City.  
 Madison Glue Manufacturing Co., New York City.  
 Maintenance Co., New York City.  
 Malara, Patsy, Garage, Utica.  
 Manhattan Motors Corporation, New York City.  
 Mantanzas, Cordage Co., New York City.  
 Marino, Guetano, Buffalo.  
 Marshall & Garrett, New York City.  
 Martin & Son, New York City.  
 Marvin Safe Co., New York City.  
 Marx Firestone, New York City.  
 Mastro, Amillo, Utica.  
 Matracht & Ergen, Brooklyn.  
 Mawn, Peter L., Brooklyn.  
 Maxwell Trading Co., New York City.  
 Meek Bros., Brooklyn.  
 Meldrum Motor Corporation, Buffalo.  
 Meng, Harry J., Buffalo.  
 Mentley, H. F., Middletown.  
 Mesner Co., F. F., Syracuse.  
 Metalograph Corporation, New York City.  
 Metcalf, D. B., Hartsdale.  
 Metro Picture Corporation, New York City.  
 Metropolitan Electrical Manufacturing Co., Long Island.  
 Metropolitan Engineering Co., Brooklyn.  
 Metropolitan Life Insurance Co., Brooklyn.  
 Meyers, Fred, Niagara Falls.  
 Meyrowitz, Ernest Du P., New York City.  
 Michaels Optical Co., Brooklyn.  
 Milkubuer, H., & Sons, New York City.  
 Miller Quick Shoe Repair Shop, Syracuse.  
 Miller Supply Co., Brooklyn.  
 Miller Tire Co., New York City.  
 Milton Piano Co., New York City.  
 Mitchell Vance Co., New York City.  
 Modern Dental Laboratory, Brooklyn.  
 Modern Machine Shop, New York City.  
 Mohegan Farms, Peekskill.  
 Moline Harvester Co., Poughkeepsie.  
 Moline Plow Co., Poughkeepsie.  
 Moosehead Manufacturing Co., Bronx.  
 Morawetz, V., Estate, Long Island.  
 Morey, C. E., Utica.  
 Morose & Burt, Brooklyn.  
 Morrow Motor Co., New York City.  
 Morse & Burt, Brooklyn.  
 Mosher, Herman, Syracuse.  
 Moten, Mrs. Claude M., New York City.  
 Motor Car Engineering Service Co. (Inc.), New York City.  
 Motor Transportation Corporation, New York City.  
 Mount Carmel Bulletin, New York City.  
 Mountain Community Art Shop, New York City.  
 Munch & Pfeiffer, Richmond Hill.  
 Munsart, Herman, New York City.  
 Murphey, John Walden.  
 Mursto, Sam, New York City.  
 Museum of Natural History, New York City.  
 Musolino, Mr., Brooklyn.  
 Muzzone, Anthony, Utica.  
 Nash Motor Co., New York City.  
 National Bridge Works, Long Island City.  
 National City Bank, New York City.  
 National Dental Laboratory, New York City.  
 National Exchange Agency, New York City.  
 National Farming Corporation, New York City.  
 National System, New York City.  
 National Tailoring, Buffalo.  
 Naumer Electrical Co., New York City.  
 Neptune Forwarding Co., New York City.  
 Neptune Meter Co., Long Island City.  
 Neptune Trading Co., New York City.  
 Nettleton Shoe Co., Syracuse.  
 Neuman & Sons, L., New York City.  
 New Brighton Garage, New Brighton.  
 New Process Gear Co., Syracuse.  
 New York Air Brake Co., Watertown.  
 New York Central Railroad Co., Utica.  
 New York-Cuba Steamship Co., New York.  
 New York Department of Plants & Structures, St. George, Staten Island, N. Y.  
 New York Edison Co., New York City.  
 New York Overgaiter & Bath Shop, New York City.  
 New York Telephone Co., Binghamton.  
 Newton & Co., Cortland.  
 Niagara Falls Power Co., Niagara Falls.  
 Nicholas Powers Moving Picture Machine, New York City.  
 Niles Cement Pond, New York City.  
 Northeast Electrical Co., Rochester.  
 Noxen, C., Per Lee Co., Syracuse.  
 Nunes, Victor N., New York City.  
 Oakland Motor Car Co., Long Island City.  
 Oberleder Co., New York City.  
 Ocean Engine & Roller Works, Brooklyn.  
 Old Colony Club, New York City.  
 Old Post Garage, Tarrytown.  
 Old Rollable Motor Truck Co., Long Island City.  
 O'Neill, A. B. (Inc.), New York City.  
 Oppenheim, L. & Co., New York City.  
 Orange Crush Co., New York City.  
 Original Dress House, Neptune, New York City.  
 Oscher Dental Laboratory, Brooklyn.  
 Ossining Garage, Ossining.  
 Otis Elevator Co., Yonkers.  
 Pacific Auto Repair Co., Brooklyn.  
 Pacific Development Corporation, New York City.  
 Packard Motor Co., New York City.  
 Paganelli, Ralph, New York City.  
 Panker Co., New York City.  
 Parker's Garage, Brooklyn.  
 Pattern & Brown, New York City.  
 Patterson & Elmiller, Niagara Falls.  
 Pecorella Manufacturing, Brooklyn.  
 Pendel, Harry M., New York City.  
 Pennsylvania Shoe Store Co. (Inc.), Brooklyn.  
 Pershing Coombs, New York City.  
 Pery (Inc.), Wm., Hudson.  
 Pettritt, Toney, White Plains.  
 Pfelemer, Chas., New York City.  
 Phillips & Wienz, New York City.  
 Photographic Art Corporation, New York City.  
 Pierce Arrow Motor Co., Buffalo.  
 Pina, Frank I., Buffalo.  
 Pinley, M. D. & Son, Utica.  
 Plant, S. S. Co., New York City.  
 Player, J. W., Jr., Inwood.  
 Piazza Photo Studios, New York City.  
 Podelyn, Fred C., Brooklyn.  
 Poellmetiz, Wm., New Rochelle.  
 Phos Manufacturing Co., New York City.  
 Pokress Hat Co., New York City.  
 Post Office Motor Vehicle Service, New York City.  
 Postal Telegraph Co., Buffalo.  
 Potter, S. A. Tool & Machine Works, New York City.  
 Pratt Estate Glenn Cove, Long Island City.  
 Pratt Export Corporation, B. B., New York City.  
 Princeton Hat & Cap Co., New York City.  
 Progress Dental Laboratory, Brooklyn.  
 Progressive Leather Co., New York City.  
 Prospect Auto Renting Co., Brooklyn.  
 Public Credit Corporation, New York City.  
 Public Sales Co., Syracuse.  
 Publishing Engraving Co., New York City.  
 Purvin Typewriter Co., New York City.  
 Q. R. S. Music Roll Co., Bronx.  
 Rand, Herbert, Syracuse.  
 Randall, Faichney Co., Watertown.  
 Rappaport & Gottlieb, New York City.  
 Ray, Robert, New York City.  
 Raymond Engraving Co., New York City.  
 Record Tire Co., Brooklyn.  
 Rector Electric Co., New York City.  
 Remington Arms Co., Ilion.  
 Remington Typewriter Co., New York City.  
 Re Nu Tire Co., New York City.  
 Re-Sales Co., Brooklyn.  
 Revillon, Ferree, New York City.

- Rich Shoe Shop, Watertown.  
 Richards, Jos., Co. (Inc.), New York City.  
 Richardson, T. S., Auburn.  
 Richmond Co., Buick Co., New Brighton.  
 Ridgewood Thermometer Co., Brooklyn.  
 Rifkin & Stupp, New York City.  
 Roadmaster Motor (Inc.), Rochester.  
 Robbins & Prokeach, New York City.  
 Roberts Hardware Co., Utica.  
 Robertson & Sons, Buffalo.  
 Rocke, Frank L., Buffalo.  
 Rogers, Lewis C. (Inc.), Rochester.  
 Rogers Bros., Long Island City.  
 Rohmen, G. H., & Sons, Brooklyn.  
 Rolls Royce Lits., Long Island City.  
 Rome Brass & Copper Co., Rome.  
 Rosebaum, S., Middletown.  
 Rosedale Poultry Farm, Rosedale.  
 Rosenberg Clothing Co., Rochester.  
 Roth, M. Cigar Co., Buffalo.  
 Roth & Zellig, Buffalo.  
 Rothstein, A., Buffalo.  
 Royal Forwarding Co., New York City.  
 Royal Typewriter Co., New York City.  
 Roylevard Dress Co., New York City.  
 Roystadt & Case, Kingston.  
 Rozar, Jerome F., Buffalo.  
 Rudge, W. E., New York City.  
 Sackett & Wilhelm Corporation, Brooklyn.  
 Samuels & De Maio, New York City.  
 Sanborn, W. S., Dental Laboratory, Brooklyn.  
 Sandusky Tractor Co., New York City.  
 San Ford & Co., Brooklyn.  
 Satterman, J. J., Brooklyn.  
 Scheer, W. B. (Inc.), New York City.  
 Scher & Title, New York City.  
 Schoen Bros., Brooklyn.  
 Schupp, William L., & Sons, Albany.  
 Schwartz Co., Rochester.  
 Scientific Institute Co., New York City.  
 Scott, R. G. J., New York City.  
 Scott Bros. Nurseries, Elmsford.  
 Seaman, Frank, Corporation, New York City.  
 Seder Juerk Studios, New York City.  
 Semet Solvay Co., Syracuse.  
 Seton, Norman, Co. (Inc.), Long Island.  
 Shagbark Farms, Saugerties.  
 Shanfield, William, New York City.  
 Shatemuck Realty Co., Kingston.  
 Shaw, J. G., New York City.  
 Shearson & Hammel, New York City.  
 Sheffield Farms Co., Pawling.  
 Sherrill Co., I. W., Poughkeepsie.  
 Shimon Bros., New York City.  
 Shire & Strauss, New York City.  
 Sier Bath Co., New York City.  
 Sigabee & Humphrey, New York City.  
 Silver Dental Laboratory, Brooklyn.  
 Simon, H., New York City.  
 Simons, John, & Co., New York City.  
 Simpson, Frederick, New York City.  
 Sinclair Glass Co., Corning.  
 Singer Sewing Machine Co., New York City.  
 Sixth Avenue Garage, Brooklyn.  
 Slights, Edward, Ithaca.  
 Smiraglia, Sam, Brooklyn.  
 Smith, J. R., & Sons, New York City.  
 Smith & Co., William R., New York City.  
 Smith, Elsemann Corporation, New York City.  
 Snow & Dennison, New York City.  
 Solar Light Co., New York City.  
 Solvay Process Co., Solvay.  
 Somers & Brawnstein, New York City.  
 Soss Manufacturing Co., Brooklyn.  
 Southard Robertson Co., Peekskill.  
 Smart Set Glove Co., New York City.  
 Spector Bros., New York City.  
 Spencer Lens Co., Buffalo.  
 Spilger Electric Co. (Inc.), New York City.  
 Squibb & Son Chemical Railroad, New York City.  
 Squires, O. D., Port Jervis.  
 Stagg Alum Rawhide Art Limb Co., New York City.  
 Standard Oil Co., New York City.  
 Star Chandelier Co., New York City.  
 Stark, J., Brooklyn.  
 Starter & Ignition Service, Rochester.  
 Staten Island Fur Dressing Co., Stapleton.  
 Steamship Toledo, New York and Cuba.  
 Rochester.  
 Stein, Block Co., Rochester.  
 Sterling Optical Co., Syracuse.  
 Stern Co., New York City.  
 Stobbie Auto Electric & Ignition, New York City.  
 Stratton, Chas., New York City.  
 Straux Bros., New York City.  
 Street Railroad Advertising Co., New York City.  
 Stremmel, Walter, New York City.  
 Strong Co., Homer, Rochester.  
 Studebaker Auto Co., New York City.  
 Sullivan, James, Syracuse.  
 Sullivan, John H., New York City.  
 Sullivan, Estate, R. G., Manchester.  
 Sun-Herald, New York City.  
 Supercolor Tire Sales Co., Syracuse.  
 Swanarton & Salley, New York City.  
 Swartwout, R. G., White Plains.  
 Syracuse Auto Sales Co., Syracuse.  
 Syracuse Ice Cream Co., Syracuse.  
 Syracuse Light & Power Co., Syracuse.  
 Syracuse Lithograph Co., Syracuse.  
 Syracuse Quick Shoe Repair Co., Syracuse.  
 Tagelabue Co., Brooklyn.  
 Tandy, Vertner W., New York City.  
 Tapley, J. F. Co., Brooklyn.  
 Taylor's Garage, West Brighton.  
 Tebo Yacht Basin, Brooklyn.  
 Times Square Auto Supply Co., Buffalo.  
 Thomas, Seth, Clock Co., New York City.  
 Thompson & Bonney, Brooklyn.  
 Thornton & Gilbert, Buffalo.  
 Title Guaranty & Trust Co., New York City.  
 Titus, James R., Islip.  
 Torio Potical Co., New York City.  
 Tomassini, D., Utica.  
 Trader Typewriter Co. (Inc.), New York City.  
 Transoceanic Commission, New York City.  
 Trowbridge & Swingstar, New York City.  
 Tucker Agency, New York City.  
 Turner Construction Co., New York City.  
 Twenty-sixth Street Garage, New York City.  
 Typewriter Repair Co., New York City.  
 Typewriter Trading Co., New York City.  
 Tyrell Garage, New York City.  
 Ulster Foundry Corporation, Kingston.  
 Uneeda Electric Co., New York City.  
 Uniform Printing Co., Brooklyn.  
 Union Mills Co., Herkimer.  
 United Consumers (Inc.), Buffalo.  
 United Fruit Co., New York City.  
 (United) Motor Service, New York City.  
 United Welding Co., Long Island City.  
 United States Department of Agriculture, Buffalo.  
 United States Department of Commerce, New York City.  
 United States Feature Syndicate, New York City.  
 United States Fleet Base Power & Cloth Department, Brooklyn.  
 United States Fleet Supply Base, Brooklyn.  
 United States Light & Heat Co., Niagara Falls.  
 United States Naval Base Clothing & Equipment Department, Brooklyn.  
 United States Postal Garage, New York City.  
 United States Shipping Board, New York City.  
 United States Steamship Finland, New York City.  
 Universal Film Manufacturing Co., New York City.  
 Universal Shirt Co., Brooklyn.  
 University Garage, New York City.  
 Up-To-Date Candy Co., New York City.

- Up-To-Date Dresser, Brooklyn.  
 Utica Garage Co. (Inc.), Utica.  
 Utica Gas & Electric Co., Utica.  
 Utility Support Co., New York City.  
 Van Benschoter, John, Poughkeepsie.  
 Van Dyke Nolan Repair Shop, Syracuse.  
 Van Raalte Co., Saratoga.  
 Vaughan & Gill, New York City.  
 Vehring & Cahn Co., New York City.  
 Vernon Storage Battery Co., Flushing.  
 Vesta Storage Battery Co., New York City.  
 Vilo Taxi Cab Co., New York City.  
 Vitello, Chas. D., New York City.  
 Voe & Reynolds, Brooklyn.  
 Wach Bros., New York City.  
 Wagner Specialty Co., New York City.  
 Wainwright, Geo., Brooklyn.  
 Walsh Wehrten, Houtsten Co.  
 Wanamaker, John, New York City.  
 Ward Broad Co., Brooklyn.  
 Warner Elevator Co., New York City.  
 Warren & Wetmore, New York City.  
 Washington Auto Repair & Machine Shop, Bronx.  
 Washington Heights Dental Co., New York City.  
 Washington Manufacturing Co., Brooklyn.  
 Waterman, L. E., Co., New York City.  
 Waterman Fountain Pen Co., New York City.  
 Weedburg, B., New York City.  
 Weil, S. & Co., Brooklyn.  
 Weld Bros., Troy.  
 West Roy Wood, Coxackio.  
 West Side Garage Co., Watervliet.  
 Western Union Telegraph Co., New York City.  
 Wetzel Co., C., New York City.  
 Wexley Bros., New York City.  
 White Co., Syracuse.  
 White, Griffin, Shoe Co., Brooklyn.  
 Whitnack, J. C., New York City.  
 Wholesale Type Co., New York City.  
 Wiechert, George, New York City.  
 Wildermuth, E. A., Brooklyn.  
 Willard Storage Battery Service Station, Albany.  
 Wilo, M. & Co., Buffalo.  
 Wilson, Ralph, New York City.  
 Wilson, S. M., New York City.  
 Wilson Studio, Tucson.  
 Winter Storage Battery Co., Middletown.  
 Wire & Steel Co., New York City.  
 Wise, J. P., & Co., Walestown.  
 Wolf, M., & Son, Brooklyn.  
 Wolfson & Co., New York City.  
 Wood, J. R., & Sons, Brooklyn.  
 Wood & Co., Buffalo.  
 Woodhull, Goodale & Bull (Inc.), Syracuse.  
 Woolworth Building Corporation, New York City.  
 Workov Shoe Co., New York City.  
 Wyman, Kerzereau, Brooklyn.  
 Wynhook - Hallenbuk - Cranford Co., New York City.  
 Yorkville Dental Laboratory, New York City.  
 Zadok & Bros., New York City.  
 Zalansky Dental Laboratory, New York City.  
 Zisholtz, A., Brooklyn.  
 Zweig & Knemmerer, New York City.
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- A. B. C. Co., Jersey City.  
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 Acocella, John B., Newark.  
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 American Tool and Machine Co., Newark.  
 American Writing Machine Co., Newark.  
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 Auto Co., E. Orange.  
 Awengo, John N., Arlington.  
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 Bippart Criscoe & Osborne, Newark.  
 Bonner & Hoff, E. Orange.  
 Brach Brook Garage, Newark.  
 Brock Garage, Trenton.  
 Brooks, Marsden, Atlantic City.  
 Bulck Service Station, Newark.  
 Burgess, Maj., Hoboken.  
 Cadillac Motor Car Co., Jersey City.  
 Caldwell, Wm. E. (Inc.), Newark.  
 Campbell Soup Co., Camden.  
 Capitol Motors Corporation, Trenton.  
 Clark Engineering Co., Jersey City.  
 Cliffside Pearl Button Manufacturing Co., Cliffside.  
 Cooper Hewitt Electric Co., Hoboken.  
 Cowan Bros., East Orange.  
 Cyrne, J. P., Trenton.  
 David Silk Co., Paterson.  
 Davis-Bournonville Co., Jersey City.  
 De Camp, Livingston.  
 De Mott, J. R., Paterson.  
 Derpfelt Co., F. W., Newark.  
 Detroit-Cadillac Motor Car Co., Newark.  
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 Durand Co., Newark.  
 Durning, William O., Newark.  
 Eck Byame Co., Belleville.  
 Empire Rubber Co., Trenton.  
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 Fairhurst & Co., Paterson.  
 Federal Machine & Tool Co., Camden.  
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 Fitzgerald Garage, Newark.  
 Flemington Egg Farm, Flemington.  
 Fletcher, W. & A., Co., Hoboken.  
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 Gorman, Wm. F., Newark.  
 Grove Bakery Restaurant, Jersey City.  
 Gunn Van Dale Co., Newark.  
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 La Pierre Manufacturing Co., Newark.  
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 Lovy, Isaac, Newark.  
 Ludlow & Squier, Newark.  
 Lynch-Duerth Motors Corporation, Newark.  
 McAlpin, D. H., Morris Plains.  
 McCabe, James A., East Orange.  
 McClellan Fulton Co., Camden.  
 McCormack, Mrs. Ella, Jersey City.  
 Manufacturing Insurance Co., East Orange.  
 Manufacturing Liability (Inc.), Jersey City.  
 Martino, J., East Orange.  
 Mehlin Piano Co., Paul G., Newark.  
 Menagh Dental Supply Co., Newark.  
 Mercaldi, A., Meriden.  
 Mercer Auto Co., Trenton.  
 Mercer Sheet Metal Co., Trenton.

Mercery Tractor & Power Co., Trenton.  
 Mergett, J. E. Co., Newark.  
 Metropolitan Life Insurance Co., Newark.  
 Michelin Tire Co., Milltown.  
 Monument Pottery Co., Trenton.  
 Moore Studios (Inc.), Newark.  
 Muldoon, John, Jersey City.  
 McGill Co., Bergen.  
 Nelson Cap Co., Camden.  
 New Art Cornice & Skylight Co., Newark.  
 New Jersey Auto & Supply Co., Camden.  
 New Jersey Service Battery Station,  
 Camden.  
 New Jersey State Experimental Station,  
 New Brunswick.  
 New York Auto Top & Supply Co., Newark.  
 New York Dental Laboratory, Newark.  
 New York Ship Building Corporation,  
 Camden.  
 New York Telephone Co., Newark.  
 Newark Evening News, Newark.  
 Newark Shoe Repair Shop, Newark.  
 Newark Sign Co., Newark.  
 Oppenheim Barter (Inc.), Newark.  
 Original Toy & Novelty Co., Brooklyn.  
 Oswald Acetylene Co., Newark.  
 Passaic Mob & Supply Co., Passaic.  
 Packard Motor Car Co., Newark.  
 Paramount Electric Shoe Repair Shop,  
 Newark.  
 Penney, C. H., Vesta Battery Service Co.,  
 Newark.  
 Plumb, D. B., Newark.  
 Quality Fur Dressing Co., Newark.  
 Quinn & Boden, Rahway.  
 Rath, H. A. Co., Elizabeth.  
 Read & Foss, Jersey City.  
 Reeves, A. W., New Brunswick.  
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 Remington Typewriter Co., Newark.  
 Richardson Scale Co., Passaic.  
 Riker Bros., Newark.  
 Rises Tire Sales Corporation, Newark.  
 Royal Typewriter Co., Newark.  
 Russo, F., Jersey City.  
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 Schwartz, Russell Manufacturing Co.,  
 Newark.  
 Schwode, Robert O., Newark.  
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 Spraurce & Co., Perth Amboy.  
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 Stewart Motor Car Co., Newark.  
 Sun Typewriter Co., Newark.  
 Theall, William, Newark.  
 Trenton Chamber of Commerce, Trenton.  
 Trenton Malleable Iron Co., Trenton.  
 Trever, E. L., Freeland.  
 Ulrich Sign Co., Newark.  
 Unique Garage, Newark.  
 United Adv. Co., Newark.  
 United Leather Good Co., Newark.  
 United States Alum Co., Newark.  
 United States Motor Transport Corps,  
 Jersey City.  
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 Warner Sugar Refining Co., Newark.  
 Washington Park Garage, Newark.  
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 Wilburtha Poultry Farms, Trenton.  
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 Willard Storage Battery Co., Newark.  
 Willow Furniture Co., Rahway.  
 Willowcraft Factory, Rahway.  
 Wilson, George W., Trenton.

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 American & British Manufacturing Co.,  
 Waterbury.  
 American Thread Co., Willimantic.  
 Americanization Committee, Hartford.  
 Angus, Charles E., Co., New Haven.  
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 Bauer & Co., S., Hartford.  
 Bergerson, Zepher J., Willimantic.  
 Bigelow, Hartford Carpet Co., Thompson-  
 ville.  
 Boothe & Bayliss, Bridgeport.  
 Boston Hartford Optical Co., Hartford.  
 Brainard Nursery & Seed Co., Thompson-  
 ville.  
 Bridgeport Pattern & Model Works, Bridge-  
 port.  
 Bridgeport Screw & Machine Co., Bridge-  
 port.  
 Bullard Machine Co., Bridgeport.  
 Cocchiola, A. M., Waterbury.  
 College Automobile Exchange, New Haven.  
 Colt, P. F., Hartford.  
 Connecticut Mutual Life Insurance Co.,  
 Connecticut Telephone & Electrical Co.,  
 Meriden.  
 Cook, A. G., Ansonia.  
 Corbin, A., Cabinet & Lock Co., New Brit-  
 ain.  
 Crane Co., Bridgeport.  
 De France, Anthony, Bridgeport.  
 Eastern Lounge Co., New Milford.  
 Eastern Malleable Iron Works, Bridgeport.  
 Electric Auto Service & Supply Co., Bridge-  
 port.  
 Elm City Nursery Co., New Haven.  
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 Frisbie Motor Co., Middletown.  
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 Gerrich & Hume, New Haven.  
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 Handey Machine Co., Torrington.  
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 Madden, George, Norwich.  
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 Norwalk Iron Works, Norwalk.  
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 Sargent & Co., New Britain.  
 Scoville Manufacturing Co., New Haven.  
 Singer Manufacturing Co., Bridgeport.  
 Stamford Pattern & Model Works, Stam-  
 ford.  
 Stickle, M. L., New Haven.  
 Turner Machine Co., Danbury.  
 Underwood Typewriter, Hartford.  
 United Illuminating Co., Bridgeport.  
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Beaver, Arthur, Philadelphia.  
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Bethlehem Steel Co., Reading.  
Betz, Harry, Philadelphia.  
Richl Wagon & Auto Body Works, Reading.  
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Bigeley & Bigeley, Philadelphia.  
Billingsley & Sons, H., Erie.  
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Bradley Meat Market, Philadelphia.  
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Byrne, Eugene J., Philadelphia.  
C. & B. Motor Co., Patton.  
Cadillac Service Station, Philadelphia.  
Cain Co., John M., Lancaster.  
Cambria Steel Co., Johnstown.  
Carnegie Steel Co., Pittsburgh.  
Carnegie Steel Co., Duquesne.  
Carpenter Steel Co., Reading.  
Caterino, M., Scranton.  
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Central Construction Co., Harrisburg.  
Central Iron Steel Co., Harrisburg.  
Central Machine Co., Philadelphia.  
Central Typewriter Co., Philadelphia.  
Central Vulcanizing Co., Monongahela.  
Chaikin, H., Pittsburgh.  
Chester Ship Building Co., Chester.  
Chester Steam Laundry, Chester.  
Chestnut Hill Motor Co., Chestnut Hill.  
Ciccione, F., Lancaster.  
Citizens Gas & Electric Appliance Co., Pottstown.  
Clarion Repair Shop, Philadelphia.  
Clause, C. A., Allentown.  
Clearfield Motor Car Sales Co., Clearfield.  
Coel, P., Bristol.  
Codori, Jos. A., Philadelphia.  
Cody, C. Paxton, Erie.  
Coffin, G., Winthrop Co., Philadelphia.  
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Columbia Mills, Philadelphia.  
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Commercial Bureau, Pittsburgh.  
Commercial Truck Co., Philadelphia.  
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Cornor, Chas. J., Philadelphia.  
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 Daniels Motor Car Co., Reading.  
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 David, B. Edmund, Wrightville.  
 Davis & Foster, Wilkes-Barre.  
 Day & Zimmerman, Philadelphia.  
 Deabigny Hill Electric Co., Pittsburgh.  
 Delaware Storage & Freezing Co., Philadelphia.  
 Delehanty Dyeing Machine Co., Pittsburgh.  
 Delfeno, Daniel, Wilmington.  
 Dem Electric Co., Reading.  
 Demun Sign Co., Wilkes-Barre.  
 Denmark, Joseph G., Pittsburgh.  
 Derahimer & Son, F. W., Pittston.  
 Diamond Ignition Co., Philadelphia.  
 Dick, D. D., Philadelphia.  
 Dick, W. H., Philadelphia.  
 Dietnick, G. B., Patton.  
 Dillon & Collins Paper Manufacturing Co., Philadelphia.  
 Dilworth & Porter Co., Pittsburgh.  
 Diston & Sons, Henry, Tacony.  
 Dobbs, A. L., Philadelphia.  
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 Fitzgerald, Gintley A., Philadelphia.  
 Fitzgerald Bros., Philadelphia.  
 Flood City Manufacturing Co., Johnstown.  
 Foley Photo Co., Philadelphia.  
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 Fort Pitt Type Co., Pittsburgh.  
 Force, J. M., Erie.  
 Formigli Arch Stone Co., Philadelphia.  
 Fowler, Dick & Walker, Wilkes-Barre.  
 Fox Auto Service Co., Philadelphia.  
 Frances Bros., Philadelphia.  
 Frank, Frederick, Reading.  
 Frankford Arsenal, Philadelphia.  
 Franklin Garage, Philadelphia.  
 French, R. T., Philadelphia.  
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 Frick McClay Electric Co., Philadelphia.  
 Frigar, John, Philadelphia.  
 Fuller Lehigh Co., Fullerton.  
 Galbreath, Dr. Olin, Philadelphia.  
 Gallagher & Co., Pittsburgh.  
 Gansert & Co., Philadelphia.  
 Garrison Foundry Co., Pittsburgh.  
 Gaul, Derr & Scheerer, Philadelphia.  
 Galb, Louis, Dubois.  
 Gen. Electric Co., W. Philadelphia.  
 General Electric Co., W. Philadelphia.  
 General Electric Co., Erie.  
 General Motors Co., Pittsburgh.  
 Gen. Shoe Repairing Common Sense Shoe Store, Reading.  
 General Typewriter Co., Philadelphia.  
 Gentel, Albert & Co., Philadelphia.  
 Gerry & Co., Frederick B., Philadelphia.  
 Githens Rexsemer & Co., Philadelphia.  
 Glenwood Tile Co., Philadelphia.  
 Godlewski, B., Shenandoah.  
 Goodwin, Elmer, Philadelphia.  
 Goodyear Shoe Repairing Co., Scranton.  
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 Greeley, Mr.  
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 Hazard Manufacturing Co., Wilkes-Barre.  
 Hazelton Iron Works, Hazelton.  
 Hazelton Manufacturing Co., Hazelton.  
 Heavher, Frank R., Morristown.  
 Heck, Paul E., Philadelphia.  
 Helme & McElhenny, Philadelphia.  
 Hendricks Leather Co., Pottsville.  
 Henly, William, Philadelphia.  
 Herbuer Felver Motor Co., Lansdale.  
 Herculeo Welding Machine Co., Philadelphia.  
 Herman's Sign Shop, Philadelphia.  
 Herron Bros., Pittsburgh.  
 Hershey Chocolate Co., Hershey.  
 Hess Manufacturing Co., none given.  
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 Hite & Sons, W. A., Altoona.  
 Hoffman & Dean, Philadelphia.  
 Hoopes & Townsend, Fort Washington.

- Hoover, John, Construction Co., Uniontown.  
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 Hotel Allen, Philadelphia.  
 Hotel Majestic, Philadelphia.  
 Hotel St. James, Philadelphia.  
 Hotel Traylor, Allentown.  
 Hotel Vendig, Philadelphia.  
 Hotel Walton, Philadelphia.  
 Hower & Sender, Scranton.  
 Howland, Harry C., photographer, Philadelphia.  
 Hub Machine Welding & Construction Co., Philadelphia.  
 Hubner & Sons, Lansdale.  
 Hudson, J. M., dental laboratory, Philadelphia.  
 Hudson Garage, York.  
 Hunt, Robert W. Co., Pittsburgh.  
 Imperial Bond Co., Easton.  
 Ireland Advertising Co., The, Philadelphia.  
 Industrial Manufacturing & Electric Co., Philadelphia.  
 Industrial Traffic Association, Philadelphia.  
 Interior Upholstering Furniture Co., Philadelphia.  
 Inter. Fabricating Corporation, Kingston.  
 International Mooney Machine Co., Reading.  
 Inter-State Stone Co., Deyault.  
 Irwin & Leighton, Philadelphia.  
 Jackson & Co., J. T., Philadelphia.  
 James Bros., West Chester.  
 Jarecki Manufacturing Co., Erie.  
 Jensen, Erik & Co., Philadelphia.  
 Johnson, L. B., Philadelphia.  
 Johnston Colliery of the Scranton Coal Co., Dickson City.  
 Johnstown Auto Co., Johnstown.  
 Johnstown Electric Co., Johnstown.  
 Jones, C. H., Scranton.  
 Jones, D. C., Olyphant.  
 Jones, W. B., Philadelphia.  
 Karcher & Reber Co., Philadelphia.  
 Kelper & Vockroth, Scranton.  
 Keller Auto Co., Philadelphia.  
 Keller, Ferdinand, Philadelphia.  
 Kelly, J. B., Philadelphia.  
 Kelsey, Albert, Philadelphia.  
 Kennedy, Stanley M., Pittsburgh.  
 Kent, Mills, Philadelphia.  
 Kershner Shoe Repair Co., Chester.  
 Ketterlinus Manufacturing Co., Philadelphia.  
 Keuhnie, Calvert Co., Philadelphia.  
 Keystone Bulck Co., Pittsburgh.  
 Keystone Electric Supply & Construction Co., Washington.  
 Keystone Sales Co., Harrisburg.  
 Keystone Welding Works, Philadelphia.  
 Killberg, A. M., Scranton.  
 Kind & Sons, S., Philadelphia.  
 King Shoe Factory, A. R., Philadelphia.  
 Kirschbaum Company, A. B., Philadelphia.  
 Kirschner Bros., Erie.  
 Kish, J. J., Philadelphia.  
 Klinge, Joseph, Philadelphia.  
 Klotz Silk Mill, Carbondale.  
 Knight, Chas., Newberry.  
 Knorr, W. L., Pittsburgh.  
 Koehler, W. D., Frankford.  
 Kolb Baking Co., Scranton.  
 Kolb Bros., Pennsburg.  
 Kossler Motor Sales Co., Pittsburgh.  
 Kreamer, H., Philadelphia.  
 Kraemer Wood Making Co., Philadelphia.  
 Kutz & Smith, Reading.  
 Lackawanna & Wyoming Valley Railroad, Scranton.  
 Laird, Schober & Co., Philadelphia.  
 Lally, J. H., Olyphant.  
 Landis Tile & Mantle Co., Reading.  
 Lanning Bros. Co., Philadelphia.  
 Lanston Monotype Machine Co., Philadelphia.  
 LaRoche Bros., Philadelphia.  
 Layton Garage, Sharon.  
 Lederle, Robt. B., Philadelphia.  
 Lee Tire & Rubber Co., Conshohocken.  
 Lees Electric Shop, Wilkes-Barre.  
 Lehigh Valley Motor Co., Allentown.  
 Lehmasters Feed & Grain Co., Lehighmaster.  
 Leimbach Co., Geo. W., Reading.  
 Lenape Silk Co., East Stroudsburg.  
 Leonard, Thos. F., Hardware Co., Scranton.  
 Leonard Machine Works, Philadelphia.  
 Lererle, Robert B., Philadelphia.  
 Levin, Abraham, Philadelphia.  
 Lewiston Foundry & Machine Co., Lewiston.  
 Liberty Typewriter Co., Philadelphia.  
 Linder Shoe Co., Carlisle.  
 Lintett Auto Co., Philadelphia.  
 Litt Bros., Philadelphia.  
 Locomotive Stoker Co., Pittsburgh.  
 Loeb Vulcanizing Shop, Lancaster.  
 Long, Chas., Philadelphia.  
 Lorain Steel Co., Johnstown.  
 Lutch Auto Co., Philadelphia.  
 Lycoming Foundry & Machine Co., Williamsport.  
 Lycoming Motors Corporation, Williamsport.  
 Lynott Auto & Electric Co., W. J., Olyphant.  
 McClintock, T. B., Scranton.  
 McCormick, W. C., Williamsport.  
 McCroskey Tool's Corporation, Mendville.  
 McCullough, John & Sons, Philadelphia.  
 McCutcheon Steel Mills, Pittsburgh.  
 McDonald & Campbell, Philadelphia.  
 McDonough & O'Toole, Pittsburgh.  
 McGinnis & Co., Philadelphia.  
 McKee, J. K., Pittsburgh.  
 McKinney Manufacturing Co., Pittsburgh.  
 McLane Silk Co., Scranton.  
 McLaughlin-Benner Manufacturing Co., Doylestown.  
 McNichol Paving & Construction Co., Cornwallis.  
 M. & M. Co., Scranton.  
 Maccar Truck Co., Scranton.  
 Machine & Auto Co., Turtle Creek.  
 Maerky Machine Works, Philadelphia.  
 Mailburg, Emil, Ridgeway.  
 Manhattan Motor Repair Co., Pittston.  
 Marceau Photography Co., Philadelphia.  
 Marcus, J., Pittsburgh.  
 Marianni, P., Bristol.  
 Marine Engine Works, Scranton.  
 Marion Service Station, Philadelphia.  
 Market St. Auto Sales Co., Clearfield.  
 Marklene & Koppelheimer, Philadelphia.  
 Marks, F., Philadelphia.  
 Markwell & Wilkie, Philadelphia.  
 Marley Electric Co., Philadelphia.  
 Marple & Sons, Nathan, Philadelphia.  
 Marx, Louis, Philadelphia.  
 Mastbaum Bros. & Fleischer, Philadelphia.  
 May Drug Co., Pittsburgh.  
 Mayer Motor Repair Shop, Philadelphia.  
 Menkins & Coughlin, Philadelphia.  
 Merchants' Shipbuilding Corporation, Chester.  
 Merchant & Evans Co., Philadelphia.  
 Metro-Education Electric Co., Reading.  
 Meyers Bros., Philadelphia.  
 Midvale Steel & Ordnance Co., Nicetown.  
 Miller, J., & Sons, Philadelphia.  
 Miller Lock Co., Philadelphia.  
 Millvale Power & Light Co., Millvale.  
 Mearns & Corkery Co., Philadelphia.  
 Modern Tool Co., Erie.  
 Monohan & Roy, Philadelphia.  
 Monument Welding Co., Philadelphia.  
 Morris Rubber Co., Philadelphia.  
 Morrison, William C., Philadelphia.  
 Mount Airy Nursery, Philadelphia.  
 Mount Sterling Coke Co., Philadelphia.  
 Moyer, R. S. Co., Philadelphia.  
 Mueller Electric Co., Philadelphia.  
 Myers Accessory House, Harrisburg.  
 National Electric Welding Co., Philadelphia.  
 National Marine Engineering Works, Scranton.



- National Shoe Repair Co., Philadelphia.  
 National Trans. Pump. Machine Co., Oil City.  
 New Oxford Shoe Co., New Oxford.  
 Niles-Baent-Feed Co., Philadelphia.  
 Noiseless Typewriter Co., Philadelphia.  
 Novelty Knitting Mills, Philadelphia.  
 Novelty Manufacturing Co., S. M., Philadelphia.  
 Obermeyer & Dubash, Philadelphia.  
 O'Brien, G. G., Pittsburgh.  
 O'Connor, Alfred S., Philadelphia.  
 Oil Well Supply Co., Oil City.  
 Oland, William F., Philadelphia.  
 Olmes, W. C., Upholsterer, Philadelphia.  
 Orinoka Mills, Philadelphia.  
 Otis Elevator Co., Allentown.  
 Outrone, Guy, Pittsburgh.  
 Overland-Erie Co., Erie.  
 Overland-Harper Co., Philadelphia.  
 Owen Magnetic Co., Kingston.  
 P. & E. C. & I. Co., Shenandoah.  
 P. & E. Coal & Iron Co., Tremont.  
 Packard Motor Co., Pittsburgh.  
 Packard Motor Car Co., Philadelphia.  
 Parish Manufacturing Co., Reading.  
 Pedrick Tool & Machine Co., Philadelphia.  
 Pennsylvania Auto Exchange, Philadelphia.  
 Pennsylvania Rubber Co., Jeannette.  
 Parkin Bros., Philadelphia.  
 Pennsylvania Coal Co., Old Forge.  
 Pennsylvania Coal Co., Dunmore.  
 Pennsylvania Electric & Engineering Co., Scranton.  
 Pennsylvania Electric Welding Co., Philadelphia.  
 Pennsylvania Engineering & Construction Co., Lansdowne.  
 Pennsylvania Garage, Mahoney City.  
 Pennsylvania Hotel Co., Wm., Pittsburgh.  
 Pennsylvania Manufacturing Co., Philadelphia.  
 Pennsylvania Public Service Corporation, Johnstown.  
 Pennsylvania Railroad Co., Harrisburg.  
 Pennsylvania Railroad Co., Altoona.  
 Pennsylvania Railroad Co., Philadelphia.  
 Pennsylvania Railroad Co., Pottsville.  
 Pennsylvania Railroad Shops, Harrisburg.  
 Pennsylvania Range Boiler Co., Philadelphia.  
 Pennsylvania Shoe Repairing Co., Philadelphia.  
 Pennsylvania Smelting & Refining, Philadelphia.  
 Pennsylvania Storage Co., Pittsburgh.  
 Pennsylvania Storage Battery Co., Pittsburgh.  
 Pennsylvania Typewriter Co., Allentown.  
 Peoples' Planing Mill, Punxsutawney.  
 Petz Motor Co., Philadelphia.  
 Philadelphia Dental Laboratory, Philadelphia.  
 Philadelphia Electric Co., Philadelphia.  
 Philadelphia Lawn Mower Co., Philadelphia.  
 Philadelphia Mechanical & Electrical School, Philadelphia.  
 Philadelphia Metal Furniture Co., Philadelphia.  
 Philadelphia Navy Yard, League Island, Philadelphia.  
 Philadelphia & Reading Coal & Iron Co., Pottsville.  
 Philadelphia Ship Repair Co., Philadelphia.  
 Philadelphia Shoe Repairing Co., Philadelphia.  
 Philadelphia Textile Manufacturing Co., Philadelphia.  
 Philadelphia Welding Co., Philadelphia.  
 Phoenix Furniture Co., Christiansburg.  
 Pickett Hardware Co., Warren.  
 Pittsburgh & Allegheny Telephone Co., Pittsburgh.  
 Pittsburgh Electric Machine Works, Pittsburgh.  
 Pittsburgh & Lake Erie Railroad Co., Pittsburgh.  
 Pittsburgh Leader Advertising Department, Pittsburgh.  
 Pittsburgh Met. Ser. Garage, Pittsburgh.  
 Pittsburgh Motor Service Corporation, Pittsburgh.  
 Pittsburgh Pipe & Equipment Co., Pittsburgh.  
 Pittsburgh Plate Glass Co., Ford City.  
 Pittsburgh Seamless Tube Co., Beaver Hill.  
 Pittsburgh Transformer Co., Pittsburgh.  
 Pittsburgh Vulcanizing Co., Pittsburgh.  
 Plank Plumbing Co., Gettysburg.  
 Polls, Louis, Pittsburgh.  
 Porter Co., H. K., Pittsburgh.  
 Post Office Department, Philadelphia.  
 Post & Sheldon Corporation, Slatington.  
 Postal Telegraph Cable Co., Warren.  
 Pottsville Ferry & Store Co.  
 Powelson Cabinet Shop, Philadelphia.  
 Pressed Steel Co., Wilkes-Barre.  
 Price Electric Co., Philadelphia.  
 Prior & Wallace, electric contractors, Williamsport.  
 Prizzi, Sam, Pittston.  
 Proby, Thomas, Bristol.  
 Provident Life & Trust Co., Philadelphia.  
 Public Ledger, Philadelphia.  
 Quaker City Corporation, Philadelphia.  
 Quaker Mills, Philadelphia.  
 Quartermaster Corps, United States Army, Philadelphia.  
 Raff, Raymond A., Philadelphia.  
 Railway Steel Spring, Latrobe.  
 Ramaguard, Gus, Philadelphia.  
 Randolph & McClements, Pittsburgh.  
 Rapid Shoe Repairing Co., Scranton.  
 Ranselberg Bros., Philadelphia.  
 Rauh Bros. & Co., Pittsburgh.  
 Read Machine Shop, Glen Rock.  
 Reading Standard Co., Reading.  
 Real Estate Trust Co., Philadelphia.  
 Reed Manufacturing Co., Erie.  
 Reese & Bernard Electric Co., Johnstown.  
 Remington Typewriter Co., Pittsburgh.  
 Richmond Garage, Philadelphia.  
 Ricks Motor Co., Uniontown.  
 Ritter Chair Co., Philadelphia.  
 Ritz-Carlton Hotel, Philadelphia.  
 Rosenweiz, Morris, Philadelphia.  
 Rossi & Rigotti, Lansford.  
 Rouché Co., Scranton.  
 Rouillot Typewriting Co., Philadelphia.  
 Royal Laundry, Pittsburgh.  
 Royal Typewriter Co., Philadelphia.  
 Royal Typewriter Co., Scranton.  
 Royal Valet Shop, Philadelphia.  
 Rural Motor Truck Garage, Philadelphia.  
 Sacks Farm, C. A., Elmhurst.  
 Sampson Motor Co., Pittsburgh.  
 Saughoit Silk Manufacturing Co., Philadelphia.  
 Scanlon, J. J., Philadelphia.  
 Scanlon, M. F., Morristown.  
 Schiller, Joseph, Conemaugh.  
 Schiller, Nolan & Co., Philadelphia.  
 Schlandecker Bros., Erie.  
 Schmid, Frederick, Philadelphia.  
 Schulteis, Anton, Scranton.  
 Schumacher & Pierce, Philadelphia.  
 Schuykill Arsenal, Philadelphia.  
 Schwartz, Gemery, Philadelphia.  
 Scott, C. B., Sunbury.  
 Scranton Bedding Co., Scranton.  
 Scranton Button Co., Scranton.  
 Scranton Motor Co., Scranton.  
 Scranton Silk Machinery Co., Scranton.  
 Scranton Steam Pump Co., Scranton.  
 Scranton Welding Co., Scranton.  
 Sellers & Co., William, Philadelphia.  
 Seminole Knitting Mills, Philadelphia.  
 Seven Stars Garage, Carlisle.  
 Seville Electric Co., Philadelphia.  
 Sheldon Axle Works, Wilkes-Barre.  
 Shenk, Henry, Co., Erie.  
 Shepard & Meyers Shoe Co., Hanover.  
 Shoe Repairers Shop, Philadelphia.  
 Shoe Repairing Shop, Erie.  
 Shotwell Bennett & Williams (Inc.), Wilkes-Barre.

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Shull Furniture Manufacturing Co., Philadelphia.  
 Shutes Garage, Philadelphia.  
 Sigwart & Rolston Machine Works, Pittsburgh.  
 Simas, Albert J., Harrisburg.  
 Simon Co., R. & H., Easton.  
 Simpkins Company, Philadelphia.  
 Singer Sewing Machine Co., Philadelphia.  
 Slenk Co., Henry.  
 Slundin, L. C., & Co., Philadelphia.  
 Smaltz-Goodman Co., Philadelphia.  
 Smith Electric Co., Reading.  
 Smith & Furbish Machine Co., Philadelphia.  
 Smith, Geo. Hugh (Inc.), Philadelphia.  
 Smith, Geo. W., Philadelphia.  
 Sommerville Bros., Williamsport.  
 South Hills Auto Co., Pittsburgh.  
 South Juniper Street Garage, Philadelphia.  
 Southern Cambria Railway, Johnstown.  
 Southwark Foundry, Philadelphia.  
 Spencer Heating Co., Scranton.  
 Spencer Turbine Co., Pittsburgh.  
 Spotola & Son, Philadelphia.  
 Stable Silk Corporation, Lancaster.  
 Standard Auto Co., Harrisburg.  
 Standard Electric Co., Philadelphia.  
 Standard Steel Works Co., Burnham.  
 Standard Turnbuckle Co., Correy.  
 Standard Typewriter Co., Reading.  
 Stanley Co. of America, Philadelphia.  
 Stann & Ditch Co., Philadelphia.  
 Star Theater, East Brady.  
 Staut, Jacob B., Philadelphia.  
 Steel, William & Sons Co., Philadelphia.  
 Steinbach & Co., J. D., Lewistown.  
 Steiner, Bernard H., Philadelphia.  
 Stempowski, Roman, Plymouth.  
 Sterling Motor Truck Co., Philadelphia.  
 Stern, Louis, Philadelphia.  
 Stevenson & Knight, Scranton.  
 Steward Motor Truck Co., Pittsburgh.  
 Stichter Hardware Co., Reading.  
 Stirling Bros. Co., Erie.  
 Stokes & Smith Co., Somerdale.  
 Stowers Pork Packing Co., Scranton.  
 Strauss Clothing Co., Philadelphia.  
 Strawbridge & Clothier, Philadelphia.  
 Studebaker Sales Co., Philadelphia.  
 Studebaker Service Station, Harrisburg.  
 Stutz Motor Car Co., Pittsburgh.  
 Susquehanna Collieries Co., Nanticoke.  
 Swann Sign Co., Erie.  
 Sweet & Sweet Steel Co., Philadelphia.  
 Taby & Co., Jas. C., Shamokin.  
 Tamaqua Manufacturing Works, Tamaqua.  
 Temple Coal Co., Scranton.  
 Terry Electric Co., Pittsburgh.  
 Textile Machine Works, Wyomissing.  
 Thomas, William G., Scranton.  
 Thompson Bros., Philadelphia.  
 Thornton-Fuller Auto, Philadelphia.  
 Times Square Auto Supply Co., Philadelphia.  
 Tifo, Anthony, Hazelton.  
 Tower City Motor Co., Tower City.  
 Traders Steel & Pipe Co., Pittsburgh.  
 Travelers Insurance Co., Philadelphia.  
 Troupe, Walter F., Philadelphia.  
 Tul. Electric Construction Co., Chas. E., Philadelphia.  
 Turner, W. A., manager Standard Type, Philadelphia.  
 Turner & Van Scoy Co., Wilkes-Barre.  
 Turon & Schwartz.  
 Turse, Dominick, Hazelton.  
 Typewriter Equipment Co., Philadelphia.  
 Underwood Co., H. B., Philadelphia.  
 Underwood Typewriter Co., Easton.  
 Union Electric Co., Pittsburgh.  
 Union National Bank Building, Pittsburgh.  
 Union Paying Co., Philadelphia.  
 Union Switch & Signal Co., Swisavale.  
 Unit Construction Co., Philadelphia.  
 United Auto Sales Co., Philadelphia.  
 United Electric Construction Co., Philadelphia.  
 United Gas Improvement Co., Philadelphia.  
 United Motor Service Co., Altoona.  
 United Shoe Machinery Corporation, Reading.  
 United States Post Office, York.  
 Vallente, Tony, Philadelphia.  
 Vally Engraving, Johnstown.  
 Van Dusen-Stokes Co., Philadelphia.  
 Vendling Hotel Co., Philadelphia.  
 Verna, McC., Philadelphia.  
 Verone Auto Co., Verone.  
 Verra, Cesare, Philadelphia.  
 Victor Garage Co., Philadelphia.  
 Victoria Silk Co., Taylor.  
 Vim Motor Truck Co., Philadelphia.  
 Vitagraph Film Exchange, Pittsburgh.  
 Yoshelle, W. H. W., Chester.  
 Vulcan Iron Works, Wilkes-Barre.  
 Vulcan Tire Service Co., Philadelphia.  
 Vulcan Tire Repair Co., Johnstown.  
 Wahneta Silk Co., Catasauqua.  
 Wales Adding Machine Co., Kingston.  
 Walter, Purke & Mellon, Philadelphia.  
 Wanamaker Shoe Repair Co., Scranton.  
 Wanamaker, John, watch repairing, Philadelphia.  
 Ware Bros., Philadelphia.  
 Warner, A. R., constructor and builder, Waynesboro.  
 Warren Machine Products Co., Warren.  
 Warrington Auto Construction Co., Pittsburgh.  
 Washburn Williams Co., Scranton.  
 Wasler, Arthur C., Pottsville.  
 Watts, J. Murray, Philadelphia.  
 Watts & Stern Co., Philadelphia.  
 Wawa Dairy Farms, Wawa, Delaware County.  
 Weaver, Joseph E., Philadelphia.  
 Weir-Ash Machine Co., Scranton.  
 West Company, The, Pittsburgh.  
 West Branch Bd. & Machine Co., Williamsport.  
 West Leechburg Steel Co., West Leechburg.  
 West Philadelphia Express & Storage, Philadelphia.  
 Westinghouse Air Brake Co., Wilmerding.  
 Westinghouse Air Brake Co., Pittsburgh.  
 Westinghouse Electric Co., East Pittsburgh.  
 Westinghouse Electric Manufacturing Co., Pittsburgh.  
 Westinghouse Electric & Manufacturing Foundry, Trafford.  
 Westinghouse Electric Service Station, Philadelphia.  
 Westinghouse Manufacturing Co., Wilmerding.  
 Wharton, Jr., & Co., Williams, Easton.  
 Whickian Tire & Repair Co., Chester.  
 White, T. B., Cheyney.  
 White Horse Farms, Paoli.  
 Whitehead Hughes Co., Philadelphia.  
 Wicaco Screen & Machine Co., Philadelphia.  
 Widner Building, Philadelphia.  
 Wiederhold, George, Pottsville.  
 Wiegner, J. Bethlehem.  
 Wilbus, H. O., Philadelphia.  
 Wildman Manufacturing Co., Norristown.  
 Wilkesbarre Electric Construction Co., Wilkes-Barre.  
 Wilkesbarre Storage Battery Co., Wilkes-Barre.  
 Willard Service Station, York.  
 Willard Storage & Battery Service, Pottsville.  
 William Penn Hotel Co., Philadelphia.  
 Williams, George E., Erie.  
 Williams, Brown & Earl, Philadelphia.  
 Williams Vulcanizing Works, Dubois.  
 Williamsport Electric Co., Williamsport.  
 Willis Bros., Scranton.  
 Wolfe Bros., Altoona.  
 Wood & Logan, Germantown.  
 Woodward, Geo., Philadelphia.  
 Wright, E. A., Philadelphia.  
 Writ & McKay, Harrisburg.  
 Yearley, R. C., Philadelphia.  
 York Printing Co., York.  
 Zavaglia, D., Shenandoah.  
 Ziegler Bros., Shoe Manufacturing Co., Philadelphia.

## DELAWARE.

Amalgamated Leather Co., Wilmington.  
Brown & Whiteide, Wilmington.  
Davis, Milard F., Wilmington.  
Delaware Motor Sales Co., Wilmington.  
Duponts Powder Works, Wilmington.  
Garnett-Miller, Wilmington.  
Overland Wilmington Co., Wilmington.  
Parkins Bros., Wilmington.  
Scotton, Geo. B., Smyrna.  
Sheet Metal Contracting Co., Wilmington.  
Underwood Typewriter Co., Wilmington.  
Watson, Albert, Smyrna.

## DISTRICT NO. 4.

## VIRGINIA.

Adams, John W., Charlottesville.  
Agnew Bros., Staunton.  
American Furniture Co., Martinsville.  
American Lace Works, Richmond.  
American Locomotive Co., Richmond.  
American Railway Express Co., Richmond.  
Apperson-Lee Motor Co., Lynchburg.  
Atlantic Life Insurance Co., Richmond.  
Auto Garage Co., Phoebus.  
Auto Tire Co., Richmond.  
Baldwin & Brown, Richmond.  
Bassett-More Co., Bassetts.  
Beazley, T. C., Richmond.  
Basic Furniture Co., Richmond.  
Bell Haven Garage, Alexandria.  
Bell Tire & Rubber Co., Richmond.  
Biggs Antique Co., Richmond.  
Blue Ridge Motor Co., Cambria.  
Bohannan, J. K. & Co., Richmond.  
Boice Studio, Richmond.  
Bolton Motor Co., Lynchburg.  
Boxley & Co., Pounding Mill.  
Branberry, H. M., Norfolk.  
Broadway Electric Shoe Repair Co., Richmond.  
Burchard & Co., Norfolk.  
Burke & Co., Richmond.  
Capital Shoe Repair Co., Richmond.  
Cardeling, Joe, & Sons, Richmond.  
Cardwell Machine Co., Richmond.  
Central Automotive Works, Norfolk.  
Chambers Hotel Clothier.  
Chenweth Auto Co., Richmond.  
Charlottesville Hardware Co., Charlottesville.  
Chesapeake & Ohio Railroad, Richmond.  
Chesapeake Knitting Mills, Norfolk.  
Claremont Garage, Claremont.  
Coburn Motor Co., Norfolk.  
Cole's Confectionery, Richmond.  
Collis Auto Painting Co., Richmond.  
Comas Cigarette Co., Salem.  
Connecticut Repair Co., Norfolk.  
Corby Baking Co., Richmond.  
Cornwell Auto Co., Danville.  
Corpew, J. J., shoemaker, Norfolk.  
Craddock-Terry Co., Lynchburg.  
Craickshanks Iron Works Co., Richmond.  
Crowell Auto Co., South Boston.  
Danville Bee (newspaper), Richmond.  
Department of Public Works, Richmond.  
Dickey, Epperson & Co., Norfolk.  
Dreyer Studio, Richmond.  
Easley Motor Co., South Boston.  
Excelsior Electric Repair Shoe Shop, Newport News.  
Ferguson Bros., Richmond.  
Fletcher Fixture Co., Richmond.  
Ford, R. H., & Co. (Inc.), Norfolk.  
Foster's Studio, Richmond.  
Fretwell, Contractor, Staunton.  
Gas & Water Department, Richmond.  
Hackett & Co., Richmond.  
Hancock Motor Co., Lynchburg.  
Harrison, H. P., & Co., Petersburg.  
Harrison, Wm. D., Charlottesville.  
Hofmann, Chas. I., Richmond.  
Holland & Wetmore, Norfolk.  
Hornier & Clark, Richmond.  
Hunter Tire & Repair Shop, Richmond.

Ideal Shoe Repair Shop, Richmond.  
Jackson Street Motor Co., Richmond.  
Jefferson Motor & Garage Co., Richmond.  
Jefferson Pharmacy, Richmond.  
Kelly Tire & Vulcanizing Co., Norfolk.  
Kuhlman, H. C., Richmond.  
Leland Shoe Repairing Co., Richmond.  
Leonard Hardware Co., Chas., Petersburg.  
Line Air Products Co., Norfolk.  
McGuie Dental Laboratory, Richmond.  
Marrow, Drummond W., Newport News.  
Marshall, Dr. Henry, Richmond.  
Mason Suter Co., Richmond.  
Merchants Cold Storage Co., Richmond.  
Messick Motor Car Co., Newport News.  
Midway Service Station, Norfolk.  
Miller, Rhodes & Swartz, Norfolk.  
Model Garage, Roanoke.  
Modern Method Shoe Repair Co., Richmond.  
Morris Shoe Repairing Co., Richmond.  
Motor Sales Co., Norfolk.  
Motor Service Co., Portsmouth.  
N. & W. Railroad Passenger Car Department, Roanoke.  
Parker Manufacturing Co., Suffolk.  
Payne Electric Co., Norfolk.  
Piedmont Motor Co., Danville.  
Portsmouth Motor Co., Portsmouth.  
Postal Telegraph-Cable Co., Roanoke.  
Puckett, A. L., Electric Co., Richmond.  
Puffenberger, L. W., Staunton.  
Pulaski Foundry & Manufacturing Co., Pulaski.  
Putney Shoe Co., Stephen, Richmond.  
R. F. & P. Railway Shops, Boulton.  
Ragan, George R., Roanoke.  
Ralf's Department Shops, Boulton.  
Ratts, Thomas R., Norfolk.  
Remington Typewriter Co., Richmond.  
Richmond Hardware Co., Richmond.  
Ripptoe's Garage, Harrisonburg.  
Riter Lumber Co., McClure.  
Riverside & Dan River Cotton Mills, Danville.  
Roanoke Electric Shoe Repr. Co., Roanoke.  
Roanoke Iron Works, Roanoke.  
Roanoke Railway Electric Co., Roanoke.  
Robinson, J. F., Roanoke.  
Rohm & Co., Richmond.  
Ross & Traynsham, Norfolk.  
Royal Barber Shop, Front Royal.  
Ruth, Louis, Richmond.  
Salem Foundry Co., Salem.  
Saunders, G. W., Richmond.  
Schluter, F. D., Richmond.  
Service Tire Co., Richmond.  
Smyth Garage, Appalachia.  
Smith & Felton, Norfolk.  
Southern Auto Repair Co., Richmond.  
Stewart, E. H., Petersburg.  
Stockdell-Myers Hardware Co., Petersburg.  
Stone, W. D., Motor Co., Richmond.  
Stonega Coke & Coal Co., Big Stone Gap.  
Strickland Machine Co., Richmond.  
Sunders Garage, Newport News.  
Surry Lumber Co., Dendron.  
Tazewell Motor Co., Tazewell.  
Thompson, C. C., Suffolk.  
Tidewater Auto Repair Co., Norfolk.  
Tompkins, G. H., Richmond.  
Underwood Typewriter Co., Richmond.  
Union Electric Co., Richmond.  
Union Machine Co., Richmond.  
United Shoe Repair Corporation, Roanoke.  
United States Department of Agriculture, Rosslyn.  
United States Post Office Building, Roanoke.  
Universal Motor Co., Richmond.  
Valley Electric Supply Co., Strasburg.  
Virginia Auto Repair Co., Petersburg.  
Virginia Machine Co., Roanoke.  
Virginia Railway & Power Co., Norfolk.  
Virginia Railway & Power Co., Richmond.  
Virginia State Board of Health, Richmond.  
Virginia Stationery Co., Richmond.  
Watson, R. L., & Co., Petersburg.  
Weaver, W. C., & Son, Front Royal.  
Webb-Adams Hardware Co., Brookneal.  
Wingfoot Electric Shoe Repairing Co., Richmond.

Woody, Henry W., Richmond.  
York Auto Co., Norfolk.  
York Garage, Norfolk.

# WEST VIRGINIA.

Appalachian Garage, Bluefield.  
Appalachian Power Co., Byllesby.  
B. & O. Railroad Shops, Fairmont.  
Beans Garage, Moorefield.  
Beechbottom Power Co., Bluefield.  
Blennerhassett Electric Co., Parkersburg.  
Bodell, W. A., Bluefield.  
Buick Service Station, Huntington.  
C. L. H. Co., Clarksburg.  
C. & L. Railroad Shops, Huntington.  
Cadillac Engineer & Equipment Co., Wheeling.  
Callahan's Garage, Charleston.  
Callahan's Tire Service, Charles Town.  
Carbon Fuel Co., South Carbon.  
Carr Advertising Co., Martinsburg.  
Central Auto Corporation, Morgantown.  
Charleston Electrical & Supply Co., Charleston.  
Chesapeake & Potomac Telephone Co. of West Virginia, Fairmont.  
City Engineering Department, Charleston.  
Clarksburg Dental Supply Co., Clarksburg.  
Clarksburg Gas & Electric Co., Clarksburg.  
Clarksburg Welding Co., Clarksburg.  
Colle, H. N., Undertaker, Martinsburg.  
Consolidated Light, Heat & Power Co., Huntington.  
Creel, Mr., Parkersville.  
Cutler, G. O., Sistersville.  
Dixie Motor Co., Bluefield.  
Dunn Woolen Co., Martinsburg.  
Electric Shoe Repair Co., Monongah.  
Elk Machine Co., Charleston.  
Fairmont Shoe Hospital, Fairmont.  
Fenton Art Glass Co., Williamstown.  
Follansbee Bros. Co., Follansbee.  
Foster Thornburg Hardware Co., Huntington.  
Fox's, Charles E., Barber Shop, Hinton.  
Garrett Auto Corporation, Clarksburg.  
Griebertshanser, Sons, A., Wheeling.  
Hall Garage, Fairmont.  
Hanley Auto Dealer, Huntington.  
Heinze & Co., Clarksburg.  
Hill Motor Co., North Fork.  
Home Baking Co., Clarksburg.  
Hostutler, D. Earl, Moundsville.  
Hulcher Auto Mechanical Works, Charleston.  
Huntington Herald Co., Huntington.  
Huntington Sash, Door, & Trimming Co., Huntington.  
Jackson & Grow Machine Co., Morgantown.  
Kanner Bros. Shoe Shop, Charleston.  
Keathly, A., Huntington.  
Light Bros. Garage Co., Charleston.  
Lukens, W. J., Co., Wheeling.  
McCoy's Shoe Shop, Wheeling.  
Mahoney's Battery Service Co., Charleston.  
Messer Garage & Auto Sales Co., Bluefield.  
Mitchell Bros., Clarksburg.  
Morgan Lumber & Manufacturing Co., Charleston.  
Mosser Co., William F., Richwood.  
Mount Clair Colliery Co., Mount Clair.  
National Shoe Repair Shop, Wheeling.  
Naval Ordnance Plant, South Charleston.  
Notty Bros., Wheeling.  
Norfolk & Western Railroad Co., Bluefield.  
Ogden, Rufus S., Clarksburg.  
Overland Perry Curta Co., Huntington.  
Packard Motor Co., Wheeling.  
Paint Creek Coal Mining Co., Collingsdale.  
Peck, Dr. W. B., Moundsville.  
Peoples Store, Clarksburg.  
Raleigh Coal & Coke Co., Raleigh.  
Reliable Auto Repair Co., Wheeling.  
Salem Co., Salem.  
Shreve, Robert, Clarksburg.  
Southern Advertising Co., Charleston.  
Standard Shoe Repair Co., Charleston.  
Staunton Lighting Co., Staunton.

Suddith Walton Co., Bluefield.  
Tusina's Barber Shop, Benwood.  
Underwood Typewriter Co., Wheeling.  
United States Naval Ordnance Plant, South Charleston.  
Weller Bros., Charleston.  
West Virginia Water & Electric Co., Charleston.  
Wheeling Tire Works, Wheeling.  
Whitaker & Glesner Coal Co., Wheeling.  
White, E. E., Coal Co., Glen White.  
Whittaker, Glessner & Co., Beechbottom.  
Wrasse & Arnett, Fairmont.

# MARYLAND.

Alexander Milburn Co., Baltimore.  
Allender Bros., Baltimore.  
American Fruit Grower (Inc.), Hancock.  
American Hammered Piston Ring Co., Baltimore.  
American Ice Co., Baltimore.  
American Railway Express Co., Baltimore.  
Amor & Dowley, Baltimore.  
Andrew, William A., Federalsburg.  
Antifriction Belt Dressing Co., Baltimore.  
Arcade Pressing Club, Baltimore.  
Ateller Studio, Baltimore.  
Audit & Accounting Service (Inc.), Baltimore.  
Auto Engineering Co., Baltimore.  
Auto Equipment Service Co., Baltimore.  
Auto Outing Co., Baltimore.  
Backus Motor Co., Baltimore.  
Baker, William, Baltimore.  
Baltimore Battery & Service Station, Baltimore.  
Baltimore Copper Smelting Co., Canton.  
Baltimore Dental Laboratory, Baltimore.  
Baltimore Electric Alloys Co., Baltimore.  
Baltimore Mill & Cabinet Co., Baltimore.  
Baltimore & Ohio Railroad Co., Baltimore.  
Baltimore Steamship Co., Baltimore.  
Barney Palmer (barber), Baltimore.  
Bee Hive Shirt Co., Baltimore.  
Bennett, Jennie E., Baltimore.  
Berlin, K., Baltimore.  
Bethlehem Shipbuilding Co., Sparrows Point.  
Biscotti, Nicola, Baltimore.  
Black & Decker Manufacturing Co., Baltimore.  
Bowen & King (Inc.), Baltimore.  
Boyd, L., & Co., Baltimore.  
Brane Bros., Baltimore.  
Buchanan & Fields, Baltimore.  
Buckhannon, H., Sons Co., Cumberland.  
Bureau of Animal Husbandry, Baltimore.  
Bushey, Geo. M., & Sons (Inc.), Caveton.  
Campbell Needlingham Tire Co., Baltimore.  
Carman, R. J., Silver Springs.  
Central Auto Corporation, Morgantown.  
Central Garage, Baltimore.  
Century Shoe Repair Co., Baltimore.  
Chambers, Dr. Harry.  
Chesapeake & Potomac Telephone Co., Baltimore.  
City Dairy Co., Baltimore.  
City Health Department, Baltimore.  
City Ice Co., Baltimore.  
Coco Cola Co., Baltimore.  
Colonial Garage & Repair Co., Baltimore.  
Compton, Lawrence Motor Co., Baltimore.  
Consolidated Beef & Product Co., Baltimore.  
Consolidated Coal Co., Frostburg.  
Consolidated Engineering Co., Baltimore.  
Consolidated Gas, Electric Light and Power Co., Baltimore.  
Continental Contracting Co., Baltimore.  
Control Manufacturing Co., Catonsville.  
Cook, W. W., & Co., Cumberland.  
Cook, William, Baltimore.  
Cooney, Robert, Baltimore.  
Crawford Auto Co., Hagerstown.  
Corwin Electric Co., Hagerstown.  
Culotta, Pasquale S., Baltimore.  
Cumberland Welding Co., Cumberland.  
Cumberland & Westernport Electric Railway, Clareysville.

- Curran, Wm., Baltimore.  
 Cusack Co., Thomas, Baltimore.  
 Danenburg, Abe, Baltimore.  
 Dashew-Flynn Electric Co., Baltimore.  
 Davison Transportation Co., Baltimore.  
 Dfenderfer, J. H., Baltimore.  
 Ditch, Bowers & Taylor Co. (Inc.), Baltimore.  
 Dollings Co., R. I., Cumberland.  
 Eilenbrandt, H. R. & Sons, Baltimore.  
 Electric Service Co., Baltimore.  
 Electric Shoe Repair Co., Baltimore.  
 Electro Mechanical Co., Baltimore.  
 Empire Furniture Manufacturing Co., Texas.  
 Erlanger Underwear Manufacturing Co., Baltimore.  
 Eureka Tire Shop, Baltimore.  
 Excello Gas Illuminating Co., Baltimore.  
 Fahcy & Sons, Patrick, Hartford Road.  
 Fairbanks Morse & Co., Baltimore.  
 Falconer Co., Baltimore.  
 Falton, Chas. O., Co., Baltimore.  
 Falgrath, H. C., Baltimore.  
 Fava Fruit Co., Baltimore.  
 Fishpaw, E. L. M., Baltimore.  
 Fingles Co., Baltimore.  
 Fitzgerald, W. P., Princess Anne.  
 Flannigan & Sons, Patrick, Hartford Road.  
 Fleet-McGinley Co., Baltimore.  
 Flynn & Emrich Co., Baltimore.  
 Ford Broom Manufacturing Co., Baltimore.  
 Foss-Hugh Co., Baltimore.  
 Fox & Bank, Baltimore.  
 Foxwell & Auld, Baltimore.  
 Frank Bros., Baltimore.  
 Franklin Motor Car Co., Baltimore.  
 Freedman, L. J., Baltimore.  
 Futeral, A., Baltimore.  
 Gamse Brothers, Baltimore.  
 Garrison & Sons, Thomas H., Hyattsville.  
 Gemp, Maurice, Baltimore.  
 General Construction Co., Baltimore.  
 General Elevator Co., Baltimore.  
 Gibbs Preserving Co., Baltimore.  
 Gilbert, J. L. & Bros., Baltimore.  
 Gilbert, P., Baltimore.  
 Gillespie & Co., Wm. A., Baltimore.  
 Glass, James, Baltimore.  
 Gold, Jos., Tailoring Co., Baltimore.  
 Good & Craft Co., Baltimore.  
 Gray, Wm. J., Baltimore.  
 Green Star Line, Baltimore.  
 Grushbell, F. A., Baltimore.  
 Haas Tailor Co., Baltimore.  
 Hagerstown Motor Co., Hagerstown.  
 Hanf, Fred T., Baltimore.  
 Harrison Nurseries, Berling.  
 Hellback, Wm., Baltimore.  
 Hentschel, P. H., Machine Co., Baltimore.  
 Herr, Schofield Co., Baltimore.  
 Himmell, M. L. & Co., Baltimore.  
 Hitzler Bros., Baltimore.  
 Hoard & Lexington, Baltimore.  
 Holmes & Bishop, Baltimore.  
 Holter, Louis M., Baltimore.  
 Hooper's Garage, Baltimore.  
 Horton, P. H., Advertising Co., Baltimore.  
 Hotel Caswell, Baltimore.  
 Hotel Chateau, Baltimore.  
 Hotel Emerson, Baltimore.  
 Hotel Rennert, Baltimore.  
 Howell Motor Car Co., Baltimore.  
 Hughes Co., Jas. F., Baltimore.  
 Hummer Motor Sales Co., Baltimore.  
 Hutchinson, William, Baltimore.  
 Huttman Hatig Co., Baltimore.  
 Hutzler Bros. Co., Baltimore.  
 Industrial Printing Co., Baltimore.  
 Jarman, G. R., Refrigerating Co., Baltimore.  
 Jenkins, J., Sons, Baltimore.  
 Jester & Sons, Ed. P., Baltimore.  
 Jewel Tea Co., Baltimore.  
 John Advertising Co., Baltimore.  
 Johnson, Thomas, Baltimore.  
 Kaiser, L. E., Baltimore.  
 Katz, Joseph, Baltimore.  
 Kaufman Garage, Geo. L., Frederick.  
 Keith & Co., Stuart, Baltimore.  
 Kelly-Springfield Co., Cumberland.  
 Kemp Manufacturing Co., C. M., Baltimore.  
 Kings Coal & Supply Co., Baltimore.  
 Kirk, Samuel, & Sons, Baltimore.  
 Knabe & Co., Wm., Baltimore.  
 Knoblock Bros., Baltimore.  
 Krause & Sons, Fred A., Baltimore.  
 Kreneberger, C. H., Baltimore.  
 La Ports Helm-Kamp Co., Baltimore.  
 Larrimore & Sinclair Co., Baltimore.  
 Leader, The, Baltimore.  
 Lechlitter Bros., Cumberland.  
 Levy, Wm. B., Baltimore.  
 Little, Marion C., Frederick.  
 Little, S. T., Jewelry Co., Cumberland.  
 Long, M. A., Baltimore.  
 Lucas Bros., Baltimore.  
 Lucy Candy Co., Baltimore.  
 McAllister, S. S. Co., Baltimore.  
 McGinity, John J., Baltimore.  
 McLean Construction Co., Baltimore.  
 McNeil Ornamental Iron & Construction Co., Baltimore.  
 Maryland, Delaware & Virginia Railroad, Baltimore.  
 Magneto & Machine Co., Baltimore.  
 Mann & Landry, Baltimore.  
 Marino Shoe Repair Co., Baltimore.  
 Martenuet, S. J., Baltimore.  
 Martin, G. H., Baltimore.  
 Martin, W. R., Baltimore.  
 Maryland Belt & Forge Co., Mount Washington.  
 Maryland Casualty Co., Baltimore.  
 Maryland Dental Co., Baltimore.  
 Merchants & Miners S. S. Co.  
 Meredith-Gundiff Co., Baltimore.  
 Meyers, Jerry, Baltimore.  
 Mickel & Krusman, Baltimore.  
 Mid City Garage, Baltimore.  
 Middleton & Meads Gas-Engine Co., Baltimore.  
 Milburn, Alexander, Co., Baltimore.  
 Miller, Henry, Co., Baltimore.  
 Miller Organ Factory, Hagerstown.  
 Morris, George R., Baltimore.  
 Morris, Shapoz, Baltimore.  
 Morris & Co., Baltimore.  
 Morton, P. H., Baltimore.  
 Motion Picture Operators' Protective Union, Baltimore.  
 Mower, H., Baltimore.  
 Mullikin & Merchant, Baltimore.  
 Murrill & Kelzer Co., Baltimore.  
 Mutual Benefit Life Insurance Co., Baltimore.  
 Myer, Moran, Co., Baltimore.  
 Myerberg Lighting Co., Baltimore.  
 Naron & Co., Harry, Baltimore.  
 National Electric Sales Co., Baltimore.  
 New Era Elevator Machine Co., Baltimore.  
 Newton, James E., Co., Baltimore.  
 Nicholas, Joseph, Sykesville.  
 North End Garage, Baltimore.  
 Packard Motor Car Co., Baltimore.  
 Parke-Davis Co., Baltimore.  
 Patterson, C. F., Baltimore.  
 Pennsylvania Railroad Co., Union Station, Baltimore.  
 Peoples' System & Bakeries, Baltimore.  
 Pollocks Furniture, Baltimore.  
 Poole Engineering Co., Woodberry.  
 Powell & Sons Co., Cumberland.  
 Prather, S. B., Co., Baltimore.  
 Price Bros., Frederick.  
 Price Construction Co., Baltimore.  
 Pritchett, Chas., Baltimore.  
 Public Athelec Co., Baltimore.  
 Queen City Garage, Cumberland.  
 Quigley Garage, Baltimore.  
 Radalsky, H. W., Baltimore.  
 Read Auto Sales & Supply Co. (Inc.), Baltimore.  
 Regal Shoe Store, Baltimore.  
 Rens Bros. Co., Baltimore.  
 Renson Electric Equipment Battery Co., Baltimore.  
 Richardson Auto Electric Co., Baltimore.  
 Riggs-Distler-Springer, Baltimore.

Roberts Bros., Baltimore.  
 Rolnick, Harry M., Baltimore.  
 Rosenfeld, Eugene, & Co., Baltimore.  
 Rotary Shoe Repair Co., Baltimore.  
 Safety Electric Service Co., Baltimore.  
 Salisbury Motor Co., Salisbury.  
 Schnepfe, Jr., Co., Baltimore.  
 Schoemenen, J., Baltimore.  
 Sells, Leopold Shoe Repair Co., Baltimore.  
 Shepherd, Whitson Helms Co., Baltimore.  
 Smith, J. H., Aberdeen.  
 Southern Embroidery Co., Baltimore.  
 Speedway Motor Co., Baltimore.  
 Sproat, S., Baltimore.  
 Standard Electric Elevator Co., Baltimore.  
 Standard Motor Car Co., Baltimore.  
 Standard Scale & Supply Co., Baltimore.  
 Star, The, Baltimore.  
 Star Sales Co., Baltimore.  
 Steiff Co., Baltimore.  
 Stewart & Co., Baltimore.  
 Swartz, Mann, Baltimore.  
 Swift & Co., Baltimore.  
 Terminal Warehouse Co., Baltimore.  
 Tin Decorating Co., Baltimore.  
 Tip Top Tailoring Co., Baltimore.  
 Tire Service Co., Baltimore.  
 Tobacco & Grocery Store, Frederick.  
 Trainor, John, Baltimore.  
 Union Electric Co., Baltimore.  
 Union Motor Co., Baltimore.  
 United Railroad & Electric Co., Baltimore.  
 United States F. & G. Co., Baltimore.  
 United States Post Office Department, Baltimore.  
 United States Shipping Board, Baltimore.  
 Vahle, Wm. E., Baltimore.  
 Vallant & Co., J. G., Baltimore.  
 Varsity Underwear Co., Baltimore.  
 Vaughan, Carroll, Co., Baltimore.  
 Ver Vac Co., Baltimore.  
 Vim Motor Car Co., Baltimore.  
 Wagner & Sons, John I., Towson.  
 Walst Co., F. & N., Baltimore.  
 Weaver, John H., Baltimore.  
 Webster Retail Ferry Co., Baltimore.  
 Weller Studio, Baltimore.  
 Westinghouse Electric Co., Baltimore.  
 Westminster Hardware Co., Westminster.  
 Wilson-Nash Motor Co., Baltimore.  
 Wright, Victor, Baltimore.  
 Zamoishki Co., Jos. M., Baltimore.  
 Zeal Motor Car Co., Baltimore.  
 Zeller, W. F., Co., Baltimore.

## DISTRICT OF COLUMBIA (WASHINGTON).

Adams, Byron S.  
 Advanced Arts Co.  
 Auto Electric Service Co.  
 Auto-Lite Service Station.  
 Automobile Sales Co.  
 Automobile Service & Supply Co.  
 Automotive Service & Supply Co.  
 Barber & Ross.  
 Beatty, Robert H.  
 Beck & Ruppert.  
 Benton, S. S., Shoemaker.  
 Boston Auto Top Co.  
 Bureau of Engraving and Printing.  
 Burside & Merchant.  
 Burroughs Adding Machine Co.  
 Buzzaro & Co.  
 Gyro Co.  
 Cassidy, C. J.  
 Clabaugh & Co., Wm.  
 Coleman, M. M.  
 Coles, F. C.  
 Coast & Geographic Survey.  
 Commercial Tire Co.  
 Congressional Garage.  
 Cornell Co., W. G.  
 Cosmos Club.  
 Cotton, Frank.  
 District Building.  
 Dublin, D.  
 Dudley & Miller.  
 Electric Storage & Battery Co.  
 Elkins Co., H. S.

Engineer Commissioner's Office.  
 Freund, Isadore.  
 Fuller, George A.  
 Gleichner Garage.  
 Gleichner Iron Works.  
 Gleichner, Ernest.  
 Government Printing Office.  
 Gyro Co.  
 Hannon, P. F.  
 Harris, Thos. D.  
 Hatung & Gibbons.  
 Haynes, Harry H.  
 Hecht Co.  
 Hotel New Willard.  
 Howard Shoe Repairing Factory.  
 Hysong Co., Martin W.  
 Kamm Sons & Co., S.  
 Keen's Garage.  
 Keys, J. O., Tailoring Establishment.  
 Kraft's Co., W. B.  
 Lambert Hudson Auto Co.  
 Lensky's, James, Sons.  
 Luttrell Co.  
 McReynolds & Sons, Robert.  
 Metcalf & Dietz.  
 Miller-Dudley Auto Ignition Works.  
 Molenof, Myer.  
 Motion Picture Laboratory.  
 National Electric Supply Co.-  
 Ohio Shoe Repairing Co.  
 Pennington & Taylor.  
 Plitt & Co., George.  
 Potomac Power & Electric Co.  
 Progressive Shoe Repair Co.  
 Roamer Sales Co.  
 Rowell, Dr. Frank H.  
 Star, The Evening.  
 Star Rapid Shoe Repair Co.  
 Steele Garage & Sales Co.  
 Surety Garage.  
 Thompson, W.  
 Tri-State Motor Corporation.  
 Union Iron Works.  
 United States Department of Agriculture.  
 United States Department of Commerce.  
 United States Department of Interior.  
 United States Patent Office.  
 United States Treasury.  
 Universal Artificial Limb & Supply Co.  
 Victory Shoe Shop.  
 Wardman, Harry.  
 Washington Navy Yard.  
 Washington Steel Ordnance Co.  
 Washington Times.  
 Washington Tire Repair Co.  
 Wedge, Walter H.  
 Western Union Telegraph Co.  
 York Garage.  
 Zolnay's Studio, Geo. J.

## PORTO RICO.

American Tobacco Co., Manati.  
 Mayoral Hermanos, Ponce.  
 Specialty Shop, San Juan.

## HAWAII.

Experiment Station, H. S. P. A., Honolulu.  
 Library of Hawaii, Honolulu.  
 Pacific Engineering Co., Honolulu.

## CANADA.

Independent Auto Service, Winnipeg.

## DISTRICT No. 5.

## NORTH CAROLINA.

Ajax Rubber Co., Charlotte.  
 Armature Welding & Gerroff Brazing Co.,  
 Charlotte.  
 Asheville Foundry & Supply Co., Asheville.  
 Bank of Sampson, Clinton.  
 Blalock, R. L., Kinston.  
 Boulevard Motor Co., Leakville.  
 Burwell-Walker Co., Charlotte.  
 Byrd, B. B., Burnsville.

- Cadillac Co., Raleigh.  
 Carolina Studio, Charlotte.  
 Charlotte Motor Car Co., Charlotte.  
 Charlotte Observer, Charlotte.  
 Clapp Garage, Burlington.  
 Clark, J. M., Charlotte.  
 Clarksville Floor Warehouse Co., Clarks-  
 ville.  
 Concord Motor Co., Concord.  
 Craig & Wilson, Gastonia.  
 Crooms, Oscar, New Bern.  
 Draper, E. S., Charlotte.  
 Elizabeth Mill Co., Charlotte.  
 Ellington Studio, Raleigh.  
 Enfield Hosiery Mill Co., Enfield.  
 English Bros. Shoe Shop, Hendersonville.  
 Garrett's Garage, Charlotte.  
 Gaston Motor Co., Asheville.  
 Gilbert, W. O., Winston-Salem.  
 Golden Belt Manufacturing Co., Durham.  
 H. B. Grady, Concord.  
 Green, R. P., Warrenton.  
 Green Frost Garage, Raleigh.  
 Greenlee, R. S., Statesville.  
 Greenville Publishing Co., Greenville.  
 Gruff-David Collett Co., Salisbury.  
 Hanover Thread Mill, Gastonia.  
 Haywick Motor Co., Greensboro.  
 Hickory Manufacturing Co., Hickory.  
 Highland Park Manufacturing Co., Char-  
 lotte.  
 Hoffman, Dr. M. E., Asheville.  
 Hornet Nest Electric Co., Charlotte.  
 Hotel, Clayton, Charlotte.  
 Hotel Langren, Asheville.  
 Hotel O'Henry, Greensboro.  
 Hovis & Son, Z. A., Charlotte.  
 International Harvester Co., Charlotte.  
 Ivay, J. B., & Co., Charlotte.  
 J. N. Motor Co., Fayetteville.  
 Johnson Garage, Hickory.  
 Key's Shoe Repairing Shop, Charlotte.  
 Killiam Nursery Co., Newton.  
 Lewis Motor Car Co., Fayetteville.  
 Liggett & Meyers Tobacco Co., Fayetteville.  
 McFadden, Geo. H., & Bros., Charlotte.  
 McIntire, M. W., Wilmington.  
 Martin Sign & Advertising Service, Wina-  
 ton-Salem.  
 Michael & Beyens, Gastonia.  
 Montgomery & McFee, Wilmington.  
 Moss, W. E., East Durham.  
 Motor Co., The, Winston-Salem.  
 Motor Service Co., Raleigh.  
 New Bern Iron Works & Supply Co., New  
 Bern.  
 News & Observer, Raleigh.  
 North Carolina Highway Commission, Ra-  
 leigh.  
 Osmond Barringer Company, Charlotte.  
 P. & N. Railway Co., Charlotte.  
 Patterson & Morrison, Drs., Wilmington.  
 Pisgah National Forest & Game Preserves,  
 Asheville.  
 Plyler & Setzer, Gastonia.  
 Porter & Boyd, Chas., Charlotte.  
 Pount & Moore Co., Charlotte.  
 Presbyterian Standard Publishing Co., Char-  
 lotte.  
 Pyramid Motor Co., Charlotte.  
 Raleigh Anderson Motor Service Co., Ra-  
 leigh.  
 Roamer Motor Co., Asheville.  
 Ritter Lumber Co., Proctor.  
 Robinson Co., F. M., Charlotte.  
 Rowland Barber Shop, Rowland.  
 Scotten Motor Co., Smithfield.  
 Service Garage, Wilmington.  
 Shaw Vulcanizing Co., Charlotte.  
 Southern Motor Corporations, Charlotte.  
 Standard Motor Service Co., Raleigh.  
 Standard Parlor Furniture, Lexington.  
 Swift & Co., Fertilizers Co., Charlotte.  
 Terminal Garage Co., Hamlet.  
 Umstead Motor Co., Durham.  
 Underwood Typewriter Co., Charlotte.  
 Vaughn, J. D., Electric Shoe Shop, Graham.  
 Wake Auto Co., Raleigh.  
 Walton's Shoe Shop, Greensboro.  
 Western Carolina Auto Co., Asheville.  
 Western Newspaper Union, Charlotte.  
 Western Union Telegraph Co., Gastonia.  
 Western Union Telegraph Co., Henderson-  
 ville.  
 Western Union Telegraph Co., Salisbury.  
 Whitmore Motor Sales Co., Asheville.  
 Wilborn Supply Co., High Point.  
 Woodside Motor Co., Charlotte.

## SOUTH CAROLINA.

- A. C. L. Railroad Agent Operators, Nichols.  
 Adams, A., Charleston.  
 Auto Electric Co., Columbia.  
 Auto Equipment Co., Charleston.  
 B. C. Electric Co., Columbia.  
 Baxter, D. M., Reevesville.  
 Brill Electric Co., Spartanburg.  
 Buckfield Stock Farm, Yemassee.  
 Caldwell Motor Co., Lenoir.  
 Capital City Garage Co., Columbia.  
 Carolina Auto Co., Columbia.  
 Carolina Electric Co., Rock Hill.  
 Child's Electric Co., Columbia.  
 Childer's & Sloan Garage, Greer.  
 City Moyer Co., Rock Hill.  
 Columbia Lumber Co., Columbia.  
 Consolidated Auto Co., Columbia.  
 Cooper & Griffin, Greenville.  
 Crum Bros., Orangeburg.  
 Farmers & Merchants' Bank, Anderson.  
 George, P. A., Latta.  
 Gibbs Machine Co., Columbia.  
 Goodyear Shoe Repair Shop, Greenville.  
 Gower Mason Electric Co., Greenville.  
 Greer Manufacturing Co., Greer.  
 Harcau Poultry Farm, Columbia.  
 Harvey Electric Shoe Co., Darlington.  
 Hay Garage, W. O., Camden.  
 Hollowell & Walker, Columbia.  
 Hughes & Jenkins, Union.  
 Huntington & Querry, Greenville.  
 Johnson's Studio, Columbia.  
 Lake City Electric Light Plant, Lake City.  
 Leavy, I. S., Columbia.  
 Loftis, M. T., Greenville.  
 Lyons Bros., Anderson.  
 McCoy Terry Motor Co., Sumter.  
 Merchants Grocery Co., Marion.  
 Old Park Garage, Charleston.  
 Orangeburg Water & Light Co., Orangeburg.  
 Otis Electric Co., Charleston.  
 Pelzer Manufacturing Co., Pelzer.  
 Progressive Machine Works, Anderson.  
 Publication House, Columbia.  
 R. S. Auto Co., Spartanburg.  
 Roddey's Garage Co., Columbia.  
 S. A. L. Railway, Cheraw.  
 Sadler Garage, John E., Anderson.  
 Savannah River Lumber Co., Wiggins.  
 Sand Builders Supply Co., Columbia.  
 Southern Printing Publishing Co., Charles-  
 ton.  
 Sumter Telephone Co., Sumter.  
 Superior Planting Mill Co., Spartanburg.  
 Tannahill, R. N., Co., Greenville.  
 Tazeway Cotton Mill, Anderson.  
 Walter, O. L., Optical Co., Charleston.  
 Welborn & Rivas, Anderson.  
 Williams, John R., Lumber Co., Hender-  
 sonville.  
 Woolworth & Co., F. W., Spartanburg.

## GEORGIA.

- Adams Cotton Mills, Atlanta.  
 Akron Vulcanizing Co., Atlanta.  
 Alexander Seewald Co., Atlanta.  
 Allen, B., & Sons, Buford.  
 Alston, Robert W. & Phillip H., Atlanta.  
 American Agricultural Chemical Co., East  
 Point.  
 American Auto Co., Americus.  
 American Moistening Co., Atlanta.  
 Aronson Shoe Shop, Dublin.  
 Arrowood Garage, Crandall.  
 Athens Republican, Athens.  
 Atlanta Auto Service Station, Atlanta.

- Atlanta Cadillac Co., Atlanta.  
 Atlanta Constitution, Atlanta.  
 Atlanta Journal, Atlanta.  
 Atlanta Woolen Mills, Atlanta.  
 Atlantic Auto Headquarters Tops and Trim-  
 mings, Atlanta.  
 Augusta Aiken Railway & Electric Cor-  
 poration, Augusta.  
 Auto Service Station, Atlanta.  
 Automatic Safety Co., Atlanta.  
 Automobile Service Co., Atlanta.  
 Bagg, Auto Co., C. C., Atlanta.  
 Bailey-Burrass Co., Atlanta.  
 Barclay & Brandon, Atlanta.  
 Battle Motor Co., Columbus.  
 Barrett Co., Atlanta.  
 Beaudry Motor Co., Atlanta.  
 Beckmann Motor Co., Savannah.  
 Bedger Aluminum Co., Atlanta.  
 Belk Auto Co., W. R., Pelham.  
 Best Motor Car Co., Rome.  
 Black & Moffett, Atlanta.  
 Blackburn, L. P., Atlanta.  
 Blount Carriage & Buggy Co., East Point.  
 Blunt, Jos. G., Atlanta.  
 Bostrum Manufacturing Co., Atlanta.  
 Bothwell-Bell Co., Atlanta.  
 Bradley Auto Co., Atlanta.  
 Branning, A. O. & Sons, Atlanta.  
 Brown, W. L., Hartwell.  
 Brown Bros. Tailoring Co., Augusta.  
 Bryan Electric Co., Atlanta.  
 Bryant, W. C. & Co., Savannah.  
 Buick Motor Co., Atlanta.  
 Burnett-Klopper Furniture Co., Atlanta.  
 Bussey, David T., Co., Atlanta.  
 Butler-Montague-Harris Co., Atlanta.  
 Byck Bros., Atlanta.  
 Byck Electric Shop, Savannah.  
 Campbell & Barrow Real Estate & Survey,  
 Athens.  
 Camp Jessup, Atlanta.  
 Cannon Motor Co., Atlanta.  
 Capital Dental Laboratory, Atlanta.  
 Carr, J., & Co., Atlanta.  
 Carroll, M. C., Atlanta.  
 Carter Electric Co., Atlanta.  
 Central Georgia Railroad Shops, Macon.  
 Chalmers, John, Atlanta.  
 Chalmers Augusta Co., Augusta.  
 Champion Supply Co., Atlanta.  
 Chateau, C. D., Georgia Cotton Mills,  
 Griffin.  
 Cherokee Bank, Canton.  
 City Realty Co., Macon.  
 Clarksville Barber Shop, Clarksville.  
 Colonial Trust Co., Atlanta.  
 Columbia Tailoring Co., Augusta.  
 Columbus Power Co., Columbus.  
 Commercial Printing Co., Rome.  
 Couch Cotton Mills Co., East Point.  
 Couch Garage & Repair Shop, West Point.  
 Cox Shoe Shop, Atlanta.  
 Crenshaw & Ludsay, Atlanta.  
 Crenshaw, J. W., & Sons, Atlanta.  
 Criswell & Cole Garage, Atlanta.  
 Cromartie, W. R., Garage, Soperton.  
 Crumley Sharp Hardware Co., Atlanta.  
 Cummings & Short, auto mechanic, Atlanta.  
 Cusack Co., Thos., Atlanta.  
 Dabney, W. J., Implement Co., Atlanta.  
 Dabney, W. J., Manufacturing Co., Atlanta.  
 Dahle Co., C. A., Atlanta.  
 Daniell & Bentell, Atlanta.  
 Davis Motor Co., Macon.  
 Davis Shoe Repair Shop, Milledgeville.  
 Davis & White Co., Atlanta.  
 Deal Garage Co., Gainesville.  
 Delta Electric Co., Savannah.  
 Desbrouillons, Savannah.  
 Diamond Holfast Rubber Co., Atlanta.  
 Dixie Engineering Co., West Savannah.  
 Dixie Marble Works, Decatur.  
 Domestic Electric Co., Decatur.  
 Dubbs Tire Co., Atlanta.  
 Duffey, Paul, Atlanta.  
 Duffey, W. D., Atlanta.  
 Dunnon Auto Repair Co., Atlanta.  
 Eberhart-Conway Co., Atlanta.  
 Edison Auto Co., Edison.  
 Electric Motor Co., Atlanta.  
 Ellaslea Farms, Dunwoody.  
 Elmwood Stock Farm, Dublin.  
 Empire Cement Limestone Co., Atlanta.  
 Ever-Ready Auto Co., Atlanta.  
 Ever-Ready Garage, Atlanta.  
 Excelsia Garage Co., Atlanta.  
 Exide Battery Co., Atlanta.  
 Ezzell Garage, Rochmart.  
 Farrell Bros., Atlanta.  
 Fashbaugh, W. A., Atlanta.  
 Faulkner & Co., E. T., Atlanta.  
 Fidelity Mutual Life Insurance Co., At-  
 lanta.  
 Fletcher, Orlin E., Augusta.  
 Fort Valley Canning Co., Fort Valley.  
 Fourcher, H. E., Augusta.  
 Fox Garage Co., J. C., Calhoun.  
 Fulton Supply Co., Atlanta.  
 Gardner & Willingham, Griffin.  
 Garner & Co., Guy, Lilburn.  
 Georgia Auto Supply Co., Atlanta.  
 Georgia Marble Finishing Co., Canton.  
 Georgia Motor Co., Atlanta.  
 Georgia Painless Dentists, Atlanta.  
 Georgia Railway & Power Co., Atlanta.  
 Georgia Storage Battery Co., Savannah.  
 Georgian, The, Atlanta.  
 Gilbreath Press Syndicate, Atlanta.  
 Glass Motor Co., B. G., Milledgeville.  
 Grant Motor Car Co., Atlanta.  
 Gray & Miller (Inc.), Augusta.  
 Greenbeeg & Bond Co., Atlanta.  
 Griffin Shoe Hospital, Griffin.  
 Halle, T. J. & Co., Fitzgerald.  
 Hammond Oil Co., Macon.  
 Hanan Motor Co., Atlanta.  
 Harbrove Bros., Atlanta.  
 Hardy, F. A., & Co., Atlanta.  
 Harlin Electric Co., Augusta.  
 Harper & Harper Shoe Repair Co.,  
 Milledgeville.  
 Harrington, Jr., Alfred, Swainsboro.  
 Harrison Co., J. M., Atlanta.  
 Hartfield Loan & Savings Co., Atlanta.  
 Haas, Arron, Sons, & Howell, Atlanta.  
 Hawlish Wagon Works, Atlanta.  
 Hayne & Hillhouse Co. (Inc.), Augusta.  
 Henson Motor Co., Atlanta.  
 Hents, Reid & Adler, Atlanta.  
 Hicks & Fuller Shoe Shop, Atlanta.  
 Hill & Holden Co., Atlanta.  
 Hillo Garage, Dalton.  
 Holmes Garage, Valdosta.  
 Hope Motor Co., Atlanta.  
 Hotel Ansley, Atlanta.  
 Hotel Marion, Atlanta.  
 Howard Amusement Co., Atlanta.  
 Howe Scale Co., Atlanta.  
 Hughes Bros., Bolton.  
 Hunter, Joel Co., Atlanta.  
 Hutchins-Parker Co., Macon.  
 Independent Garage, Macon.  
 International Rubber Sales Co., Atlanta.  
 International Harvester Co., Atlanta.  
 Ivy Street Garage, Atlanta.  
 Johnson's Garage, East Point.  
 Jones, Charles, Motor Co., Statesboro.  
 Jones, S. E., Alapaha.  
 Johnson & Scott, Atlanta.  
 Johnston & Gray Co., Augusta.  
 King, E. H., & Co., Atlanta.  
 King Electric Co., Savannah.  
 King Hardware Co., Atlanta.  
 Knowlton, Jack, & Co., Atlanta.  
 Kramer, F. Chris, Savannah.  
 Lanford-Burnett Detective Agency, At-  
 lanta.  
 Lanford & Ledford Detective Agency, At-  
 lanta.  
 Lee Plumbing & Heating Co., Augusta.  
 Liberty Garage, Atlanta.  
 Little Powell Smith & Goldstein, Atlanta.  
 Lloyd & Crimming Sign Painters, Macon.  
 Loxler & Gaudy, La Grange.  
 McCarthy & Thomas, Macon.  
 McCarthy & Thomas, Rome.  
 McCauley Electric Co., Atlanta.



McClain & Speers, Canton.  
 McClure Company, Atlanta.  
 McDonald & Binns, Atlanta.  
 McDuffie Jewelry Co., Atlanta.  
 McGrary Co., Atlanta.  
 Magee, Dr. J. P., Macon.  
 Manchester Garage, Manchester.  
 Marietta Shoe Hospital, Marietta.  
 Marion Garage, Marion.  
 Martin, Samuel Co., Atlanta.  
 Martin Bros., Atlanta.  
 Martin Café, Atlanta.  
 Mayson & Johnson, Atlanta.  
 Meritas Mills, Columbus.  
 Miller Manufacturing Co., Bainbridge.  
 Moore & Son (Inc.), J. L. Atlanta.  
 Moore & Oetgen Co., Atlanta.  
 Morris Co., Chas., Athens.  
 Morris Garage & Supply Co., Augusta.  
 Morris Shoe Repair Shop, Savannah.  
 Motor Car Service Co., Atlanta.  
 Motor Sales Corporation, Atlanta.  
 N. C. & St. L. Railway Co., Kennesaw.  
 National Life & Accident Insurance Co., Waycross.  
 Newkome, T. B., Augusta.  
 Newway Market Co., Griffin.  
 North Hilland Shoe Shop, Columbus.  
 Odell Bros., Co., H. B., Atlanta.  
 Odum, E. H., Bros., Atlanta.  
 O'Kelly Co., Paul D., Atlanta.  
 Orr, H. E., East Point.  
 Otis, Robert K., Atlanta.  
 Our Radiator Shop, Augusta.  
 Pacific Mutual Life Insurance Co., Atlanta.  
 Packard Motor Car Co., Atlanta.  
 Paige Sales & Service Co., Atlanta.  
 Park, R. H., Co. (Inc.), Atlanta.  
 Patterson & Sons, F. W., Atlanta.  
 Pause, H. B., Atlanta.  
 Peoples Shoe Shop, Birmingham.  
 Phillips & Crew, Atlanta.  
 Phoenix Mutual Life Insurance Co., Atlanta.  
 Phoenix Planing Mill Co., Atlanta.  
 Pittsburgh Plate Glass Co., Atlanta.  
 Poole, Harry G., Atlanta.  
 Postal Telegraph Co., Cartersville.  
 Pratt Engineering & Machine Co., Atlanta.  
 Price, Francis E., Atlanta.  
 Putman Garage, Hartwell.  
 Red Rock Co., Atlanta.  
 Reeves Machine Co., Atlanta.  
 Reid, J. B., Shoe Repair Co., Atlanta.  
 Rejordan Co., W. J., Atlanta.  
 Remington Typewriter Co., Atlanta.  
 Retail Credit Co., Atlanta.  
 Rhodes, Ernest S., Co., Atlanta.  
 Rhoth, Obrine & Lockridge, Atlanta.  
 Richardson, Alonzo, Co., Atlanta.  
 Richmond Hosiery Mills, Rossville.  
 Roberts Marble Co., Ball Grounds.  
 Robertson & Sharpenson Garage, Savannah.  
 Robinson & Co., C. G., Atlanta.  
 Rogers Co., L. W., East Point.  
 Royals, S. L., Cordele.  
 Russell, F. B., tailor, Atlanta.  
 Russell Electric Co., Atlanta.  
 Savannah Dental Laboratory, Savannah.  
 Savannah Electric Co., Savannah.  
 Savannah Welding & Cutting Co., Savannah.  
 Scarboro & West Garage, Statesboro.  
 Scenic Film Co., Atlanta.  
 Schlesinger Co., Harry L., Atlanta.  
 Scott & Son, Levi A., Atlanta.  
 Service Garage, Atlanta.  
 Service Garage, Dalton.  
 Sheffield Bros., Atlanta.  
 Shoe Renury, Atlanta.  
 Smith Type Co., W. S., Atlanta.  
 South Eastern Underwriters, Atlanta.  
 Southern Bell Telephone & Telegraph Co., Atlanta.  
 Southern Drum Co., Atlanta.  
 Southern Enterprise (Inc.), Modjeska Theater, Augusta.  
 Southern Enterprise (Inc.), Rialto, The, Atlanta.

Southern Ferro Concrete Co.  
 Southern Machine Co., Atlanta.  
 Southern Printing & Novelty Co., Lithonia.  
 Southern Railway Co., Atlanta.  
 Standard Auto & Equipment Co., Atlanta.  
 Standard Garage, Dalton.  
 Standard Oil Co. of Kentucky, Atlanta.  
 Stebbins Co., Atlanta.  
 Stokes & Co., Atlanta.  
 Strand Theater, Marietta.  
 Stutz Co. of Georgia, Atlanta.  
 Sulunes, M. S., Atlanta.  
 Superior Motor Co., Atlanta.  
 Sweeney, F. J., Atlanta.  
 Swords, T. S., Tire Co., Atlanta.  
 Swords Vulcanizing Co., Atlanta.  
 Toledo Scales Co., Atlanta.  
 Tripod Paint Co., Atlanta.  
 Tucker, C. J., Lithonia.  
 Tufts, Arthur, Co., Atlanta.  
 Turner, James, Shoe Repair Shop, Augusta.  
 Tway, Charles, Atlanta.  
 Underwood Typewriter Co., Atlanta.  
 United Motor Service (Inc.), Atlanta.  
 United States Engineer's Office, Jacksonville.  
 United States Penitentiary Office Works, Atlanta.  
 United States Post Office, Atlanta.  
 Varn-Speer Co., Atlanta.  
 Wade & Co., Macon.  
 Waldrip Garage, Calhoun.  
 Walker-Lott Garage, Waycross.  
 Walker Electric & Plumbing Co., Atlanta.  
 Walker's Garage, Atlanta.  
 Ware Electric & Plumbing Co., Vidalia.  
 Waters Cigar Factory, Rome.  
 Watkins, Benjamin D., Co., Atlanta.  
 Watson Engineering Co., Atlanta.  
 Waycross & Southern Railroad, Waycross.  
 Weaver, Tom, Atlanta.  
 R. D. Webb Dental Manufacturing Co., Atlanta.  
 West, W. D., Oakland City Barber, Oakland City.  
 West-Mush Auto Co., Carrollton.  
 Westinghouse Electric Co., Atlanta.  
 White Provisions Co., Atlanta.  
 Whitney & McNeil Electric Co., Augusta.  
 Whitten Bros., Atlanta.  
 Williams, J. M., Winder.  
 Willingham's Warehouse, Macon.  
 Wimpy, H., Thomasville.  
 Wyanton Garage, Columbus.  
 Yancy Bros. Machine Co., Atlanta.

## FLORIDA.

Atlas Manufacturing Co., Orlando.  
 Birdsey Commercial Co., Palatka.  
 Boss, H. E., Jacksonville.  
 Bostains Bakery, Tampa.  
 Bowen, S. P., Burdin Building, Miami.  
 Boyde, Dr. H. B., Tampa.  
 M. Burns Meat Market, Jacksonville.  
 C. & M. Motor Co., Tampa.  
 Campbell Tire & Supply Co., Jacksonville.  
 Central Vulcanizer, Palatka.  
 City of Fernandina Electric Power Plant, Fernandina.  
 City of Jacksonville Engineering Department, Jacksonville.  
 Conant, Marcus, Co., Jacksonville.  
 Cook & Co., S. A., Jacksonville.  
 Dade Electric Co., Miami.  
 Daniel Co., Oscar, Tampa.  
 Darby, J. B., Palatka.  
 Duvall Shoe Repair Shop, Gainesville.  
 Electric Equipment Co., Miami.  
 Empire Shoe Factory, Jacksonville.  
 Fellsmore Co., Fellsmore.  
 Fitzgerald Chain Stores, Jacksonville.  
 Florida Auto & Gas Co., Tampa.  
 Florida Hardware Co., Jacksonville.  
 Florida Key Lime Co., Miami.  
 Florida Optical Co., Jacksonville.  
 Florida Times Union, Jacksonville.  
 Flynn-Harris-Bullard Co., Jacksonville.

Griffin & Latimer, Jacksonville.  
 Gustafson Garage, C. G., Tampa.  
 Halsema Lumber Co., Jacksonville.  
 Hanbury Lumber Co., Martel.  
 Hunter Electric Co., Tampa.  
 Huppell Bros. Garage, Orlando.  
 Ignition & Starting Battery Service, Jacksonville.  
 International Harvester Co., Jacksonville.  
 Jacksonville Electric Garage, Jacksonville.  
 James Shoe Shop, Palatka.  
 Kruse, Wm., Tailoring Co., Tampa.  
 Lawson Undertaking Establishment, Palatka.  
 Liebreich, I. H., Tampa.  
 Livingston Young & Co., Jacksonville.  
 Marine Garage, Jacksonville.  
 Mente Electric Co., Jacksonville.  
 Merrell-Stevens Shipbuilding Co., South Jacksonville.  
 Mission & Anderson, Jacksonville.  
 Mock, Wm., Jr., Jacksonville.  
 Moody's Garage, Tampa.  
 Municipal Water, Light & Power Co., Gainesville.  
 Myers, Dr. R. E., Ybor City.  
 New Homer Bakery, Jacksonville.  
 Nolan, Claud, Jacksonville.  
 Palatka Auto Co., Palatka.  
 Parish, J. J., Titusville.  
 Phoenix Park Plant, Jacksonville.  
 Postal Telegraph Co., Jacksonville.  
 Putnam Shoe Factory, Palatka.  
 Quick Tire Service Co., The City, Tampa.  
 Geo. A. Rebston, Tampa.  
 Richton, Chas., Tampa.  
 Risk, Joe, Jacksonville.  
 San Juan Garage, Daytona.  
 Seaboard Air Line Railroad Co., St. Petersburg.  
 Seminole Electric Co., Jacksonville.  
 Service Garage, Umatilla.  
 Service Shoe Factory, Jacksonville.  
 Shoe Renury, Jacksonville.  
 Show & Bryan Co., Tampa.  
 Smith Poultry Farm, Oakland.  
 Southern Bell Telephone Co., Key West.  
 Southern Iron Works, South Jacksonville.  
 Stanton Foundry & Machine Co., Palatka.  
 Stephen, F. L., Tampa.  
 Swindell, Mrs. Nell, secretary A. R. C., Lakeland.  
 Tampa Dock Co., Tampa.  
 Tampa Electric Co., Tampa.  
 Tampa Marble & Granite Works, Tampa.  
 Umatillo Garage, Umatilla.  
 United Shoe Factory, Jacksonville.  
 United States Engineer's Office, Jacksonville.  
 United States Health Service, Jacksonville.  
 Willard Service Station, Tampa.

## TENNESSEE.

Acme Electric Co., Knoxville.  
 Akers Company, B. W., Knoxville.  
 Allen & Smith, Nashville.  
 Ashland City Garage, Ashland City.  
 Babcock Lumber & Land Co., Maryville.  
 Randy Auto Co., Atwood.  
 Barnwell & Co., Memphis.  
 Bauman, Albert B., Knoxville.  
 Bell Motor Co., Nashville.  
 Blue Ridge Lumber Co., Caryville.  
 Boles Motor Co., H. C., Knoxville.  
 Bradley, Fred S., & Co., Memphis.  
 Broadside Mills, Knoxville.  
 Brown Carriage Co., Elizabethton.  
 Cantrells, G. B., Co., Nashville.  
 Chalmers Auto Co., Nashville.  
 City Garage, Cookeville.  
 City Garage, Greenville.  
 City Home Building Co., Nashville.  
 Clapp, R. T., Battery Co., Knoxville.  
 Comm. Club Shoe Repair, Nashville.  
 Connor Tire Co., Nashville.  
 Cumberland Telegraph & Telephone Co., Nashville.

Cunningham Electric Co., Nashville.  
 Davis, Jed., Clarksville.  
 Dempster Motor Co., Knoxville.  
 Dorris Auto Shops, Nashville.  
 Dry Block Mercantile Co., Nashville.  
 Duffy, Dr. Wm. J., Chattanooga.  
 Dyer Battery Co., Knoxville.  
 East Tennessee Dental Department, Knoxville.  
 East Tennessee Packing Co., Knoxville.  
 Eastham & Eubanks, Jackson.  
 Electric Service Stores (Inc.), Knoxville.  
 Electric Shoe Shop, Cleveland.  
 Etowah Garage & Auto Co., Etowah.  
 Evans, G. H., Lumber Co., Chattanooga.  
 Fairbanks, W. W., McMinnville.  
 Elite-French & Hatcher, Nashville.  
 Godsey & Ryston, Bristol.  
 Graves & Adams, Nashville.  
 Greenville Machine Shop, Greenville.  
 Gwlnur Dental Manufacturing Co., Memphis.  
 Hall-Mitchell Auto Co., Chattanooga.  
 Ham & Vogel, Memphis.  
 Hardwick Buick Co., Chattanooga.  
 Hargis & Co., H. L., Cookeville.  
 Harned, P. L., Corbindale.  
 Henry Co., T. L., Knoxville.  
 Hill, W. F., Dyerburg.  
 Hirsig Auto Supply Co., Nashville.  
 Holston Manufacturing Co., Cleveland.  
 Hunt Bros., Chattanooga.  
 Hunter Bros. Garage, Knoxville.  
 Hunter, Wilson & Co., Memphis.  
 I. C. R. R. Co., Memphis.  
 Imperial Motor Car Co., Nashville.  
 Joe, The Tailor, Paris.  
 Johnson, Dr. Wm., Chattanooga.  
 Jones Auto Co., Bill, Chattanooga.  
 Kenney Auto Electric Co., Chattanooga.  
 Kenton Shoe Hospital, Chattanooga.  
 Knoxville Electric Co., Knoxville.  
 Knoxville Gas Co., Knoxville.  
 Knoxville Tire & Vulcanizing Co., Knoxville.  
 Littlefield & Steere Co., Knoxville.  
 Lookout Roofing Co., Chattanooga.  
 Louden Manufacturing Corporation, Chattanooga.  
 Lowden Hosiery Mill, Louden.  
 Lucey Manufacturing Corporation, Chattanooga.  
 McBroom, Gentry Auto Co., Chattanooga.  
 McKinney, Fred, Chattanooga.  
 McMutt & Co., Knoxville.  
 Madden, J. F., & Co., Fayetteville.  
 Marble City Typewriter Co., Knoxville.  
 Mathis Bros. & Co., Memphis.  
 Maury Motor Corporation, Columbia.  
 Miller & Ashley, Obion.  
 Mississippi River Commission, Memphis.  
 Moore & Sons, John L., Knoxville.  
 Myers-Whaley Co., Knoxville.  
 N. C. & St. L. R. R. Co., Memphis.  
 N. & N. Dental Manufacturing Co., Nashville.  
 National Life Insurance Co., Nashville.  
 Newhauser & Davis, Clarksville.  
 Newton Jeweler Co., Knoxville.  
 Noble, P. M., Knoxville.  
 Norman, C. A., Poultry Farms, Knoxville.  
 Oliver, C. A., Co., Somerville.  
 Pace Motor Co., Knoxville.  
 Parkinson, R. T., Riceville.  
 Provident Life & Trust Co., Knoxville.  
 Pryor, Geo. M., Motor Co., Memphis.  
 Ransom & Co., John B., Nashville.  
 Re-Cornoline Spaling Co., Nashville.  
 Reynolds, Chas. E., Knoxville.  
 Rock City Electric Co., Nashville.  
 Rogers & Sons, L. O., Knoxville.  
 Rymer Bros. Garage, Etowah.  
 St. L. & S. F. R. R. Co., Memphis.  
 Savage, W. J., Co., Knoxville.  
 Sanitary Bakery, Knoxville.  
 Schenk Electric Co., Knoxville.  
 Schmidt, Chas. R., Tire Co., Knoxville.  
 Selton Motor Sales Co., Chattanooga.

Serviss Barber Supply Co., Knoxville.  
 Sessions, John W., Memphis.  
 Shappell, T. P., Pottsville.  
 Sheldon Garage Motor & Supply Co.,  
 Bristol.  
 Simmons, James T., Chattanooga.  
 Simpson Raimen Co., Knoxville.  
 Smith, R. B., Garage, Clarksville.  
 Snyder Massachusetts Cotton Co., Memphis.  
 Southern Railway Co., Chattanooga.  
 Standard Auto Works, Chattanooga.  
 Standard Processing Co., Chattanooga.  
 Star Shoe Shop, Knoxville.  
 Starr Piano Co., Knoxville.  
 Taryer, San V., Co., Knoxville.  
 Taylor & Co., N., Nashville.  
 Taylor Garage, Dresden.  
 Temple Motor Co., Union City.  
 Tennessee Amusement & Investment Co.,  
 Johnson City.  
 Tennessee Armature Works, Knoxville.  
 Tennessee Manufacturing Co. Assn., Nash-  
 ville.  
 Tennessee Marble Works, Knoxville.  
 Thuss, A. J., Co., Nashville.  
 Tire Vulcanizing Co., Jackson.  
 Train & Stratton, Spring City.  
 Turner Co., Jessie T., Martin.  
 Twin City Garage, Bristol.  
 Tyler Repair Shop, Morristown.  
 Union Shoe Parlor, Knoxville.  
 United Hosiery Mills Corporation, Chatta-  
 nooga.  
 Up To Date Auto Repair Co., Chattanooga.  
 Walsh & Weldner Boiler Co., Chattanooga.  
 Warden Motor Sales Co., Memphis.  
 Western Union Telegraph Co., Chattanooga.  
 Whitaker & Foust, Chattanooga.  
 Whitten Bros., Memphis.  
 Wilkinson & Carroll Cotton Co., Memphis.  
 Willis-Hackney Auto Supply Co., Chatta-  
 nooga.  
 Woods, H. P., Memphis.  
 Woolworth, F. W., Co., Jacksonville.  
 Wright & Rosenbusch, Nashville.  
 Yarrow Motor Car Co., Jackson.

## DISTRICT No. 6.

## ALABAMA.

Accountant Service Co., Mobile.  
 Advance-Rumley Co., Crowley.  
 Alabama Hart-Parr Co., Birmingham.  
 Alabama Power Co., Anniston.  
 Alabama Power Co., Birmingham.  
 Alabama Power Co., Gadsden.  
 Alabama Power Co., Gorgas.  
 All American Shoe Shops, Birmingham.  
 Aller, T. S., drug store, Mobile.  
 Altman, John W., Birmingham.  
 American Bakeries Co., Birmingham.  
 American Blakeslee Manufacturing Co.,  
 Birmingham.  
 American Rebuilt Tire Co., Birmingham.  
 American Shoe Shop, Birmingham.  
 American Tobacco Co., Birmingham.  
 Avondale Cotton Mills, Birmingham.  
 Bazemore & Bensley, Birmingham.  
 Bell-Ramsey Brokerage Co., Birmingham.  
 Bell Tailoring Co., Florence.  
 Bender Welding Co., Mobile.  
 Berheim, S. M., Electric Co., Birmingham.  
 Best Shoe Fixery, Birmingham.  
 Binder Elevator Co., Birmingham.  
 Birmingham Athletic Club, Birmingham.  
 Birmingham Auto & Ignition Co., Birming-  
 ham.  
 Birmingham Electric Battery Co., Birming-  
 ham.  
 Birmingham Ice & Cold Storage Co., Birming-  
 ham.  
 Birmingham Machine & Foundry, Birming-  
 ham.  
 Birmingham Motor Co., Birmingham.  
 Birmingham Realty Co., Birmingham.  
 Birmingham Railway & Light Power Co.,  
 Birmingham.  
 Birmingham Shoe Hospital, Birmingham.

Birmingham Traffic Bureau, Birmingham.  
 Birmingham Water Works, Birmingham.  
 Birmingham Welding Co., Birmingham.  
 Boykin, Dr. M. G., Mobile.  
 Boykin, M. C., Drug Co., Brewton.  
 Brighton Garage, Bessemer.  
 Bromberg & Co., Birmingham.  
 Brooks & Co., C. P., opticians, Birmingham.  
 Bunch-Morrow Motor Co., Birmingham.  
 Carrel Jewelry Co., Bessemer.  
 Chace Bros., Auto Tire Co., Birmingham.  
 Champion Shoe Shop, Birmingham.  
 Chisholm, Jas. I., Birmingham.  
 Christian Love & Sales Co., Birmingham.  
 Colvin, A., Furniture Reupholster Co.,  
 Birmingham.  
 Coosa Manufacturing Co., Piedmont.  
 Crawford's Auto Shoe (Inc.), Birmingham.  
 Cromwell Lumber Co., Montgomery.  
 Dixie Brass & Foundry Co., Birmingham.  
 Dunn, S. E., Tire Co., Birmingham.  
 Eighty-First Tire Co., Birmingham.  
 Electric Garage & Repair Co., Birmingham.  
 Electric Repair & Service Co., Birmingham.  
 Ellis Jewelry Co., Ensley.  
 Evans Bros. Construction Co., N., Bir-  
 mingham.  
 Evergreen Lumber Co., Evergreen.  
 Federal System of Bakeries, Birmingham.  
 Gayle Motor Car Co., Mobile.  
 Geary, J. M., Birmingham.  
 Hixon, Dr. E. D., Birmingham.  
 Hixon & Naftel, Bessemer.  
 Hobbie Motor Car Co., Montgomery.  
 Holland, E. H., Birmingham.  
 B. Hoppe Co., Birmingham.  
 Hotel Tutwiler, Birmingham.  
 Hutchinson, C. L., architect, Mobile.  
 International Harvester Co. of America,  
 Birmingham.  
 Imperial Laundry Co., Birmingham.  
 Jefe Jewelry Co., Birmingham.  
 Jones, B. A., Birmingham.  
 Jones Co., Chas. A., Birmingham.  
 Knox, F., Birmingham.  
 Knight Hardware & Electric Co., Birming-  
 ham.  
 Lathrop Lumber Co., Lathrop.  
 Lee McGregor Auto Shop, Birmingham.  
 Leggett, J. W., Jewelry Co., Bessemer.  
 Lehman Machine Co., Birmingham.  
 Lovey Tire Vulcanizing Co., Birmingham.  
 Lynch, F. M., Birmingham.  
 F. C. McKenzie, Mobile.  
 Matthews Electric Supply Co., Birming-  
 ham.  
 Memoli, Phillip, Birmingham.  
 Merrimack Manufacturing Co., Huntsville.  
 Middlebrooks Electric Co., Birmingham.  
 Miller Mill Co., Brewton.  
 Minto's, Tom, Electric Repair Shop, Mont-  
 gomery.  
 Mobile Auto Top & Trimming Co., Mobile.  
 Mobile Brewery & Ice Plant, Mobile.  
 Mobile Light & Railroad Co., Mobile.  
 Mueller, Tailor, Birmingham.  
 Mully Optical Co., Birmingham.  
 Murphy, T. R., Birmingham.  
 Nuck Carriage & Wagon Works, Mobile.  
 New Orleans Optical Co., Mobile.  
 O. K. Shoe Shop, Birmingham.  
 Old Dutch Carbon & Ribbon Co., Birming-  
 ham.  
 Oliver-Walstrum Armature Works, Birming-  
 ham.  
 Owens & Owens, Jewelers, Birmingham.  
 Pizitz, Louis, Dry Goods Co., Birmingham.  
 Place Garage, Birmingham.  
 Puritan Bakery Co., Birmingham.  
 Quigley Motor Car Co., Mobile.  
 Remington Typewriter Co., Birmingham.  
 Royal Shoe Shop, Mobile.  
 Royal Typewriter Co. (Inc.), Birmingham.  
 Saks, Louis, Clothing (Inc.), Birmingham.  
 Savoy Barber Shop, Birmingham.  
 Sims-Densler Auto Supply Co., Birming-  
 ham.  
 Skelton Jewelry Co., Birmingham.  
 Smith's Bakery, Mobile.  
 Smith-Brown Jewelry Co., Ensley.

Smith Typewriter Co., Birmingham.  
 Southern Bell Telephone Co., Birmingham.  
 Southern Motor Sales Co., Birmingham.  
 Southern Pattern & Engineering Co., Birmingham.  
 Southern Railroad Co., Birmingham.  
 Southern States Equipment Co., Birmingham.  
 Strickland Bro. Machine Co., Tuscaloosa.  
 Terminal Machine & Engineering Co., Birmingham.  
 Typewriter Exchange, Birmingham.  
 Underwood Typewriting Co., Birmingham.  
 Underwood Typewriting Co., Mobile.  
 Underwood Typewriting Co., Montgomery.  
 Up-To-Date Shoe Shop, Mobile.  
 Warten, H. & I. M., Cotton Co., Athens.  
 Watkins Tire Co., Birmingham.  
 Weldon Martin Rubber Co., Birmingham.  
 Winn Cigar Co., S. C., Montgomery.  
 Winona Coal Co., Gorgas.  
 Woods, T. S., Furniture Co., Troy.  
 Young & Vann Supply Co., Birmingham.

## MISSISSIPPI.

Auto Supply Co., Jackson.  
 Bonner, Edwin, Co., Carrollton.  
 Christian Brough Co., Vicksburg.  
 Counth Drug Co., Counth.  
 Cut Rate Shoe Shop, Natchez.  
 Finhins Lumber Co., Dlo.  
 Gilchrist Foundry Co., Laurel.  
 Hart-Parr Co., West Point.  
 Hattiesburg Plumbing Co., Hattiesburg.  
 Hines Auto Co., Jackson.  
 Illinois Central Railroad shops, McComb.  
 Jackson Shoe Shop, Jackson.  
 Jackson Welding Supply Co., Jackson.  
 Laurel Ice & Packing Co., Laurel.  
 McCloggan Ice Factory, McComb.  
 Magruder Auto Repair Shop, Jackson.  
 Railroad Wreck Store, Meridian.  
 Tucker Printing Co., Jackson.

## LOUISIANA.

Acme Blow Pipe & Sheet Metal Works, New Orleans.  
 Advance-Rumely Co., Crowley.  
 Ahten & Colger, New Orleans.  
 American Elevator Co., New Orleans.  
 American Shoe Shop, New Orleans.  
 Anchor Packing Co., New Orleans.  
 Anderson & Clayton Co., New Orleans.  
 Appalachian Warehouse, New Orleans.  
 Arcadia Garage, Crowley.  
 Atkins, E. C., New Orleans.  
 Avoelles Wholesale Grocery, Alexandria.  
 Audubon Pharmacy, New Orleans.  
 Auto Service Co., New Orleans.  
 Auto Tire Co., Alexandria.  
 Bahin, Nick, White Castle.  
 Baldwin, A., & Co., New Orleans.  
 Barnes Electrical Construction Co., New Orleans.  
 Beane Bros., New Orleans.  
 Bell Ramsey Brokerage Co., Birmingham.  
 Bernstein, M., New Orleans.  
 Beshel Cabinet Works, New Orleans.  
 Billard Motor Co., Lafayette.  
 Bland, Dr. H. B., D. D. S., New Orleans.  
 Bogalusa Paper Co. (Inc.), Bogalusa.  
 Bonhage, D., New Orleans.  
 Breaux & Bennin, Gueydan.  
 Broussard, Alfred, Lake Arthur.  
 Brow, R. J., New Orleans.  
 Burroughs Adding Machine Co., New Orleans.  
 Button, F. S., Crowley.  
 Cabinet Refrigerator Co., New Orleans.  
 Caffall Implement Co., Jennings.  
 Capitol City Auto Co., New Orleans.  
 Cannella, S., New Orleans.  
 Cappell, Dr. W. T., Alexandria.  
 Carlisle, C. C., Welsh.  
 Case Threshing Co., Crowley.  
 Castleberry Garage, Crowley.  
 Central Louisiana Motor Car Co., Alexandria.

Chevrolet Motor Co., New Orleans.  
 Chisholm Co., John O., New Orleans.  
 Chopin, Peter A., New Orleans.  
 Citizens' Motor Co., Shreveport.  
 Clark, John F., New Orleans.  
 Coffall, C. B., Implement Co., Jennings.  
 Cohen, M., tailor, New Orleans.  
 Commercial Shoe Hospital, New Orleans.  
 Commercial Trust & Savings Co., New Orleans.  
 Consumers' Electric Light Power Co., New Orleans.  
 Cooney, Thos. S., New Orleans.  
 Cosmo Shoe Repairing Co., New Orleans.  
 Coste, Erichte, Machinery Construction Co., New Orleans.  
 Country Club, New Orleans.  
 Covington Garage, Covington.  
 Crane, Dr. Harry L., New Orleans.  
 Crescent City Machinery Works, New Orleans.  
 Crescent Typewriter Exchange, New Orleans.  
 Crowley Battery Co., Crowley.  
 Crowley Motor Car Co., Crowley.  
 Deaton & Robertson, New Orleans.  
 Delta Motor Co., New Orleans.  
 Denachaud, Charles, New Orleans.  
 Diebert, Bancroft & Ross, New Orleans.  
 Dixie Dyeing & Tailoring, New Orleans.  
 Dixie Laundry, New Orleans.  
 Domenico, Dossi, New Orleans.  
 Doullnt & Willams, New Orleans.  
 Duggan (Inc.), New Orleans.  
 Dussell Iron Works, New Orleans.  
 Duval Tire Rebuilding Co., New Orleans.  
 Dwyer Piano Co., New Orleans.  
 Eberling, Edw. N., & Co., New Orleans.  
 Economical Dental Co., New Orleans.  
 Evans Bros. Construction Co., Birmingham.  
 Fahrenhatt, Laurel.  
 Fala, John, New Orleans.  
 Fairbanks, New Orleans.  
 Fairchild Auto Co., New Orleans.  
 Fair Hills Auto Co., New Orleans.  
 Flinn, Dr. Parlos, New Orleans.  
 Foester, George, New Orleans.  
 Fordson Tractor Co., Jennings.  
 Franch, Charles L., New Orleans.  
 Freed Realty Co., New Orleans.  
 Friendship Pressing Shop, New Orleans.  
 Fuller, George A., New Orleans.  
 Gaston, R. W., New Orleans.  
 Gedchaux Co., L., New Orleans.  
 General Auto Co., New Orleans.  
 Girot, L. Co., New Orleans.  
 Glover, George J., New Orleans.  
 Goodyear Shoe Hospital, New Orleans.  
 Gorham W. E., Jennings.  
 Gorod Service Station, New Orleans.  
 Griswold, A. F., & Co., New Orleans.  
 Grunewald, L. Co., New Orleans.  
 Guinn, O. M., New Orleans.  
 Gulf Refining Co., New Orleans.  
 Haas, Leon, Opelousas.  
 Hansen, Kall, Co., New Orleans.  
 Hart Jewelry Co., New Orleans.  
 Hart-Parr Tractor Co., Crowley.  
 Hartman Co. (Inc.), New Orleans.  
 Hatter, B. T., New Orleans.  
 Hatty Garage, Crowley.  
 Herfarth Bros., New Orleans.  
 Hoffman, Olsen, New Orleans.  
 Hotel Grunewald, New Orleans.  
 Hotel Montelone, New Orleans.  
 Huber Motor Co., New Orleans.  
 I. C. R. R. Co., New Orleans.  
 Ideal Sheet Metal Works, New Orleans.  
 Imperial Laundry Co., Birmingham.  
 Industrial Loan & Investment Co., New Orleans.  
 Interstate Electric Company, New Orleans.  
 Jachneke Dry Docks & Ship Co., New Orleans.  
 Jeanerette Electric Light Plant, Jeanerette.  
 Joplin Tractor Co., Crowley.  
 Kaplan Machine Shop, Kaplan.  
 Kenton Shoe Repairing Co., New Orleans.  
 Koch, Charles A., New Orleans.

- Krauss Bros. Lumber Co., New Orleans.  
 Krewer & Son (Ltd.), Leonard, New Orleans.  
 Lafayette Motor Co., Lafayette.  
 Lake Irrigation Mill Co., Crowley.  
 Lake Charles Implement Co., Lake Charles.  
 Landry, W. W., New Orleans.  
 Lane Cotton Mills, New Orleans.  
 Lapo Motor Co., New Orleans.  
 Lazards, C., Co., New Orleans.  
 Le Blanc & Crawford, Crowley.  
 Lehman Stern Co., New Orleans.  
 Leiber's Garage, Alexandria.  
 Leipsner, Frank, New Orleans.  
 Le Red Cypress Co., New Orleans.  
 Lockette, A. N. & V. L. D., New Orleans.  
 Lynch, Thomas E., New Orleans.  
 M. L. & T. T. R. Co., Algiers.  
 Mack Truck Co., New Orleans.  
 Maison Blanche Co., New Orleans.  
 Mark, Trunk Co., New Orleans.  
 Martinez, Raymond J., New Orleans.  
 Mason's Annuity, New Orleans.  
 Massillon Engine & Thresher Co., Crowley.  
 Mauboules, Le Blanc & Crawford, Crowley.  
 Mayer & Co., Norman, New Orleans.  
 Meraux, Phil, New Orleans.  
 Metairie Ridge Nurseries Co., New Orleans.  
 Mexican Petroleum Corporation, Destregab.  
 Meyer-Eiseman, New Orleans.  
 Miller Bros., New Orleans.  
 Miller-Goll Manufacturing Co., New Orleans.  
 Mogalgh Store Front Co., New Orleans.  
 Moore, Frank B., New Orleans.  
 Morgan, Louisiana & Texas Railroad Co., Algiers.  
 Mutual Rice Co., New Orleans.  
 National Rubber Works (Inc.), New Orleans.  
 New Orleans Cold Storage Warehouse Co., New Orleans.  
 New Orleans Gas Light Co., New Orleans.  
 New Orleans Railway & Light Co., New Orleans.  
 New Orleans Refining Co., Sellers.  
 New York Goodyear Shoe Hosp., New Orleans.  
 Olsen, T. Hoffman, New Orleans.  
 Otis Elevator Co., New Orleans.  
 Otis Manufacturing Company, New Orleans.  
 Otter, Robt. E., New Orleans.  
 Pallet, David, New Orleans.  
 Patriotic Dye Works, New Orleans.  
 Pelican Cracker Factory, New Orleans.  
 People Motor Co., Abbeville.  
 Peter's Pharmacy, New Orleans.  
 Petty, J. A., New Orleans.  
 Pfister, L. M., New Orleans.  
 Potter's Tailoring Co., New Orleans.  
 Printing Trades Bindery, New Orleans.  
 Purity Feed Mill, Crowley.  
 Ramsey, Cicero, New Orleans.  
 Remington Typewriter Co., New Orleans.  
 Renshaw Motor Co., Abbeville.  
 Revol, Gus, New Orleans.  
 Rhodes, Jos. Lee, New Orleans.  
 Rice Belt Auto Co., Crowley.  
 Rice Implement Co., Jennings.  
 Rippard, J. K. & Co., New Orleans.  
 Royerer, New Orleans.  
 Rypierre, Aug., New Orleans.  
 Schayer & Sons, New Orleans.  
 Schmidt Bros., New Orleans.  
 Schwack, C. A., Alexandria.  
 Scrath, Geo. A., New Orleans.  
 Searcy & Pfall, New Orleans.  
 Service Garage, Crowley.  
 Sheppard & Gluck, New Orleans.  
 Shiner Casket Co., New Orleans.  
 Shoe Hospital, The, New Orleans.  
 Sinclair Motor Co., New Orleans.  
 Southern Amusement Co., Crowley.  
 Southern Cabinet & Refrigerating Co., New Orleans.  
 Southern Mattress Co., New Orleans.  
 Southern Pacific Railway, Algiers.  
 Square Deal Shoe Shop, New Orleans.  
 Stahel & Co., E. S., New Orleans.  
 Stamm-Scheele Co., Rayne.  
 Standard Jewelry Co., New Orleans.  
 Standard Rice Mill, Crowley.  
 Stauffer Eschelman & Co., New Orleans.  
 Steffee, H. T., New Orleans.  
 Sterbow, Louis, New Orleans.  
 Strauss, H. J., New Orleans.  
 Stumpf Co., New Orleans.  
 Suhren (Inc.), New Orleans.  
 Sumner, Charles, New Orleans.  
 Sutter, Van Horn, Co.  
 Swords, C. W., New Orleans.  
 Teche Motor Co., Lafayette.  
 Testard, H. A., New Orleans.  
 Thompson, C. N. Co., New Orleans.  
 Thompson & Reiber Co., Crowley.  
 Thompson Machine Co., New Orleans.  
 Twin City Tractor Co., Crowley.  
 Twine, The Tailor, New Orleans.  
 Typewriter Emporium, New Orleans.  
 Typewriter Repair & Sales Co., New Orleans.  
 Underwood Typewriter Co., New Orleans.  
 Union Dental Co., New Orleans.  
 Union Shoe Repairing Co., New Orleans.  
 Union Woolen Mills, Crowley.  
 United Dental Co., New Orleans.  
 Vallenti Co., F., New Orleans.  
 Verderami Shoe Shop, New Orleans.  
 Vermillion Garage, Crowley.  
 Victor Garage, New Orleans.  
 Vissca Breaux Motor, New Orleans.  
 Wayne Thompson Co., Crowley.  
 Well Electric Co., New Orleans.  
 Welsh Motor Co., Welsh.  
 West Bros. C. C., Jennings.  
 White Bros. & Co., New Orleans.  
 White, Horace M., New Orleans.  
 Wlans Studio, New Orleans.  
 Wilkins Auto Co., Jennings.  
 Young Men's Gymnasium Club, New Orleans.  
 Zilberman, Lucien, New Orleans.

## DISTRICT NO. 7.

## OHIO.

- Acme Machinery Co., Cleveland.  
 Adams, Henry, garage, Postoria.  
 Albough, E. S., Jewelry Shop, Columbus.  
 Allis-Chalmers Manufacturing Co., Cincinnati.  
 Allis-Chalmers Manufacturing Co., Norwood.  
 Aluminum Casting Co., Cleveland.  
 American Auto Trimming Co., Cleveland.  
 American Multigraph Co., Cincinnati.  
 American Stamping & Enamel Co., Bellaire.  
 American Steel Foundry Co., Alliance.  
 American Steel & Wire Co., Cleveland.  
 American Steel & Wire Co., Cuyahoga.  
 Angstadt, George W., Warren.  
 Anness Electric Co., Hamilton.  
 Atlas Machine & Die Co., S. W. Canton.  
 Atlas Pattern & Manufacturing Co., Cleveland.  
 Atlas Tire & Vulcanizing Co., Cleveland.  
 Auburn Service Station, Cleveland.  
 Auld Co., D. L., Columbus.  
 Auto Electric Maintenance Co., Cleveland.  
 Auto Electric Equipment Co., Dayton.  
 Auto Inn Garage, Cambridge.  
 Auto Light Co., Toledo.  
 Baltimore & Ohio Railroad Co., Cincinnati.  
 Baker, M. O., Co., Toledo.  
 Baldwin Piano Co., Cincinnati.  
 Ball, Webb C., Co., Cleveland.  
 Banner Pattern Co., Columbus.  
 Barnhern, Ben, Minster.  
 Bartlett & Dillenselder, Fremont.  
 Batsner Bros., Cincinnati.  
 Beam Brow, Youngstown.  
 Beck Bearing Co., Toledo.  
 Becker, Dr. J. P., Cincinnati.  
 Bedaux Co., Charles E., Cleveland.  
 Belden Motor Car Co., Canton.

- Belmont Casket Manufacturing Co., Columbus.  
 Bentley & Sons Co., Toledo.  
 Bing, I. & S. Co., Cincinnati.  
 Bingham Hardware Co., W. Cleveland.  
 Bissinger Magneto Co., Columbus.  
 Blackwood Davis Co., Columbus.  
 Blair-Thompson, Cincinnati.  
 Board of Park Commissioners, Cincinnati.  
 Board of Public Affairs, Cincinnati.  
 Book Bearing Co., Cincinnati.  
 Bora Fruit Co., Cleveland.  
 Boyer Office Supply Co., Canton.  
 Bradstreet Co., Toledo.  
 Brehmer Garage, Circleville.  
 Brehrer Mechanical & Tool Co., Cincinnati.  
 Brepson & Hay, Washington.  
 Brooks & Co., Messrs., Columbia.  
 Brown Holsting Machinery Co., Cleveland.  
 Brown Manufacturing Co., Columbus.  
 Browning Engraving Co., Cleveland.  
 Bryson & Hay, Washington C. H.  
 Bucher & Gibbs Plow Co., Canton.  
 Buckeye Electric, Cincinnati.  
 Buckeye Equipment Co., Cincinnati.  
 Buckeye Steel Castings Co., Columbus.  
 Buckleys Tire Repairing Co., Cincinnati.  
 Buehler Bros., Lima.  
 Buick Auto Co., Cincinnati.  
 Buick Service Department, Cincinnati.  
 Bukowsky, A. W., Toledo.  
 Bullock Electric Co. Works, Cincinnati.  
 Bullock Electric Co. Works, Norwood.  
 Burris & Pasig Tire Shop, Ashland.  
 C. & B. Transit Co., Cleveland.  
 Cleveland, Cincinnati, Chicago & St. Louis Railway Co., Cincinnati.  
 C. M. & L. Departments, Wilberforce.  
 Cadillac Cleveland Co., Cleveland.  
 Cadillac Service Station, Akron.  
 Cadiz Electric Light & Power Co., Cadiz.  
 Campbell & Burbaker, Napoleon.  
 Cardinger, D. E., Columbus.  
 Cecil, W. T., Akron.  
 Central Union Telephone Co., Dayton.  
 Champion Engineering Co., Kenton.  
 Charters, J. T., Xenia.  
 Chevrolet Motor Co., Toledo.  
 Chevrolet Service Station, Cleveland.  
 Chisholm & Moor Manufacturing Co., Cleveland.  
 Christian, J. E., Co., Cleveland.  
 Chester Supply Co., Cincinnati.  
 Cincinnati Abattoir Co., Cincinnati.  
 Cincinnati Watch Case Repair Co., Cincinnati.  
 Citizens Motor Car Co., Cincinnati.  
 Citizens National Bank, Urbana.  
 City Auto Tire & Supply Co., Cleveland.  
 City Engineer's Office, Cincinnati.  
 City Supply Co., Cleveland.  
 Cleveland Armature Works, Cleveland.  
 Cleveland Artificial Limb Co., Cleveland.  
 Cleveland Auto Co., Cleveland.  
 Cleveland Builders Supply Co., Cleveland.  
 Cleveland Construction Co., Cleveland.  
 Cleveland Cutlery Co., Cleveland.  
 Cleveland Electric Railway, Cleveland.  
 Cleveland Illuminating Co., Cleveland.  
 Cleveland Shoe Hospital, Cleveland.  
 Cleveland Tractor Service Co., Cleveland.  
 Clifton Auto Sales Co., Columbus.  
 Coffey Co., M. H., Cleveland.  
 Coffin Co., Columbus.  
 Cohen Friedlander & Martinez, Toledo.  
 Cole Motor Sales Co., Columbus.  
 Columbia Garage & Machine Co., Columbus.  
 Columbus Artificial Limb Co., Columbus.  
 Columbus Power & Light Co., Columbus.  
 Columbus Welding Shop, Columbus.  
 Commercial Equipment Co., Cleveland.  
 Conklin Fountain Pen Co., Toledo.  
 Conneaut Light Plant, Conneaut.  
 Conrad Baisch Kroehle Co., Cleveland.  
 Consolidated Railroad Ticket Office, Cleveland.  
 Cooper Rubber Co., L. W., Dayton.  
 Corra, J. B., Ironton.  
 Cowell & Hubbard Co., Cleveland.  
 Crawford Garage, Cincinnati.  
 Crown Auto Co., Celina.  
 Curtis Motor Cycle Garage Repair Shop, Zanesville.  
 Dally Electric Co., Springfield.  
 Dalton Adding Machine Co., Norwood.  
 Dalton Adding Machine, Cincinnati.  
 Davis Sewing Machine Co., Dayton.  
 Davy Tree Expert Co., Dayton.  
 Dayton Dental Laboratory, Columbus.  
 Dayton Engineering Laboratory, Dayton.  
 Dayton Fan & Motor Co., Dayton.  
 Dayton Manufacturing Co., Dayton.  
 Dayton Power & Light Co., Dayton.  
 Dayton Wright Aeroplane Co., Dayton.  
 Dean Motor Sales Co., Toledo.  
 Defiance Screw Machine Co., Defiance.  
 Delco Light Co., Dayton.  
 Delco Light Co., Toledo.  
 Delco Plant, Dayton.  
 Delco Light Products Co., Newark.  
 Dempsey, McMann Co., Toledo.  
 Detroit Range & Steel Barrel Works, Toledo.  
 Deuble Co., Geo., Canton.  
 Deuble, W. H., Canton.  
 Dyle & Waltz Printing Co., Cleveland.  
 Doehler Die Casting Co., Toledo.  
 Dorst Jewelry Co., Cincinnati.  
 Double Service Station, Cleveland.  
 Douglas Co., John, Cincinnati.  
 Egan Bros. Co., Toledo.  
 Egbert Real Estate Co., Jay, Cleveland.  
 Eglehoff Repair Shop, Columbus.  
 Ehler Electric Co., Dayton.  
 Electric Construction & Motor Co., Finlay.  
 Electric Motor & Repair Co., Akron.  
 Electric Power & Maintenance Co., Toledo.  
 Electric Sales Co., Columbus.  
 Emerson, Samuel W., Cleveland.  
 Englebert Co., Jos. D., Cincinnati.  
 Enterprise Electric Co., Cleveland.  
 Enterprise Electric Construction Co., Cleveland.  
 Enterprise Manufacturing Co., Cleveland.  
 Erner & Hopkins Co., Columbus.  
 Evans, U. G., Washington.  
 Exide Service Station, Akron.  
 Factory Shoe Repair Co., Cleveland.  
 Farrell Auto Repair Co., Cincinnati.  
 Farrell Motor Sales Co., Cincinnati.  
 Federal Reserve Bank, Cleveland.  
 Fenton Dry Cleaning Co., Cincinnati.  
 Fergus Electric Co., Zanesville.  
 Ferguson Auto Service Co., Cincinnati.  
 Ferro Foundry & Machine Co., Cleveland.  
 Firestone Steel Products Co., Akron.  
 Firestone Tire & Rubber Co., Akron.  
 Firestone Tire & Rubber Co., Columbus.  
 Fischer Auto Co., Cincinnati.  
 Flitz, Guy C., Zanesville.  
 Foley & Harding, Cincinnati.  
 Foot-Burt Co., Cleveland.  
 Foote, Tom, Printing Co., Cleveland.  
 Forchheimer, B., Cleveland.  
 Fowler Electric Supply Co., Toledo.  
 Fox, Gustave, Jewelry Co., Cincinnati.  
 Foy Paint Co., Cincinnati.  
 Foy & Starr Co., Cincinnati.  
 Franklin Board & Paper Co., Franklin.  
 Franklin Dye Works, Columbus.  
 Franklin Tractor Co., Columbus.  
 Freeman Co., J. J., Toledo.  
 French Oil & Machine Co., Piqua.  
 Friedman Co., Ben, Cincinnati.  
 Fuller & Smith Advertising Agency, Cleveland.  
 G. & K. Auto Repair Co., Cincinnati.  
 G. & E. Realty Co., Cleveland.  
 Gallon Iron & Manufacturing Co., Gallon.  
 Garford Motor Truck Co., Lima.  
 Gas & Electric Appliance Co., Cincinnati.  
 Gaumer Publishing Co., Urbana.  
 Gebhardt Manufacturing Co., Cincinnati.  
 Gendron Wheel Co., Toledo.  
 General Fireproofing Co., Youngstown.  
 Getz Co., Cleveland.  
 Gibson & Perin Co., Cincinnati.

Gifts Theater, Cincinnati.  
 Glow Electric Co., Cincinnati.  
 Godman Co., H. C., Lancaster.  
 Good Tire Repair Co., Cincinnati.  
 Goodrich Rubber Co., Akron.  
 Goodyear Rubber Co., Akron.  
 Gordon Supply Co., Lancaster.  
 Grant, John, & Son, Cleveland.  
 Grasselli Chemical Co., Canton.  
 Great Lakes Construction Co., Cleveland.  
 Greensmith & Sons, Herbert, Cincinnati.  
 Grossman, E. H., Cincinnati.  
 Gruen Watch Co., Cincinnati.  
 Guerney Garage Co., Cambridge.  
 Hall, Wm., Electric Co., Dayton.  
 Hamer's Plumbing Co., Cincinnati.  
 Hamilton Corliss Co., Hamilton.  
 Hanson Jewelry Co., Akron.  
 Harris Automatic Press Co., Cleveland.  
 Harrington Electric Co., Cleveland.  
 Helming McKenzie Shoe Co., Cincinnati.  
 Herring Bros. Garage, Mansfield.  
 Hershede Clock Co., Cincinnati.  
 Hess & Lewis, Springfield.  
 Hughes-Peters Electric Co., Columbus.  
 Hilker Co., W. E., Toledo.  
 Hills Electric Co., Cleveland.  
 Hocking Valley Railway Co., Columbus.  
 Holmes Auto Co., Canton.  
 Homan Manufacturing Co., Cincinnati.  
 Hooven Automatic Typewriter Corporation, Hamilton.  
 Hooven-Owens-Pentschler Co., Hamilton.  
 Hotel Gibson, Cincinnati.  
 Hotel Harris, Toledo.  
 Hotel Statler, Cleveland.  
 Hubbell, H. C., Cincinnati.  
 Huber Manufacturing Co., Marion.  
 Hydraulic Pressed Steel Co., Cleveland.  
 Illuminating Co., Cleveland.  
 Industrial Steel Casting Co., Toledo.  
 Interlocking Cord Tire Co., Magadon.  
 International Foundry Co., Cleveland.  
 International Harvester Co., Cleveland.  
 Interstate Foundry Co., Cleveland.  
 Interstate Taxicab Co., Cincinnati.  
 Johnson Artificial Limb Co., Cincinnati.  
 K. & P. Garage, Cleveland.  
 K. W. Ignition Co., Cleveland.  
 Kaiser Machine Works, The, Columbus.  
 Kauffman Metal Co., Bellefontaine.  
 Kayline Fixture Co., Cleveland.  
 Keagy Watch Repair Service, Cincinnati.  
 Keith's Theater, B. F., Cleveland.  
 Kelly, L. W., Co., Cleveland.  
 Kelly Welding Co., Cincinnati.  
 Kennedy, Guy, C. P. A., Cincinnati.  
 Kennedy Shoe Co., Toledo.  
 Kepler Auto Exchange, Cincinnati.  
 Kidney, James, Co., Cincinnati.  
 Kindtz, Theodore, Cleveland.  
 Korb Photographic Co., Toledo.  
 Krakora, James, Cleveland.  
 Krenz Boiler Works, Toledo.  
 Krippendorff Dittman Shoe Co., Cincinnati.  
 Kroger Grocery & Baking Co., Cincinnati.  
 Kruse & Garlick Co., Cincinnati.  
 Kuhn & Studebaker Co., Miamiburg.  
 Kundtz Co., Theodore, Cleveland.  
 L. C. R. Co., Dayton.  
 La Fayette Electric Light Co., La Fayette.  
 Laine, John, Ashtabula.  
 Langdon-Meyers Laboratory, Cincinnati.  
 Lazarus, R. F., & Co., Columbus.  
 Leader (newspaper office), Middleport.  
 Le Blond Machine & Tool Co., Cincinnati.  
 Leyman Buick Co., Cincinnati.  
 Liberty Tool & Production, Cincinnati.  
 Lilley Co., M. G., Columbus.  
 Lima City Water Works, Lima.  
 Lincoln Electric Co., Cleveland.  
 Lincoln Tire & Rubber Co., Mansfield.  
 Link, H. A., Washington.  
 Lockland Motor Car Co., Lockland.  
 Lostro Auto Sales Co., Athens.  
 Lucas Electric Co., Toledo.  
 McCaskey Register Co., Alliance.  
 McFarlan, J. T., Adena.  
 McGarry & McGarry, Liverpool.  
 McGaw Co., Wm. E., Toledo.  
 McGonigle & Corbett, Columbus.  
 McKeever Electric Co., Columbus.  
 Madison Foundry Co., Cleveland.  
 Manchester Ice & Machine Co., Manchester.  
 Mansfield Garage, Mansfield.  
 Mansfield Service Station, Mansfield.  
 Martem Electric Co., Cleveland.  
 Martin, H. B., Cincinnati.  
 Mason Auto Painting Co., Findlay.  
 Mathews Bros., Athens.  
 Mauck, Roscoe J., Gallipolis.  
 Maumee Malleable Co., Toledo.  
 Mecklenberg & Gerhardt, Cincinnati.  
 Medina Foundry Co., Medina.  
 Melburn Wagon Co., Toledo.  
 Melvin Bros. Pattern Works, Columbus.  
 Metal Welding Co., Cleveland.  
 Miami Cycle Co., Middletown.  
 Middletown Battery Station, Middletown.  
 Miller Jewelry Co., Cincinnati.  
 Minster Machine Co., Minster.  
 Mitchell Garage Co., Dunkirk.  
 Modern Tool & Die Machine Co., Columbus.  
 Mohrlite Co., Urbana.  
 Montross Bros. Garage, Utica.  
 Morrell, G. A., Cleveland.  
 Morris Machine & Tool Co., Cincinnati.  
 Morton Co., P. H., Cincinnati.  
 Motor Car Sales Co., Mansfield.  
 Moyer, A., Co., Cincinnati.  
 Municipal Power Plant, Cleveland.  
 Myslinski & Moore, Cleveland.  
 National Acme Manufacturing Co., Cleveland.  
 National Carbon Co., Cleveland.  
 National Iron & Wire Co., Cleveland.  
 National Screw & Track Co., Cleveland.  
 National Supply Co., Toledo.  
 National Tube Co., Lorain.  
 Neiswender Fruit & Poultry Farm, Grove City.  
 New Buckeye Auto Co., Columbus.  
 New York Central Railroad, Cleveland.  
 Newark Bargain Shoe Store, Newark.  
 Niles Tool Works, Hamilton.  
 North American Watch Co., Hamilton.  
 North American Watch Co., Mansfield.  
 Noterman, Jos., & Co., Cincinnati.  
 O. S. W. County Agents' Department, Cincinnati.  
 Oak Street Garage, Toledo.  
 Oberly Tool & Die Works, Toledo.  
 Ocean Accident & Guarantee Corporation, Dayton.  
 Ohio Collieries Co., Glouster.  
 Ohio Electric Maintenance Co., Cleveland.  
 Ohio Electric Railway Co., Springfield.  
 Ohio Messenger & Telegraph Co., Cincinnati.  
 Ohio Oil Co., Findlay.  
 Ohio Sign Co., Cleveland.  
 Ohio State Telephone Co., Washington.  
 Ohmer Fare Register Co., Dayton.  
 Oldsmobile & Mercer Service Station, Akron.  
 Oskamp & Noltin Co., Cincinnati.  
 Overland-Dunkle, Columbus.  
 Paige Ohio Co., Cleveland.  
 Palmer Co., Cincinnati.  
 Palmer-Blain Realty Co., Toledo.  
 Paschal Electric Co., Marion.  
 Patterson Supply Co., Cleveland.  
 Pauley Bros., Springfield.  
 Pa. Square Body Co., Cleveland.  
 People Shoe Co., Chillicothe.  
 Perfection Rubber Co., Mansfield.  
 Perkins-Campbell Co., Cincinnati.  
 Peters Cartridge Co., Kings Mills.  
 Pluckebaums Shop, Cincinnati.  
 Postatype Manufacturing Co., Cleveland.  
 Prince, J. M., Optical Co., Cincinnati.  
 Proctor & Gamble Co., Cincinnati.  
 Product Machine Tool Co., Cincinnati.  
 Progressive Engineering Co., Toledo.  
 Pursell, Val., Cincinnati.

- Quality Electric Co., Cincinnati.  
 Queen City Auto Radiator Co., Cincinnati.  
 Queen City Welding Co., Cincinnati.  
 Quehl Sign Co., Cincinnati.  
 Quincy Avenue Furniture Co., Cleveland.  
 Ralsbeck & Co., Cincinnati.  
 Rentz Electric Contractors, Bellevue.  
 Rapid Electrotype Co., Cincinnati.  
 Reed Furniture Co., Dayton.  
 Register Publishing Co., Ironton.  
 Reliable Engine Co., Portsmouth.  
 Rep. Iron & Steel Co., Youngstown.  
 Repository Printing Co., Canton.  
 Rex File Co., Newcomerstown.  
 Robbins & Myers Co., Springfield.  
 Root, A. B., Medina.  
 Roosback Art Glass Co., Columbus.  
 Royal Shoe Co., Cincinnati.  
 Royal Typewriter Co., Youngstown.  
 Rubay Company, Cleveland.  
 Rubin, Leon E., Liverpool.  
 Rudolph Deutsch Co., The, Cleveland.  
 Russell Realty Co., Cleveland.  
 Ryan Ideal Stain & Blackening Co., Cincinnati.  
 S. P. Manufacturing Co., Cleveland.  
 Salzer Electric Co., Cleveland.  
 Sanderson, R. C., Washington, C. H.  
 Sanitary Wet Wash Co., Cleveland.  
 Scannell Electric Construction Co., Toledo.  
 Schaefer, The Fine Shoe Repairing, Columbus.  
 Schell, James A., Miamisburg.  
 Schencks Tire & Battery Co., Dayton.  
 Schilling, Wade, undertaker, Troy.  
 Schmidt & Son, Portsmouth.  
 Schott Monument Co., Cincinnati.  
 Schuller Garage, New Bavaria.  
 Schwake Garage Pa. Station, Toledo.  
 Schwitzer Bros., Cincinnati.  
 Schwartz, Emil, Cincinnati.  
 Segroves, G. F., Marietta.  
 Selby Shoe Co., Portsmouth.  
 Seyfert, L. J., Indianapolis.  
 Sharon Steel Hoop Co., Lowellville.  
 Sharile Motor Car Co., Hamilton.  
 Shelow, H. F., Dayton.  
 Sherwin Williams Co., Cleveland.  
 Shoe Hospital, Bellaire.  
 Sigler Bros., Cleveland.  
 Silver Co. (Inc.), Cincinnati.  
 Singer Sewing Machine Co., Cincinnati.  
 Singer Sewing Machine Co., Toledo.  
 Slaughter, Harry C., Athens.  
 Smenner, E. L., Electric Co., Toledo.  
 Smith Machine Shop, Bowling Green.  
 Smith & Patton Co., Defiance.  
 Solitro, Tony, Ravenna.  
 Soakin, Jos., Cleveland.  
 Southern Optic Co., Cincinnati.  
 Spencer, M. A., Co., Cincinnati.  
 Spencer Bros., Cincinnati.  
 Stacy Bros., Elmwood.  
 Standard Parts Manufacturing Co., Cleveland.  
 Standard Publishing Co., Cincinnati.  
 Standard Sanitary Manufacturing Co., Columbus.  
 Standard Securities Co., Cleveland.  
 Standard Tire Co., Athens.  
 Stanley Bros. Garage, Hillsboro.  
 Star Rubber Co., Akron.  
 Starr Co., A. E., Zanesville.  
 Stebbins, H. L., Realty Co., Toledo.  
 Sterling Machine & Stamping Co., Wellington.  
 Sterling & Welch Co., Cleveland.  
 Stewart & Bishop, Cincinnati.  
 Strecker, C. W., Machine Co., Bellevue.  
 Strong, Carlisle & Hammond Co., Cleveland.  
 Sullivan & Co., G. W., Cincinnati.  
 Summit Drug Co., Akron.  
 Sun Oil Co., Toledo.  
 Sunlight Creameries, Washington.  
 Superior Electric Co., Ashtabula.  
 Superior Vulcanizing Co., Lima.  
 Sweet Auto Repair Shop, Mansfield.  
 T. & O. C. Railway, Bucyrus.  
 T. & O. C. Railway, Luckey.  
 Templar Motor Co., Cleveland.  
 Ticks Reed Co., Cincinnati.  
 Tire & Rubber Shop, Washington.  
 Toledo Builders Supply, Toledo.  
 Toledo Pure Asphalt Roofing Co., Toledo.  
 Toledo Jewelry Manufacturing Co., Toledo.  
 Toledo Machine Tool Co., Toledo.  
 Toledo Saw Co., Toledo.  
 Toledo Sheet Tube Co., Toledo.  
 Toledo Shipbuilding Co., Toledo.  
 Toledo Steel Products Co., Toledo.  
 Torbensen Axle Co., Cleveland.  
 Travelers Insurance Co., Columbus.  
 Tribune Co., Coshocton.  
 Tri-State Manufacturing Co., Cincinnati.  
 Triumph Electric Co., Cincinnati.  
 Ultes, Dr., Columbus.  
 Union Gas & Electric Co., Cincinnati.  
 United Engineering Co., Youngstown.  
 United Garment Co., Louisville.  
 United States Cast Iron Pipe & Foundry Co., Addyston.  
 United States Government Ordnance Depot, Cincinnati.  
 United States Post Office, Cleveland.  
 United States Printing & Lithographing Co., Norwood.  
 United States Publishing House, Dayton.  
 United States Rubber Co., Toledo.  
 Universal Car Co., Cincinnati.  
 Victor Grocery & Supply Co., Cincinnati.  
 Waddell Co., Greenfield.  
 Wagner & Swassey Co., Cleveland.  
 Walker Motor Car Co., Cleveland.  
 Walk-Over Shoe Co., Cincinnati.  
 Walton, R. W., Cleveland.  
 Warner Elevator Manufacturing Co., Cincinnati.  
 Warner & Sweeney Co., Cleveland.  
 Wedge Garage Co., Zanesville.  
 Wescott Motor Car Co., Springfield.  
 Western Accumulator Co., Cleveland.  
 Western Automatic Screw Machine Co., Olyria.  
 Western Union Telegraph Co., Toledo.  
 Western Union Telegraph Co., Cincinnati.  
 Western Union Telegraph Co., Hamilton.  
 Westinghouse Electric Co., Mansfield.  
 Wheeling & Lake Railroad, Cleveland.  
 Whitacre Co., W. J., Cincinnati.  
 Whitcomb Co., Clyde.  
 White & Sons, C. D., Columbus.  
 White Motor Car Co., Cleveland.  
 Whitell, Thos. H., Cleveland.  
 Whitehouse Bros. Jewelry Co., Cincinnati.  
 Whittle Cook Electric Co., Cincinnati.  
 Wilking Sons, Zanesville.  
 Wilkinsons Co., F., Zanesville.  
 Wilkof, Morris, Canton.  
 Will-Burt Co., Orville.  
 Willey-Wray Co., Cincinnati.  
 Wilson & Co., Cleveland.  
 Wilson Motor Car Co., Canton.  
 Wineland, Dr. P. H., Cincinnati.  
 Winte Electric Co., Hamilton.  
 Winton Auto Co., Cleveland.  
 Witherhold Gun & Key Shop, Columbus.  
 Witters, R. G., Canton.  
 Wolf Auto Electric Supply Co., Cincinnati.  
 Wood Furniture & Undertaking Co., Jackson.  
 Woodard Machine Co., Wooster.  
 Wuriltzer Co., Cincinnati.  
 Yarger Vulcanizing Works, Fremont.  
 Yoder Co., Cleveland.  
 Yoder & Bowers Realty Co., Toledo.  
 Young & Bertha, Cincinnati.  
 Youngstown Sheet & Tube Co., Struthers.  
 Zange & Dence, East Liverpool.  
 Zipf, F. W., Columbus.  
 Zwee & Burr, Cleveland.

## INDIANA.

- Acme Pattern Co., Indianapolis.  
 Advance Rumeley Co., La Porte.  
 Aetna Cabinet Co., Indianapolis.  
 Arvac Manufacturing Co., Anderson.  
 Auto Electric Service, Anderson.  
 B. & O. Railroad, Garrett.  
 Bank of Warsaw, Warsaw.



- Bardach & Cran, Indianapolis.  
 Bay Piano Co., Bluffton.  
 Bell Telephone Co., South Bend.  
 Betts Surgical Instrument Co., Hammond.  
 Bland Farm Implement Co., Brownstown.  
 Blaskeske, James K., Michigan City.  
 Boone & Smith, Muncie.  
 Bretzman Co., Charles, Indianapolis.  
 Brightwood Garage, Indianapolis.  
 Brittingham, Albert, Anderson.  
 Brunka Bros., Marion.  
 Bucrus Co., Evansville.  
 Carr Tire & Motor Service, Indianapolis.  
 Case, J. I., Plow Co., Indianapolis.  
 Central Manufacturing Co., Connersville.  
 Central State Envelope Co., Indianapolis.  
 Central Union Telephone Co., Indianapolis.  
 Chase & Co., Chas. D., Logansport.  
 Chenoweth Auto Co., Richmond.  
 Chicago & Eastern Illinois Railroad Co., Terre Haute.  
 City Light & Water Plant, Columbia City.  
 Clark Vance Co., Washington.  
 Coffield & Hendrick, Indianapolis.  
 Cole Motor Car Co., Indianapolis.  
 Commersville Dry Cleaning Co., Commersville.  
 Craft & Co., A. P., Indianapolis.  
 Creagar Service Station, Butler.  
 Cummins Engine Co., Columbus.  
 Curtis & Miller, Linton.  
 C. L. David Co., Indiana.  
 Davis, Wm. P., Indianapolis.  
 Davis Auto Co., Richmond.  
 Denis-White Auto Co., Kokomo.  
 Dicks Auto Electric Shop, Indianapolis.  
 Dodge Engineering Co., Mishawaka.  
 Dorman & Sykes Auto Co., Gary.  
 Drew, H. F., Richmond.  
 Duncanson Brothers, Lynchburg Co.  
 D. B. Dyer, Indianapolis.  
 East End Garage, Peru.  
 Electric Repair Shop, Linton.  
 Electric Steel Co., Indianapolis.  
 Elliott & De Vinney, Muncie.  
 Ellis, Scott, Indianapolis.  
 English Woolen Mills, South Bend.  
 Easterline Electric Co., Indianapolis.  
 Evansville Tire Hospital, Evansville.  
 Express Printing Co., Connersville.  
 Fabian, Carl, Michigan City.  
 Fairbanks Morse Co., Indianapolis.  
 Fausch-Enders Co., Evansville.  
 Federal Pattern Works, Indianapolis.  
 Ferraro, Antonio, Indianapolis.  
 Finchum, J. H., Martinsville.  
 Foster, J. H., Kokomo.  
 Garrett Studio, Gary.  
 General Electric Co., Ft. Wayne.  
 General Supply Depot, Jeffersonville.  
 Gibson-Overland Co., Muncie.  
 Glenn Electric & Battery Co., La Fayette.  
 Glover Equipment Co., Indianapolis.  
 Goddard Auto Repair Shop, Terre Haute.  
 Goldberg Magneto Co., Indianapolis.  
 Greensburg Auto Electric Service Co., Greensburg.  
 Guarantee Tire & Rubber Co., Indianapolis.  
 Hagewald Co., Chas., New Albany.  
 Hammond Optical Machine Manufacturing Co., Vincennes.  
 Hardin Grain Co., Fortsville.  
 Hare & Sons, W., Noblesville.  
 Harlan, Earl S., New Castle.  
 Hasbelle & Barker, Michigan City.  
 Hatfield Electric Co., Indianapolis.  
 Hayward Tire & Equipment Co., Indianapolis.  
 Helman Co., L. G., South Bend.  
 Hercules Buggy Manufacturing Co., Evansville.  
 Hercules Electric Co., Indianapolis.  
 Hertzog, J. W., Fort Wayne.  
 Hetherington & Berner, Indianapolis.  
 Hinkle Motor Co., Mishawaka.  
 Hobbs & Sons, C. M., Bridgeport.  
 Hoosier Auto Co., Evansville.  
 Howell & Sons, W. S., Madison.  
 Humphrey Lumber Co., New Albany.  
 Hunt & Wass Motor Sales Co., Marion.  
 Illinois Glass Co., Gas City.  
 Illinois Steel Co., Gary.  
 Indiana Power & Water Co., Vincennes.  
 Indiana Truck Corporation, Marion.  
 Indianapolis Electric Co., Indianapolis.  
 Indianapolis Park Board, Indianapolis.  
 Indianapolis Welding Co., Indianapolis.  
 International Construction Co., Evansville.  
 International Rubber Sales, Indianapolis.  
 International Typographical Union, Indianapolis.  
 Inter-State Service Co., Lafayette.  
 Interstate Tire & Sales Co., Lafayette.  
 Jackson & Sons, C. W., Indianapolis.  
 Jones Sign Co., Evansville.  
 Klein, Louis, Evansville.  
 Knox County Lumber Co., Vincennes.  
 Kunkle Valve Co., Fort Wayne.  
 L. L. E. & W. R. R., Lafayette.  
 Levenberger Bros., Monroeville.  
 Lexington Motor Co., Connersville.  
 Lincoln Cotton Mill, Evansville.  
 Logansport Machine Co., Logansport.  
 Long Boy Cigar Co., Indianapolis.  
 Louisville Cement Co., Sellersburg.  
 Luten Engraving Co., Indianapolis.  
 Luther, Joe A., South Bend.  
 McClellan Hensel & Guthrie, Muncie.  
 McConnell & Brady, Marion.  
 McCullough Service Station, Fort Wayne.  
 Mankervix Co., Indianapolis.  
 Marion Machine, Foundry & Supply Co., Marion.  
 Marion Theater, Marion.  
 Martin, J. D., machine shop, South Bend.  
 Maxwell Motor Co., New Castle.  
 Merry Optical Co., Indianapolis.  
 Meyer & Alexander, Marion.  
 Michigan City Electric Co., Michigan City.  
 Michigan City Auto Service Co., Michigan City.  
 Miller, Chas. E., Anderson.  
 Mimms Paper Hanging & Decorating Co., Evansville.  
 Mishawaka Woolen Mills, Mishawaka.  
 Mogab, S. M., Indianapolis.  
 Moore Manufacturing Co., Muncie.  
 Moving Picture Operators, Indianapolis.  
 Muncie Products Division, Muncie.  
 Municipal Light & Power Plant, Anderson.  
 National Mill Supply Co., Fort Wayne.  
 Newman Tailoring Co., Gary.  
 Nordyke & Harmon Co., Indianapolis.  
 North Baltimore Glass & Bottle Co., Terre Haute.  
 Omdoama Department of Conservation, Indianapolis.  
 One Piece Bi-Focal Lens Co., Indianapolis.  
 Orbison & Olive, Indianapolis.  
 Otto Tire & Rubber Co., Evansville.  
 Overland McGrath Co., New Castle.  
 Parrish, W. R., Terre Haute.  
 Paxton, D. M., Marion.  
 Peek, Chas., Indianapolis.  
 Pennsylvania R. R. Co., Marion.  
 Pennsylvania R. R. shops, Richmond.  
 Philadelphia Storage Battery Co., Indianapolis.  
 Porcoro, Peter, Indianapolis.  
 Presto Lite Co., Indianapolis.  
 Pride Vulcanizing Co., Evansville.  
 Quality Tire & Rubber Co., Anderson.  
 Radiator & Electrical Repair Co., Indianapolis.  
 Ready-Conley Machine Co., Connersville.  
 Reitenour Battery Co., Princeton.  
 Revere Motor Car Corporation, Logansport.  
 Ritchie Motor Car Co., Terre Haute.  
 Royal Theater, Garrett.  
 Rutenbar Motor Co., Marion.  
 Samriss Machine Shop, Indianapolis.  
 Sanborn Electric Co., Indianapolis.  
 Sand Point Green House, Fort Wayne.  
 Schaulitz Photo Studio, Fort Wayne.  
 Sibbey Plumbing Co., South Bend.  
 Smith Jewelry Store, Bedford.  
 Snyder Bros., service station, Pierceton.  
 South Bend Lathe Works, South Bend.

South Bend Wagon & Carriage Co., South Bend.  
 South Bend Watch Co., South Bend.  
 Sparks Machine & Tool Co., Indianapolis.  
 Staley, Crabb & Thomas, Indianapolis.  
 Standard Motor Parts Co., Lebanon.  
 Standard Wheel Co., Terre Haute.  
 Star Electric Service Station, Logansport.  
 Starr Piano Co., Richmond.  
 Sterling Products Co., Evansville.  
 Stout, Dr. C. N., Indianapolis.  
 Street Railway Co., Evansville.  
 Strouse & Bro., Evansville.  
 Studebaker Auto Co., South Bend.  
 Swanson Electric Co., Evansville.  
 Thorawood Poultry Yards, Crandall.  
 Thornton-Levy Co., Indianapolis.  
 Timme Construction Co., Fort Wayne.  
 Transfer Shoe Repair Shop, Lebanon.  
 Union Traction Co., Anderson.  
 United Motor Service Co. (Inc.), Indianapolis.  
 United States Government Depot, Jeffersonville.  
 Vincennes Welding Co., Vincennes.  
 Wallace Motor Co., La Fayette.  
 Wangolin, Sharp Co., Indianapolis.  
 Warner Corporation, Anderson.  
 Warner Gear Co., Muncie.  
 Wayne Oil Tank & Pump Co., Fort Wayne.  
 Weldley Motor Co., Indianapolis.  
 Western Union Office, Marion.  
 Western Union Telegraph Co., Evansville.  
 White's Garage, South Bend.  
 Woods-Mosaic Co., New Albany.

## KENTUCKY.

American Elevator & Machinery Co., Louisville.  
 Anderson, S. W., Owensboro.  
 Ante & Sons, L., Covington.  
 Bailey, William, Covington.  
 Bass Grocery Co., Louisville.  
 Baptist Church, Louisville.  
 Belknap Hardware & Manufacturing Co., Louisville.  
 Bickel Cigar Co., Louisville.  
 Boston Electric Shoe Repairing Co., Henderson.  
 Bowman Auto Sales Co., Covington.  
 Broadway Amusement Co., Louisville.  
 C., N. O. & T. R. R., Hinton.  
 Caron Directory Co., Louisville.  
 Central Service Station, Paducah.  
 Childress Electric Co., Louisville.  
 Cooper & Son, Henderson.  
 Cumberland Telephone Co., Louisville.  
 Department of Public Safety of Kentucky, Irvine.  
 Dodd's Garage, Paducah.  
 Ellis Bros., Paducah.  
 Ford Auto Exchange, Louisville.  
 Georgetown Times, Georgetown.  
 Graver & Cox, Lexington.  
 Harvey, J. W., Ashland.  
 Helmerdinger, W. G., Louisville.  
 Hogan Auto Supply Co., Bowling Green.  
 Holmes Shoe Shop, Ashland.  
 Hotel Watterson, Louisville.  
 Jefferson County Jail Power Plant, Louisville.  
 Kenton Motor Car Co., Covington.  
 Kentucky Oxy-Hydrogen Co., Louisville.  
 Kentucky Wagon Manufacturing Co., Louisville.  
 Koch Auto Electric Co., Louisville.  
 Kokoma Rubber Co., Louisville.  
 Kokoma Sales Co., Louisville.  
 Louisville & Nashville Railway Shops, Corbin.  
 Lay Studio, Corbin.  
 Lexington Shoe-Hospital, Lexington.  
 Longest Bros., Garage, Louisville.  
 Louisville Food Products Co., Louisville.  
 Louisville Gas & Electric Co., Louisville.  
 Lunsford, John L., Covington.  
 Maggard Studio, Ashland.  
 Mansfield, R. & Son, Louisville.

Merry Optical Co., Louisville.  
 Mullin Garage, W. R., Demonsville.  
 Nelson Motor Car Co., Ashland.  
 Owne, Dr. W. Barnett, Louisville.  
 Palm Studio, Louisville.  
 Peerless Manufacturing Co., Louisville.  
 Puritan Cardage Mills, Louisville.  
 Ramsey, L. M., Lexington.  
 Rhodes-Buford House Furnishing Co., Louisville.  
 Shepherdsville Motor Co., Shepherdsville.  
 Silva Co., Covington.  
 Southern Motors Co., Louisville.  
 Southern Optical Co., Louisville.  
 Stanley Garage, Bedford.  
 States Roads Department of Kentucky, Franklin.  
 Stege Brass Plating Co., Louisville.  
 Stevens, The Shoemaker, Louisville.  
 Steward Dry Goods Co., Louisville.  
 Stratton & Terstegge Co., Louisville.  
 Studio Amusement Co., Louisville.  
 Tackett & Tackett, Hartley.  
 Terrell, Claude B., Bedford.  
 United States Motor Truck Co., Covington.  
 Vogt Bros. Manufacturing Co., Louisville.  
 Vogt, Henry, Machinery Manufacturing Co., Louisville.  
 Wadsworth Watch Case Co., Dayton.  
 Wayne Works, Richmond.  
 Winston Elkhart Coal Co., Regina.

## DISTRICT NO. 8.

## ILLINOIS.

Acorn Sign Service, Chicago.  
 Aetna Powder Co., Bayville.  
 Alsace Lorraine Shoe Repair Shop, Chicago.  
 American Car & Foundry Co., Chicago.  
 American Commercial Building Co., Chicago.  
 American Dental Laboratories, Chicago.  
 American Express Co., Naperville.  
 American Multigraph Co., Sales, Chicago.  
 American Tailors, Chicago.  
 Andrews, Wm. G., Decorating Co., Chicago.  
 Armour & Co., Chicago.  
 Atlas Dental Co., Chicago.  
 Aurora Greenhouse Co., Aurora.  
 Austin Auto Construction Co., Chicago.  
 Austin Manufacturing Co., Harvey.  
 Auto Electric Service Co., Chicago.  
 Auto Supply Co., Olney.  
 Automobile Electric Co., Chicago.  
 Automatic Screw Machine Co., Chicago.  
 Automatic Telegraph Co., Chicago.  
 Baird Harvester Co., Decatur.  
 Barrett Co., Chicago.  
 Bayer Auto Co., Madison.  
 Beaver Electric Construction Co., Chicago.  
 Belle, W. A., & Co., Chicago.  
 Bergstrom Auto Sales Co., Chicago.  
 Best Bros., Quincy.  
 Birk-Sykes Co.  
 Blaha, Frank, Chicago.  
 Blomgren, Bros. & Co., Chicago.  
 Bloomenthal, Marcus, Chicago.  
 Bosch Magneto Co., Chicago.  
 Boston Hose Repair Shop, Chicago.  
 Boston Store, Chicago.  
 Bradley, David, Bradley.  
 Breslowski, W., Chicago.  
 Britigan, Wm. H., Chicago.  
 Broderic Realty Co., Peoria.  
 Brown Shoe Co., Litchfield.  
 Brown Shoe Repair Shop, Chicago.  
 Butler Paper Co., Chicago.  
 C. & A. R. H., Chicago.  
 C. B. & C. R. R., Chicago.  
 C. & H. Sales Co., Chicago.  
 C. & M. Sales, Chicago.  
 Cahill, James J., Chicago.  
 Cairo Tractor Co., Cairo.  
 Calumet Baking Powder Co., Chicago.  
 Calumet Market, Chicago.  
 Campbell, W. A., & Co., Chicago.

- Campbell Mill Co., Carum.  
 Carlton Bros., Decatur.  
 Central Dental Laboratory Co., Chicago.  
 Central Illinois Public Service, Paxton.  
 Chicago & Alton Railroad, Chicago.  
 Chicago, Burlington & Quincy Railroad, Chicago.  
 Chicago Carnation Co., Joliet.  
 Chicago Electric Construction Works, Chicago.  
 Chicago Engineering Works, Chicago.  
 Chicago Guarantee Survey Co., Chicago.  
 Chicago Lapidary Co., Chicago.  
 Chicago, Milwaukee & St. Paul Railroad, Fort Land.  
 Chicago Reed Works, Chicago.  
 Chicago, Rock Island & Pacific Railroad, Chicago.  
 Chicago Storage Depot, Chicago.  
 Chicago Telegraph Co., Chicago.  
 Clark Jewel Works, of American Stove Works, Harvey.  
 Clayton Motor Co., Evanston.  
 Cleveland Tractor Co., Chicago.  
 Clydesdale Service Station, Chicago.  
 Cohn, H. C., Co., Chicago.  
 Columbia Portrait Co., Chicago.  
 Commercial Steel Co., Granite City.  
 Commonwealth Edison Co., Chicago.  
 Consumers Co., Chicago.  
 Cook, Jonathan B. & Co., Chicago.  
 Corby Co., M. J., Chicago.  
 Crane & Co., Chicago.  
 Critchfield Co., Chicago.  
 Curtiss-Leger Fixture Co., Chicago.  
 Davies Dental Laboratory, Rockland Island.  
 Decker & Cowen Co., Alfred, Chicago.  
 Delicatessen Store Business, Chicago.  
 Dempsey & Mende Electric Co., Chicago.  
 De Priedt & De Priest, Chicago.  
 Desmond, E. B., Chicago.  
 Dieges & Chris, Chicago.  
 Donnelly & Sons, R. R., Chicago.  
 Douglas, E. P., Metrose.  
 Downey, W. J., Chicago.  
 Drew, Dr. A., Chicago.  
 Drysdale Shoe Repair Shop, Chicago.  
 Eagle Brass Works, Chicago.  
 Edberg Shoe Repair Shop, Bloomington.  
 Ederheimer Stein Co., Chicago.  
 Ehrhart, W. G., Chicago.  
 Electric Machine Co., Chicago.  
 Electric Testing Co., Peoria.  
 Elgin Daily Courier, Elgin.  
 Elgin Motor Car Co., Argo.  
 Elgin National Watch Co., Elgin.  
 Englewood Dental Laboratory, Chicago.  
 Fair, The, Chicago.  
 Felt-Farraut Co., Chicago.  
 Flynn Auto Livery Co., Chicago.  
 Foote Bros.-Machine Co., Chicago.  
 Fort Sheridan Association, Chicago.  
 Franklin Coal & Coke Co., Royalton.  
 Franklin Lunch Co., Chicago.  
 Gellan, Jos. H., Chicago.  
 General Superintendent of Police, Chicago.  
 Giles Decorating Co., W. F., Moline.  
 Glink, Samuel, Chicago.  
 Golt, H., Chicago.  
 Grady, T. J., & Co., Chicago.  
 Graf Manufacturing Co., Chicago.  
 Graham, John, Illiopolls.  
 Great Western Overall Co., Chicago.  
 Gregory Electric Co., Chicago.  
 Grubb Co., G. R., Champaign.  
 Hackett Harvey Garage Co., Bloomington.  
 Hall, J. J., & Sons, Co., Chicago.  
 Hamilton Co., Louis, Chicago.  
 Hansen Co., Louis, Chicago.  
 Harper, I. C., Peoria.  
 Hart, Schaffner & Marx, Chicago.  
 Hartford Steam Boiler (Inc.), Chicago.  
 Hartzell Auto Repair Co., Chicago.  
 Hatfield Electric Co., Chicago.  
 Hauchett Paper Co., Chicago.  
 Hibbard, Spencer, Bartlett & Co., Chicago.  
 Highland Repair Plant, Chicago.  
 Hill, A., Chicago.  
 Hill, C. E., Electric Co., Chicago.  
 Hines Lumber Co., Chicago.  
 Hinsdale Auto Co., Hinsdale.  
 Hoefield, Albert, Co., Chicago.  
 Hoefield Shirt Co., Chicago.  
 Holt Manufacturing Co., East Peoria.  
 Hood Rubber Produce Co., Chicago.  
 Hotel Auditorium, Chicago.  
 Hotel Congress, Chicago.  
 Hotel Great Northern, Chicago.  
 Hotel La Salle, Chicago.  
 Hotel Morrison, Chicago.  
 Hotel Sherman, Chicago.  
 Hudson Motor Co., Chicago.  
 Hyre Electric Co., Chicago.  
 Ide & Sons, Springfield.  
 Ideal Garage & Motor Sales Co., Chicago.  
 Illinois Starter & Magneto Co., Chicago.  
 Illinois Tractor Co., Bloomington.  
 International Harvester Co., Chicago.  
 International Type Co., Chicago.  
 Jahn & Ollier, Engr., Chicago.  
 Jerrickson Company, Chicago.  
 Johnson & Sons, Chicago.  
 Johnstone Rippey & Johnstone Co., Chicago.  
 Jolly Hodgson Organ, Chicago.  
 Jones Electric Co., Arthur, Chicago.  
 Juergens & Anderson Co., Chicago.  
 Kalo Shop, Chicago.  
 Kaup, F. A., Glenn Ellynn.  
 Kay Co., Ronald, Chicago.  
 Kay Talancer Co., Austin.  
 Keith Co., Dayton, Bloomington.  
 Kellogg Switchboard Supply Co., Chicago.  
 Kenary Synthetic Products Co., Chicago.  
 Kettle River Co., Madison.  
 Kimball, C. P., Co., Chicago.  
 Kimble Electric Co., Chicago.  
 Klaner, Fred, Chicago.  
 Klein, M., & Son, Chicago.  
 Koehne, William L., Chicago.  
 Kontos, George, Chicago.  
 Kuppenheimer, Chicago.  
 La Salle Central Railroad, Chicago.  
 Lasswell Studio, Chicago.  
 Lemme, E. A., Bloomington.  
 Litchfield Tire Shop, Litchfield.  
 Lockwood, W. C., Co., Chicago.  
 London Guarantee Accident Insurance Co., Chicago.  
 Lord & Thomas, Chicago.  
 McClanahan, J. C., Collinsville.  
 McClaren Tire & Service Station, Chicago.  
 McCord & Co., Chicago.  
 McCowan, Jacksonville.  
 McDermott Pattern Works, Chicago.  
 McKeon & Co., Chicago.  
 McLeansboro Implement Co., McLeansboro.  
 Magazine Circulation Co., Chicago.  
 Mandel Bros., Chicago.  
 Manison, M. L., Chicago.  
 Manufacturing Tire Repair Co., Chicago.  
 Martin & Martin, Chicago.  
 Maywood Motor Co., Maywood.  
 Methodist Book Concern, Chicago.  
 Meyer-Both Co., Chicago.  
 Mid West Electric Co., Decatur.  
 Million, E., Chicago.  
 Mitchell Bros., Chicago.  
 Mix, Dr. Chas. L., Chicago.  
 Moddy Repair Shop, Chicago.  
 Modern Dental Laboratory, Chicago.  
 Montgomery, Ward & Co., Chicago.  
 Marshall Field Co., Chicago.  
 Morris & Co., Chicago.  
 Morrison, M. L., Chicago.  
 Motion Picture Operators' Union, Chicago.  
 Mutual Construction Co., Chicago.  
 Napier Auto Shop, Chicago.  
 National Engraving Co., Chicago.  
 National Envelope Co., Chicago.  
 National Malleable Casting Co., Melrose Park.  
 Nelson, P. M., Chicago.  
 New York Central Railroad, Chicago.  
 Nick's Shoe Repair Shop, Chicago.  
 Nolan's & Owen's Garage, Taylorville.  
 Nordquist Machinery & Manufacturing Co., Chicago.

- Norgaard & Christenson, Chicago.  
 Northwestern Elevated Railroad, Chicago.  
 Northwestern Union, Chicago.  
 O'Connor & Goldberg, Chicago.  
 Ogden Auto Construction Co., Chicago.  
 O'Hanley Bros., Chicago.  
 Ottawa Electric Co., Ottawa.  
 Palmer House, The, Chicago.  
 Pennsylvania Railroad Co., Chicago.  
 People's Gas Light & Coke Co., Chicago.  
 Peoria Dental Laboratory, Peoria.  
 Peru Plow & Wheel Co., Peru.  
 Peverly, Ed. E., Joliet.  
 Piet, Albert, & Co., Chicago.  
 Pierce, Chas. W., Chicago.  
 Pneumatic Tool Co., Chicago.  
 Price, Edw. V., Chicago.  
 Progressive Electric Shoe Shop, Chicago.  
 Progressive Thinker, Chicago.  
 Public Service Co., Northern.  
 Pullman Co., Chicago.  
 Pullman Car Works, Pullman.  
 Pullman Couch Co., Chicago.  
 Randall, A. L., Co., Chicago.  
 Reese & Wiedoff, Chicago.  
 Regal Hat Co., Chicago.  
 Reinberg's Green House, Peter, Chicago.  
 Resemant & Mosham, Pontiac.  
 Richardson, O. W., Chicago.  
 Rickert, Ernest, Co., Chicago.  
 Riley, Frank K., & Co., Chicago.  
 Robertson, Dr. John Dill, Chicago.  
 Robinson & Co., Clay, Chicago.  
 Rock Island Plow Co., Rock Island.  
 Root Studio, Chicago.  
 Root & Van Dervoort Engr. Co., East Mo-  
 line.  
 Rothchild & Co., Chicago.  
 Rott, W. J., Chicago.  
 Roy Top Co., Chicago.  
 S. & K. Sales Co., Morrisonville.  
 Sanberg, C. A., Bloomington.  
 Sarget & Co., Chicago.  
 Sehnaar, C. A., Macomb.  
 Shellabarger Motor Car Co., Decatur.  
 Selz, Schwab Shoe Manufacturing Co., Chi-  
 cago.  
 Sglote, Joe, Collinsville.  
 Shaw, Co., A. W., Chicago.  
 Shoe Repair Shop, Chicago.  
 Singer, Harry, Springfield.  
 Smart Set Tailors, Chicago.  
 Smith, Carl C., Chicago.  
 Smith Typewriter Co., H. A., Chicago.  
 Sobolewski, Roman, Chicago.  
 Solomon Waterton Co., Chicago.  
 Southern Railroad, Bellmont.  
 Speedway Garage, Chicago.  
 Staley Starch Works, Decatur.  
 Steger Piano Co., Steger.  
 Stevens-Adamson, Aurora.  
 Stewart Co., J. K., Chicago.  
 Stewart Warner Speed Co., Chicago.  
 Stotlan Hindman Motor Co., Dugunon.  
 Strutzel Auto Co., Joliet.  
 Stuber & Knoh, Peoria.  
 Sulton & Co., Chicago.  
 Style Shop, Aurora.  
 Swift & Co., Chicago.  
 Theater Century, Chicago.  
 Thompson Co., John R., Chicago.  
 Thompson Taylor Spice Co., Chicago.  
 Todd, John E., Wheaton.  
 Trahelot, Dr. Henry, Chicago.  
 Trask, Nieman Electric Co., Galesburg.  
 Tu-dna Dental Laboratory, Peoria.  
 Twentieth Century Theater, Chicago.  
 Twenty-four-hour Service Co., Chicago.  
 Union Special Machine Co., Chicago.  
 United Garage, Chicago.  
 United States Bureau of Animal Husban-  
 dry, Chicago.  
 United States Post Office, Chicago.  
 United States Railroad Administration,  
 Chicago.  
 Vankeerablick, Richard, Moline.  
 Van Walter, Henry, Chicago.  
 Venditti, Lorenzo, & Co., Chicago.  
 W. S. Cold Storage Co., Chicago.  
 Wagner Electric Manufacturing Co., Chi-  
 cago.  
 Wahl Co., Chicago.  
 Ward Baking Co., Chicago.  
 Webster Warren Co., Chicago.  
 Webster Wilson Speech Co., Chicago.  
 Weed, Jarvis, Chicago.  
 Wells Bros. Construction Co., Chicago.  
 Welldet Welting Jewelry Co., Peoria.  
 Wessowa, Anthony, Chicago.  
 West Englewood Electric Co., Chicago.  
 Western Electric Co., Chicago.  
 Western Electric Co., Hawthorne.  
 Western Newspaper Union, Chicago.  
 Western Steel Co., Hogewisch.  
 Western Tire & Rubber Co., Chicago.  
 Western Union Telegraph Co., Chicago.  
 Wheaton Sons, G. S., Chicago.  
 Wheeler Auto Service Co., Chicago.  
 White City Electric Construction Co., Chi-  
 cago.  
 Wiebmer Machine Shop, Quincy.  
 Wieboldt Co., Chicago.  
 Wilk's Laboratory, Chicago.  
 Willis, C. R., Decatur.  
 Wilson & Co., Chicago.  
 Windler, R. I., Chicago.  
 Wolf's Battery Station, Shelbyville.  
 Wolf Manufacturing Co., Chicago.  
 Workrum Tool Co., Chicago.  
 Yellow Taxi Cab Co., Chicago.  
 Zaslow Watch Co., Chicago.
- WISCONSIN.
- Adams, H. V., Beloit.  
 Albertson & Co., W. N., Milwaukee.  
 Alder, David & Sons, Cloth Co., Milwaukee.  
 Allis Chalmers Co., West Allis.  
 Amithy Leather Co., Wausau.  
 Andrews & Sons Co., Julius, Milwaukee.  
 Ashland Light & Power Railway Co., Ash-  
 land.  
 Avery Co., West Ellis.  
 Banta Publishing Co., Geo., Menasha.  
 Blled Printing Co., Madison.  
 Brientenstein Tozier Co., Stevens Point.  
 Briggs & Stratton Co., Milwaukee.  
 C. S. & P. M. & O. Railroad, Altoona.  
 Case, J. I., Threshing Machine Co., Racine.  
 Chas. A. C., Milwaukee.  
 Cochran Laboratory, H. T., Milwaukee.  
 Combined Locks Paper Co., Combined  
 Locks.  
 Conradson Machine Tool Co., Green Bay.  
 Consumers Farm Implement, Rice Lake.  
 Curtis Auto Co., Milwaukee.  
 Cusack Co., Thos., Milwaukee.  
 Cutler Hammer Manufacturing Co., Mil-  
 waukee.  
 Damrow Bros., Fond du Lac.  
 De Groot Bros., Green Bay.  
 Dells Paper & Pulp Co., Eau Claire.  
 Diamond Watch Co., Oshkosh.  
 Deman, H. C., Co., Oshkosh.  
 Dupont-de Nemours, E. I. & Co., Barksdale.  
 Dupont Co., Joseph, Casenovia.  
 Duren, Jos. Co., Casenovia.  
 Eastern Power & Light Co., Fon du Lac.  
 Eau Claire Electric Equipment, Eau Claire.  
 Edward Motor Co., Milwaukee.  
 Electric Co., Kaukauna.  
 Electric Trades Union, Milwaukee.  
 Emerald Roller Mills, Hingham.  
 Erickson Pattern Manufacturing Co.,  
 Beaver Dam.  
 Wans & Bannon, La Cross.  
 Fairbanks Morse Co., Beloit.  
 Fairmont Creamery Co., Green Bay.  
 Federal Engr. Co., Milwaukee.  
 Federal Rubber Co., Cudahy.  
 Fisk, L. C., Co., Beloit.  
 Fitzgerald, Wm., Beloit.  
 General Electric Co., Milwaukee.  
 Gillette Rubber Co., Eau Claire.  
 Goll & Frank, Milwaukee.  
 Great Northern Railroad Co., Superior.  
 Green Bay Motor Co., Green Bay.  
 Green Shoe Repair Co., Appleton.  
 Gross Philip Hardware Co., Milwaukee.

Hammemann, Frank, Wausau.  
 Harsh Chapline Shoe Co., Milwaukee.  
 Hartman, Wm., Co., Green Bay.  
 Holmes Motor Co., Milwaukee.  
 Holt Lumber Co., Oconto.  
 Ideal Cheese Factory, Chetok.  
 International Harvester Co., Milwaukee.  
 Kaiser Lr. Co., Eau Claire.  
 Keller & Sons, Chas. J., Milwaukee.  
 Klein Studio, Milwaukee.  
 Klump & Schults, Wonegos.  
 Knoeller Electric Co., Green Bay.  
 Lake Mills Shoe Co., Lake Mills.  
 Langenberger Construction Co., Milwaukee.  
 Linderman Box & Veneer Co., Eau Claire.  
 Lucia Bros., Green Bay.  
 McCallum, Harry E., Beloit.  
 McIntyre Burrall Co., Green Bay.  
 Meyer, C. R., Construction Co., Oshkosh.  
 Meyer-Botter Printing Co., Milwaukee.  
 Modern Shoe Repairing Co., Wausau.  
 Moon Cheese Co., Moon.  
 Myre Bros. Garage, Tomahawk.  
 Nash Motor Co., Kenosha.  
 Nately Garage, S., Green Bay.  
 Newport Chemical Co., Carrollville.  
 North Star Cheese Factory, Boyd.  
 Northwestern Manufacturing Co., Milwaukee.  
 Northwest Paper Mills Co., Green Bay.  
 Oelhafan Lumber Co., Tomahawk.  
 Orton Theater, Madison.  
 Oshkosh Pattern Works, Oshkosh.  
 Otis Bros., Hortonville.  
 Overland Motor Co., Green Bay.  
 Pahl, E. H., Milwaukee.  
 Paine Lumber Co., Oshkosh.  
 Paramount Knitting Co., Beaver Dam.  
 Peterson Vulcanizing Co., Eau Claire.  
 Phoenix Manufacturing Co., Eau Claire.  
 Plover Spring Bottling Works, Stevens Point.  
 R. & T. Sales Co., Green Bay.  
 Recordian Phonograph Co., North Milwaukee.  
 Rueping Leather Co., Fred, Fond du Lac.  
 Rumford Tire & Battery Works, Rumford.  
 Rusk Box & Furniture Co., Hawkins.  
 St. Croix Falls Improvement Co., St. Croix Falls.  
 Sampson Tractor Co., Janesville.  
 Schafneters Shoe Hospital, Stevens Point.  
 Schneider, Dan, Milwaukee.  
 Schommer Barber Shop, Kaukauna.  
 Schultz Real Estate Co., Herman, Madison.  
 Schwable & Sons, La Crosse.  
 Schwahn, A. F., & Co., Eau Claire.  
 Sinsheimer, S. H., Milwaukee.  
 Smith, George, Steel Co., Milwaukee.  
 Smith, Harry L., Wonegos.  
 Sorlie Electric Co., Eau Claire.  
 Stanley Supply Co. (Superior), Stanley.  
 Stinson Tractor Co., Superior.  
 T. M. E. R. L. Ways & Structural Drafting Department, Milwaukee.  
 Thilman Pulp & Paper Mill, South Kaukauna.  
 Thompson Auto Co., Oshkosh.  
 Thompson Auto Co., Barron.  
 Towle, M. P., Wausau.  
 Union Auto Co., Eau Claire.  
 United States Gear Shift Co., Eau Claire.  
 Van Breda, L. C., Milwaukee.  
 Wm. Van Kyk Shoe Co., West De Pere.  
 Vogel, A., Milwaukee.  
 Weipbrenner, Albert, Milwaukee.  
 Welch, Milo, Milwaukee.  
 Wenzel & Henoch Co., Milwaukee.  
 West Indies Cigar Co., Milwaukee.  
 Wischan Co., Purcell, Madison.  
 Wisconsin Free Liberty Loan, Madison.  
 Wisconsin Fur Co., La Crosse.  
 Wisconsin Parts Co., Oshkosh.  
 Wisconsin Pattern Works, Oshkosh.  
 Wisconsin Telephone Co., Milwaukee.  
 Wisconsin Valley Ice Co., Wausau.  
 Wisconsin Welding & Cutting Co., Milwaukee.  
 Zaleski, Stanislaus, Studio, Milwaukee.

## MICHIGAN.

Acme Motor Truck Co., Cadillac.  
 Acme Welding Co., Grand Rapids.  
 Abern Plumbing Co., John, Saginaw.  
 Aladdin Co., Bay City.  
 Alpina Creamery, Alpena.  
 American Cash Register Co., Saginaw.  
 American Electrical Appliance Co., Detroit.  
 American Forging Sockett Co., Pontiac.  
 Anderson Electric Co., Detroit.  
 Ann Arbor E. R. Co., Mount Pleasant.  
 Arbaugh, Co. F. N., Lansing.  
 Armour & Co., Ironwood.  
 Auto Body Co., Lansing.  
 Baker Flak, Hygill, Detroit.  
 Bardone, B., Detroit.  
 Bayne Co., James, Grand Rapids.  
 Becker Auto Co., Grand Rapids.  
 Berkey & Gray Furniture Co., Grand Rapids.  
 Big Rapids Pioneer, Big Rapids.  
 Bloom Bros. Motor Car Co., Escanaba.  
 Boehme & Rauch, Monroe.  
 Boehringer Bros., Bay City.  
 Bredo & Schroeter, Detroit.  
 Briggs Kessler Co., Detroit.  
 Briscoe Motor Corporation, Jackson.  
 Brock Products Co., Detroit.  
 Buick Motor Co., Flint.  
 Burr Patterson Manufacturing Co., Detroit.  
 Burroughs Adding Machine Co., Detroit.  
 Burton Auto Top Co., Detroit.  
 Busche Bros., Flushing.  
 Central City Lumber Co., Detroit.  
 Cadillac Motor Co., Detroit.  
 Calhbert & Calhbert, Ann Harbor.  
 Calrow, Wm., Garage, Grand Rapids.  
 Calvert Lithographing Co., Detroit.  
 Campbell Ewald Co., Detroit.  
 Carde Stamping & Tool Co., Saginaw.  
 Case Auto Co., Detroit.  
 Central Electric Co., Battle Creek.  
 Champion Ignition Co., Flint.  
 Chatterton & Sons, Saginaw.  
 Chevrolet Motor Co., Bay City.  
 City Engineer, Grand Rapids.  
 City of Jackson, Jackson.  
 Consumers Power Plant, Saginaw.  
 Continental Motor Corporation, Muskegon.  
 Cotton Electric Co., E. T., Grand Rapids.  
 County Clerk's Office, Grand Rapids.  
 Crisp Point & Light House, Crisp Point.  
 Curber, Nelson, Saginaw.  
 Cushman, Dr. Marshall, East Lansing.  
 D. S. S. & A. R. R. Co., Michigan.  
 Dammann Construction Co., Fred, Saginaw.  
 Delco Factory Service, Detroit.  
 Demers Auto Exchange, Saginaw.  
 Detroit, City of Detroit.  
 Detroit Porcelain Laboratory, Detroit.  
 Detroit Range Boller & Barrel Co., Detroit.  
 Dickinson Real Estate Exchange, Detroit.  
 Dort Motor Car Co., Flint.  
 Dun, R. F. & Co., Detroit.  
 Dunn Electric Co., Grand Rapids.  
 Edison Co., Detroit.  
 Electric Gas Co., Bay City.  
 Elias, Mr. Jos., Detroit.  
 Ellis, A. E., Owosso.  
 English Woolen Mills, Detroit.  
 Escanaba Harness Co., Escanaba.  
 Fairbanks Morse & Co., Three Rivers.  
 Farrell, O. J., Muskegon.  
 Fauver-Cavanaugh Co., Detroit.  
 Fields Body Co., Owosso.  
 First & Old Detroit National Bank, Detroit.  
 Fisher Body Corporation, Detroit.  
 Fisher Built Co., Detroit.  
 Fletcher Auto Sales Co., Detroit.  
 Fletcher Paper Co., Alpena.  
 Flint Daily Journal, Flint.  
 Ford Motor Co., Detroit.  
 Ford Motor Co., Highland Park.  
 Ford Sales Co., Flint.  
 Four Drive Tractor Co., Big Rapids.  
 Fox Typewriter Co., Grand Rapids.

- Freedman, A. & Sons, Detroit.  
 Gale, W. D., Detroit.  
 Garber-Buick Co., Saginaw.  
 Gass, Roy, Royal Oak.  
 Gaston & Camp, Walter J., Hamtramck.  
 General Aluminum & Brass Co., Detroit.  
 General Motor Truck Co., Pontiac.  
 Gill Co., F. S., Grand Rapids.  
 Gillette Studio, Royal T., Grand Rapids.  
 Grand Rapids Brass Co., Grand Rapids.  
 Grand Rapids Butcher Supply Co., Grand Rapids.  
 Grand Rapids & Indiana Railroad Co., Mancelona.  
 Grand Rapids Upholstering Co., Grand Rapids.  
 Gregory Electric Co., Saginaw.  
 Grombley Electric Co., Saginaw.  
 Haynes Wheel Co., Jackson.  
 Hegginsbottom & Sons, Saginaw.  
 Henderson, H. H., Detroit.  
 Heth Co., Leon S., Grand Rapids.  
 Hickok, Leon C., Grand Rapids.  
 Horner, F. A., Construction Engineers, Grand Rapids.  
 Hotel Bancroft, Saginaw.  
 Hotel Wenonah, Bay City.  
 Howland, John Ward, Detroit.  
 Hubbell Auto Sales Co., Bay City.  
 Hudson Motor Car Co., Detroit.  
 Hutchinson, Paul M., Motor Car Co., Grand Rapids.  
 Industrial Iron Works, Bay City.  
 Jackson News, Jackson.  
 Jackson Motor Corps, Jackson.  
 Jesick Boat Co., Grand Rapids.  
 Kalamazoo Dental Laboratory, Kalamazoo.  
 Kalamazoo Electric Co., Grand Rapids.  
 Keller Brass Co., Grand Rapids.  
 Kelt Green House, Martin, Bay City.  
 Kerr Electric Shop, A. G., Munroe.  
 King Motor Co., Grand Rapids.  
 Kline, Lewis T., Alpena.  
 Kohler Bros., Saginaw.  
 Kuhlman Electric Co., Bay City.  
 Lansing Pattern Co., Lansing.  
 Liberty Starter Co., Detroit.  
 Light & Power Co., Marquette.  
 Light & Power Department, Negaunee.  
 Lincoln Motor Co., Detroit.  
 Lobdell & Elmbury Co., Onaway.  
 Loraine Motor Co., Grand Rapids.  
 Lyons Machine Co., Muskegee.  
 Lysaght, Wm., Detroit.  
 McArthur, P. C., Ford Sales Service, Detroit.  
 McDonald, Frederick, Grand Rapids.  
 McKinney Steel Co., Bessemer.  
 Malleable Iron Co., Saginaw.  
 Malleable Iron Co., Delroy.  
 Manhattan Machine & Tool Works, Grand Rapids.  
 Marentette & Co., Detroit.  
 Marvel Carburetor Co., Flint.  
 Masterbrook & Fearoye, Grand Rapids.  
 Maxwell Motor Car Co., Detroit.  
 Michigan Auto Co., Calumet.  
 Michigan Central Railroad, Detroit.  
 Michigan Electric and Ster. Co., Detroit.  
 Michigan State Telephone Co., Clare.  
 Miller, Garage, Owosso.  
 Miller-York (Inc.), Detroit.  
 Mio Gerate, Mio.  
 Monarch Typewriter Co., Detroit.  
 Monroe Sales Agency, Grand Rapids.  
 Monroe Tailors, Kalamazoo.  
 Morgan & Wright, Detroit.  
 Moss, William E., & Co., Detroit.  
 Motor Co. of Bay City, Bay City.  
 Motor Car Co., Detroit.  
 Muesel Vulcanizing Co., O. L., Grand Rapids.  
 Mutual Life Insurance Co., Grand Rapids.  
 Meno Electric Co., Detroit.  
 Nelson, John St., Ignace.  
 New Era Spring & Specialty Co., Grand Rapids.  
 Nitchky & Grant Electric Co., Bay City.  
 Oakland Auto Co., Pontiac.  
 Owens Ames Kimball Co., Bay City.  
 Packard Motor Co., Detroit.  
 Pattern Casting Co., Saginaw.  
 Peoples State Bank, Holland.  
 Pere Marquette Railroad Co., Grand Rapids.  
 Pere Marquette Railroad Shops, Saginaw.  
 Petrus-Caveries Export Co., Detroit.  
 Phil Printing Co., Detroit.  
 Pingree Shoe Co., Detroit.  
 Plowaty, M., & Sons, Grand Rapids.  
 Powell & Forrey Real Estate Co., Flint.  
 Public Works of Detroit, Detroit.  
 Remington Typewriter Co., Detroit.  
 Reo Motor Co., Lansing.  
 Rice, R. L., Detroit.  
 Rinck, B. B., Detroit.  
 Riverside Garage, Grand Rapids.  
 Saginaw Auto Sales Co., Saginaw.  
 Saginaw Lighting Co., Saginaw.  
 Saginaw Products Co., Saginaw.  
 Saginaw Real Estate Co., Saginaw.  
 Saginaw Ship Building Co., Saginaw.  
 Saginaw Valley Coal Co., Saginaw.  
 Schneider, R., Auto Truck Sales, Detroit.  
 Scott & Jopson, Flint.  
 Seeley Brown Co., Detroit.  
 Sinclair Oil Co., Grand Rapids.  
 Smalley General Co., Bay City.  
 Smith Fruit Farm, Henry, Grand Rapids.  
 Smith-Hinchman Grylls Co., Detroit.  
 Smith Machine Co., Saginaw.  
 Soo Machine Auto Co., Sault Ste. Marie.  
 Spaulding Electric Co., Detroit.  
 Sperry, J. B., Co., Fort Huron.  
 Stacy Bros. Construction Co., Flint.  
 Stearn & Co., Frederick, Detroit.  
 Steele Auto Co., G. J., Alpena.  
 Steele & Tuter Co. of America, Ironwood.  
 Steffenach, A. P., Garage, Greenville.  
 Stokes, Paul & Sons, Grand Rapids.  
 Sullivan Packing Co., Detroit.  
 Sulphite Pulp & Paper Co., Detroit.  
 Talbot, C. N., Flushing.  
 Temple Theater Co., Sault Ste. Marie.  
 Thompson Jewelry Co., Grand Rapids.  
 Timken Detroit Axle Co., Detroit.  
 Trombley Electric Co., Saginaw.  
 Union Carbonide Co., Sault Ste. Marie.  
 Union Motor Truck Co., Bay City.  
 United Motor Service, Detroit.  
 United States Railroad Administration, Detroit.  
 Van Breda Bros., Grand Rapids.  
 Vance, E. J., Box Co., Detroit.  
 Van Lopik & Co., Grand Haven.  
 Wadsworth Manufacturing Co., Detroit.  
 Wagner Electric Co., Detroit.  
 Walker Sign Co., Detroit.  
 Warren & Wicket, Bloomingdale.  
 Warren & Wicket, Detroit.  
 Welding, J. M., Co., Detroit.  
 West Side Garage, Owosso.  
 Wickes Brothers, Saginaw.  
 Willard Battery Co., Detroit.  
 Wilson & Co., Grand Rapids.  
 Wittchell & Shiell, Detroit.  
 Wright Bros., Alpena.  
 Wright & Sons, Sturgis.  
 Young, Elmer A., Bay City.  
 Yaberg, F. F., Saginaw.

## DISTRICT No. 9.

## MISSOURI.

- Aellan Company, St. Louis.  
 Aetna Insurance Co., St. Louis.  
 Albrecht & Miller, St. Louis.  
 Alter & Gray Garage, Kansas City.  
 Ambruster Undertaking Co., Wm., St. Louis.  
 American Multigraph Co., St. Louis.  
 Andlaner & Simes, Kansas City.  
 Animated Advertising Corporation, Kansas City.  
 Armstrong Shoe Repair Co., Kansas City.  
 Arntty & Roelichen Co., St. Louis.  
 Askew Saddlery Co., Kansas City.  
 Auto Electric Service Co., St. Louis.  
 Automotive Electric Co., St. Louis.

- Ball & Wilkerson, Joplin.  
 Bell Telephone Co., St. Louis.  
 Biglow Willis Company, Kansas City.  
 Bohn, J. C., St. Louis.  
 Bolgt, S. S., Wichita.  
 Briner Bros. Electric Co., St. Louis.  
 Brock Garage & Repair Co., St. Louis.  
 Brooks Wigely Shoe Store, Chillicothe.  
 Buckner Ragsdale Co., Cape Girardeau.  
 Bufum Tool Co., Louisiana.  
 Buhler Mill & Elevator Co., St. Louis.  
 Campbell Baking Co., Kansas City.  
 Carnes Artificial Limb Co., Kansas City.  
 Central Library, St. Louis.  
 Century Dental Company, St. Louis.  
 Cirle, Joseph, St. Louis.  
 Coca Cola Co., St. Louis.  
 Coleman, Dr. R. C., St. Louis.  
 Columbian Electric Co., St. Joseph.  
 Comarford Plumbing Co., Joplin.  
 Commonwealth Steel Co., St. Louis.  
 Connecticut Zinc Corporation, Oronogo.  
 County Motor Car Co., Webster Grove.  
 Cowie Electric Co., E. S., Kansas City.  
 Cronkhite, Dr. E. P., St. Joseph.  
 Crow's Shoe Repair Co., Kansas City.  
 Curtis Manufacturing Co., St. Louis.  
 Cusack Co., Thos., St. Louis.  
 Davis Boring Tool Co., St. Louis.  
 Deless Undertaking Co., John, St. Louis.  
 De Luxe Auto Co., St. Louis.  
 Dittman Boot and Shoe Co., St. Louis.  
 Diagraph Stencil Co., St. Louis.  
 Difani, Ernest, Festus.  
 Dixie Mills Co., St. Louis.  
 Dorris Auto Co., St. Louis.—  
 Doyle, Thomas, St. Louis.  
 Drag Shoe Shop, Frank, Kansas City.  
 Drandell Cleaning Shop, St. Louis.  
 Eagleton & Hadenlech, St. Louis.  
 Eastern Shoe Repair Shop, Kansas City.  
 Edwards, Cramer & Edwards, Kansas City.  
 Eisenstedt Manufacturing Co., St. Louis.  
 Electric Service Co., Joplin.  
 Emerson Electric Co., St. Louis.  
 England Auto Repair Co., C. H., Kansas City.  
 Esmeuller Mill Fur Co., St. Louis.  
 Evans & Howard Fire Brick Co., Green Station.  
 Famous Barr Co., St. Louis.  
 Farmer Auto Co., St. Joseph.  
 Federal Truck Co., St. Louis.  
 First National Bank Building, Kansas City.  
 French Electric Co., St. Louis.  
 Frisch, Geo., St. Louis.  
 Frisco Railroad Shops, Springfield.  
 Funston Bros. Fur Co., St. Louis.  
 G. & H. Battery Co., St. Joseph.  
 Galloway-Pease Lumber Co., Poplar Bluff.  
 Gasdam, Jos., St. Louis.  
 Grigone Sheet Metal Works, John, St. Louis.  
 Hamilton Bakery Co., St. Louis.  
 Hamilton Brown Shoe Co., St. Louis.  
 Hamilton-Brown Shoe Co., Poplar Bluff.  
 Hampton Shoe Repairing Co., Jefferson City.  
 Hanley Sign Co., St. Louis.  
 Harris Shoe Co., Joe, Springfield.  
 Henderson, Willis Welding Co., St. Louis.  
 Hilsner Co., Louis, St. Louis.  
 Hoffman Magneto Co., S. G., St. Louis.  
 Hoisting Engines Union, St. Louis.  
 Holcomb Foundry Machinery Co., Poplar Bluffs.  
 Hood, A., & Son, Springfield.  
 Hotel Baltimore, Kansas City.  
 Hotel Statler, St. Louis.  
 International All. Theatrical State Employees & Motion Picture Corporation, Kansas City.  
 International Shoe Co., Marshall.  
 International Shoe Co., St. Louis.  
 James, M. M., & Son Shoe Co., St. Joseph.  
 Jennens, W. H., Manufacturing Co., Kansas City.  
 Jennings, A. H., Sons, Kansas City.  
 Joe's Shoe Repairing, Kansas City.  
 Johnson, Stephen & Shinkle Shoe Co., St. Louis.  
 K. B. Supply Co., Kansas City.  
 Kansas City Battery Supply Co., Kansas City.  
 Kansas City Saddlery Co., Kansas City.  
 Kansas City Southern Railroad Co., Kansas City.  
 Kansas City Tire & Accessory Co., Kansas City.  
 Kidd, C. G., Garage, Kansas City.  
 Kira, Geo. C., Sign Co., St. Louis.  
 Koby, A., St. Louis.  
 Kocak, James, St. Louis.  
 Koeneman, E. A., Electric Co., St. Louis.  
 Krummenacher, Rudolph H., St. Louis.  
 Kuhnle, Chas. F., St. Louis.  
 La Clede Iron Works, St. Louis.  
 La Grande Garage, Sedalia.  
 Lee Tire Co., St. Louis.  
 Lehman Machine Co., St. Louis.  
 Lendell & Skinker, St. Louis.  
 Liberty Roofing Co., St. Louis.  
 Liberty Shoe Repair Co., St. Louis.  
 McCabe-Powers Carg. Co., St. Louis.  
 McCormack Repair Shop, Kansas City.  
 McCune, Caldwell & Downing, Kansas City.  
 McPike Drug Co., Kansas City.  
 Maloney Electric Co., St. Louis.  
 Manufacturers Supply Co., St. Louis.  
 Maplewood Auto Co., St. Louis.  
 Martin, A., St. Louis.  
 Martynenko Mill Co., St. Louis.  
 Marz & Hess Clothing Co., St. Louis.  
 Melody, Joyce & Taylor, Kansas City.  
 Merry Optical Co., Kansas City.  
 Milburn Motor Co., St. Louis.  
 Missouri Athletic Association, St. Louis.  
 Missouri Pacific Railway Shops, Kansas City.  
 Missouri Pacific Railroad, Osage.  
 Missouri Pacific Railway, St. Louis.  
 Missouri Portland Cement Co., St. Louis.  
 Monkey Steam Dye Works, Kansas City.  
 Moon Auto Co., St. Louis.  
 Mooneyhan, J. H., Auto Repair Shop, Kansas City.  
 Morrison, H. I., Poplar Bluff.  
 Moving Picture Operators' Union, St. Louis.  
 Murray, Robert M., Kansas City.  
 National Cash Register Co., St. Louis.  
 National Film Photo Corporation, St. Louis.  
 National Military Home Barber Shop, National Military Home.  
 Neff, Chas. E., St. Joseph.  
 Nelson, N. O., Manufacturing Co., St. Louis.  
 New York Shoe Repair Shop, St. Louis.  
 News-Herald Publishing Co., Joplin.  
 Orange Smile Shop Co., St. Louis.  
 Otley, Geo., St. Louis.  
 Owen's Auto Co., Lebanon.  
 Packard Motor Car Co., St. Louis.  
 Patterson, M. G., Dental Co., Kansas City.  
 Pedigo-Weber Shoe Co., St. Louis.  
 Petty Shoe Store, Halcomb, Liberty.  
 Peverly Dairy, St. Louis.  
 Playm, James, St. Louis.  
 Polar Wave Ice & Fuel Co., St. Louis.  
 Postal Telegraph Co., St. Louis.  
 Preks, E. L., St. Louis.  
 Queen City Shoe Repair Co., Sedalia.  
 Raho's Garage, Kansas City.  
 Rankin Auto Co., Kansas City.  
 Rankin-Lagrange Auto Repair Co., St. Louis.  
 Ray, Edw., St. Louis.  
 Ray, H. G., watch repairing, St. Louis.  
 Reich-Mayer Garment Co., St. Louis.  
 Remington Pharmacy, St. Louis.  
 Remington Typewriter Co., Kansas City.  
 Richards & Conover Hardware Co., Kansas City.  
 Robbins Jewelry Co., St. Louis.  
 Royal Typewriter Co., St. Louis.  
 Rubber Tire Supply Co., Springfield.  
 Russell, A., St. Louis.  
 St. Joseph Engineering Corporation, St. Joseph.  
 St. Joseph News & Press, St. Joseph.  
 St. Joseph Railway, Light, Heat & Power Co., St. Joseph.

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St. Joseph Terminal Railroad Shops, St. Joseph.  
 St. Louis City Hall, St. Louis.  
 St. Louis Machine Supply Co., St. Louis.  
 St. Louis Manufacturing Co., St. Louis.  
 St. Louis N. W. Bell Telephone Co., St. Louis.  
 St. Louis Post Dispatch, St. Louis.  
 St. Louis & San Francisco Ry., Kansas City.  
 St. Mary's Oil Engineering Co., St. Charles.  
 Sandler Bros., shoe repairing, St. Louis.  
 Sanford Saddlery Co., Springfield.  
 Santa Fe Trail Garage, Kansas City.  
 Saunders, William, St. Louis.  
 Scanga, Raphael, St. Louis.  
 Schmeckbeber Candy Co., St. Louis.  
 Schleich, H. B., St. Louis.  
 Schmeckbeber Candy Co., St. Louis.  
 Schnieder, Wm., St. Louis.  
 Seanga, Vandervoort & Barney Dry Goods Co., St. Louis.  
 Scullin Steel Co., St. Louis.  
 Shapleigh Hardware Co., St. Louis.  
 Shaw Auto Repair Co., St. Louis.  
 Shoe Mart Co., St. Louis.  
 Sinclair Painting Co., St. Louis.  
 Slebt, William, St. Louis.  
 Southern Bell Telephone Co., St. Joseph.  
 Southern Hardware & Supply Co., St. Louis.  
 Special Shoe Repair & Manufacturing Co., Carthage.  
 Star Leather Co., St. Louis.  
 Stark Bros. Nurseries, Louisiana.  
 State Mutual Life Insurance Co., St. Louis.  
 Stiles & Putnam Boot & Shoe Repair Co., Joplin.  
 Stix Baer & Fuller Dry Goods, St. Louis.  
 Swift & Co., Packers, St. Joseph.  
 Tate-Gillums Auto. Co., St. Louis.  
 Tharp, W. H., Garage Auto H. S., Joplin.  
 Turenes, Wm. J., St. Louis.  
 United Iron Works, Joplin.  
 United Motors Service Co., Kansas City.  
 Universal Shirt Co., Kansas City.  
 Uts Electric Shop, St. Joseph.  
 Vay Noy Interstate Co., Joplin.  
 Victor Machine Works, St. Louis.  
 Wagner, John W., Kansas City.  
 Weber Shoe Co., Pedigo, St. Louis.  
 Weiss Shoe Co., St. Louis.  
 Wendell & Co., Kansas City.  
 West End Battery Co., St. Louis.  
 Western Auto Supply Co., Kansas City.  
 Whitcomb Cabinet Co., Kansas City.  
 Whitting Studio, St. Louis.  
 Wittek, Jos., Floral Co., St. Louis.  
 Yawman-Erbe Manufacturing Co., St. Louis.  
 Young Carriage Co., St. Louis.  
 Zelser Bros. Co., St. Louis.

## IOWA.

American Cement Co., Keokuk.  
 American Shoe Repairing Co., Des Moines.  
 Arthur Cooperative Elevator Co., Arthur.  
 Atkins Sons Co., (Inc.), Des Moines.  
 Auto Salvage & Exchange Co., Des Moines.  
 Avery Co., Des Moines.  
 Bernard & Turner Auto Co., Des Moines.  
 Bilz Sign Painting Co., Des Moines.  
 Black Co., James, Waterloo.  
 Boyce, R. M., Auto Co., Shenandoah.  
 Brown Garage, Des Moines.  
 Burlington Shippers Association, Burlington.  
 Central Iowa Fuel Co., Chariton.  
 Chase & West, Des Moines.  
 Chevrolet Garage, Sigourney.  
 City Hall Shoe Repair Co., Davenport.  
 Darwin Co., Des Moines.  
 Dupy Bros. Bakery, Ottumwa.  
 Erickson Co., C. H., Des Moines.  
 Farmers Motor & Supply Co., Burlington.  
 Gibbs Welding Co., Des Moines.  
 Green Foundry & Furnace Works, Des Moines.

Hannah Garage, Fairfield.  
 Harbach Funeral Parlor, Des Moines.  
 Harper & McIntire Co., Ottumwa.  
 Herring Motor Co., Des Moines.  
 Hotel Savary, Des Moines.  
 Illinois Central Railroad, Dubuque.  
 International Harvester Co., Des Moines.  
 Iowa Seed Co., Des Moines.  
 Iowa Tire Corporation, Des Moines.  
 Iowa Vulcanizing Co., Des Moines.  
 Jaeger Manufacturing Co., Des Moines.  
 Kellmeyer & Talbot, Keokuk.  
 Kunts Co., H. S., Des Moines.  
 Merchants Life Insurance Co., Des Moines.  
 Midwest Tire & Supply Co., Des Moines.  
 Morrell Packing Co., John, Ottumwa.  
 Morrison Auto Co., Centerville.  
 Muscatine Shipper Association, Muscatine.  
 New Monarch Machine & Stamping Co., Des Moines.  
 Ottumwa Ice Co., Ottumwa.  
 Pacific Mutual Life Insurance Co., Des Moines.  
 Padden Auto Co., Harry, Waterloo.  
 Park Auto Repair Shop, Cedar Rapids.  
 People's Gas & Electric Co., Burlington.  
 Prairie City Auto Co., Prairie City.  
 Red Ball Garage, Cedar Rapids.  
 S. & S. Shoe Co., Sigourney.  
 Schlamp Co., Frank, Des Moines.  
 Sixth Avenue Garage, Des Moines.  
 Spencer Sign Service, Des Moines.  
 Storage Battery Co., Des Moines.  
 Swanson & Anderson, Ottumwa.  
 Union Shoe Repair Co., Waterloo.  
 Walling, T. H., Shenandoah.  
 Waterloo Gas Engine Co., Waterloo.  
 Waterloo Sash & Fixture Works, Waterloo.  
 Well Co., L. K., Des Moines.  
 Woods Studio, Guy, Des Moines.

## NEBRASKA.

Auto Electric Service Co., Omaha.  
 Avery Co., Lincoln.  
 Avery Co., Omaha.  
 Boren Barber Shop, Geo., Omaha.  
 Bradley-Hughey Co., Nebraska City.  
 Bureau of Highways, Lincoln.  
 Burgess-Granden Co., Omaha.  
 Carpenter Paper Co., Omaha.  
 Carruthers Motor Co., W., Grand Island.  
 Chapman Union Pacific Railroad Co., Omaha.  
 Corner, Geo., Blue Hill.  
 Delco Exide Station, Broken Bow.  
 Farmers' State Bank, Tecumseh.  
 Gentlemen, John A., Omaha.  
 Grainger Bros. Co., Lincoln.  
 Haller, Fred A., Lincoln.  
 International Harvester Co., Omaha.  
 Irwin Land Co., Lincoln.  
 Koch, Harry A., Omaha.  
 Lincoln Telephone & Telegraph Co., Lincoln.  
 Logan Cochran Barber Shop, Kearney.  
 Magnuson X-Ray Co., Omaha.  
 Massachusetts Mutual Life Insurance Co., Omaha.  
 Moving Picture Operators' Union, Lincoln.  
 National Printing Co., Omaha.  
 Nebraska Aircraft Co., Lincoln.  
 Nebraska Bell Telephone Co., Grand Rapids.  
 Ohlsen & Co., Henry, David City.  
 Pacific Mutual Life Insurance Co., Lincoln.  
 Paulson, Wm., Kearney.  
 Pennsylvania Rubber Co., Omaha.  
 Platt Valley Motor Co., Scottsbluff.  
 Postal Telegraph Co., Omaha.  
 Randall & Noll, Lincoln.  
 Realty Syndicate Co., Omaha.  
 Rhodes, George W., Nebraska City.  
 Schnelder Electric Co., Omaha.  
 Security Mutual Life Insurance Co., Lincoln.  
 Tukey & Sons, Omaha.  
 Union Pacific Railroad Co., Omaha.  
 Voortman, A. H., Beatrice.  
 Vulcapatch Sales Agency, Omaha.  
 Wagner, Chas. E., Omaha.



Walker, Max L., Omaha.  
 Western Union Telegraph & Cable Co.,  
 Omaha.  
 Williams, L. C., Lincoln.  
 Woodmen of the World Power Plant,  
 Omaha.  
 Yale & Hopewell, Lincoln.  
 Young Co., J. A., Broken Bow.

## KANSAS.

Albright Garage, Hope.  
 Arnold Auto Co., Wichita.  
 Atchison, Topeka & Santa Fe Railroad,  
 Topeka.  
 Bell Telephone Co., Wichita.  
 Brooks Machine Co., Wichita.  
 Busch's Shoe Shop, Wichita.  
 Coleman Lamp Co., Wichita.  
 County Engineers, Barton County.  
 Dobpkins Machine Shop, Winfield.  
 Frahauf Shirt Manufacturing Co., Wichita.  
 Galka, John Leavenworth.  
 Gates Electric Co., Hutchinson.  
 Hayes Florist Shop, John, Topeka.  
 Homer Barber Shop, National Military  
 Home.  
 Hotel Sassen, Wichita.  
 Hughes Motor Co., Wichita.  
 Hutchinson Foundry & Machine Works,  
 Hutchinson.  
 Jackson & Stone, Roxbury.  
 Keele Electric Co., Topeka.  
 McKee, L. S., Jeweler, Fredonia.  
 Machinist Electric Co., Topeka.  
 Menefee, Jas. T., Paola.  
 Meyer, J. W., Chapmana.  
 Midcontinent Tire Manufacturing Co.,  
 Wichita.  
 Monney Butcher Shop, F. W., Fort Scott.  
 Montgomery, Clinton H., Wichita.  
 Morris Packing Co., Kansas City.  
 Pressman Bros., Topeka.  
 Ramsey-King Electric Co., Hutchinson.  
 Riddle & Riddle, Abilene.  
 Riggs Motor Co., Harrington.  
 Sheridan & Co., Wichita.  
 Shields, W. L., Pratt.  
 Southwestern Bell Telephone Co., Arkansas.  
 Southwestern Bell Telephone Co., Winfield.  
 Spray Electric Co., Salina.  
 Taylor Electric Co., Wichita.  
 United States Penitentiary Bureau of  
 Criminal Identification, Leavenworth.  
 Vall, Edw., & Co., Wichita.  
 Viola, R. H., Abilene.  
 Waller's Shoe Shop, Columbus.  
 Warner Manufacturing Co., Ottawa.  
 Weld-It-All-Shop, Hutchinson.  
 Western Iron & Foundry Co., Wichita.  
 Whelan's Sign Works, Abilene.  
 Wichita Magneto Co., Wichita.  
 Wichita Sign Co., Wichita.  
 Wolf Packing Co., Topeka.

## DISTRICT NO. 10.

## NORTH DAKOTA.

Anderson Auto Shop, Fargo.  
 Automotive Service Co., Minot.  
 Bismarck Foundry & Welding Co., Bis-  
 marck.  
 Brownstein Co., A. D., Minot.  
 Carrington Iron Works, Carrington.  
 Carrington Motor Sales Co., Carrington.  
 Champlain Co., A. E., Fargo.  
 Corwin Motor Co., Bismarck.  
 Dakota Auto Co., Grand Forks.  
 Diriam, Otto, Bismarck.  
 Doyle Overland Co., Fargo.  
 Egan, J. P., Dickinson.  
 Electrical Construction Co., Grand Forks.  
 Ellis, George F., Dental Laboratory, Fargo.  
 Fargo Jewelry Manufacturing Co., Fargo.  
 Fargo Plumbing & Heating Co., Fargo.  
 Fargo Theater Co., Fargo.  
 Fogles Construction Co., Grand Forks.  
 Fuller Motor Co., Minot.

Grain Belt Manufacturing Co., Fargo.  
 Jacobson, C. S., Electrical Shoe Shop,  
 Jamestown.  
 Kraus, John M., McClusky.  
 Kuhn, John L., Hazen.  
 Marschke, Construction Co. (Inc.), Fargo.  
 Mason Motor Co., Jamestown.  
 Minot Dental Laboratory, Minot.  
 Minto Auto Co., Minto.  
 Moore Automobile Co., Grand Forks.  
 Northwest Machine Shop, Minot.  
 Occident Elevator Co., Richardson.  
 Owen & Owen, Law Firm, Grand Forks.  
 Recorder-Post, Dickinson.  
 Richter & Yoder, Fargo.  
 Solum, G. J., Mandan.  
 Twin City Machine Co., Wahpeton.  
 Turner & Son, James, Grand Forks.  
 Union Light, Heat & Power Co., Fargo.

## SOUTH DAKOTA.

Blue Front Garage, Canton.  
 Candys Garage, Webster.  
 Central Auto & Machinery Co., Mitchell.  
 Dalton Adding Machine, Sioux Falls.  
 Gem Shoe Shop, Mitchell.  
 Hicks, Dr. T. H., Milbank.  
 L. D. Miller & Co., Sioux Falls.  
 Minnehaha County Courthouse, Sioux Falls.  
 Scott, Bedford & Scott, Sioux Falls.  
 C. L. Shannon, wholesale lumber, Sioux  
 Falls.  
 Thompson, A. W., Veblen.  
 Thoradale Dental Laboratory, Sioux Falls.

## MINNESOTA.

Abbey Sign Co., Minneapolis.  
 Adams Bros., Minneapolis.  
 American Holst & Derrick Co., St. Paul.  
 American Multigraph Sales Co., Minneapo-  
 lis.  
 American Shoe Repair Co., Minneapolis.  
 American Telegraph Co., Little Falls.  
 Anderson Steam Vulcanizing Co., Minneapo-  
 lis.  
 Andrus Building, Minneapolis.  
 Archambo Heating & Plumbing Co., Minne-  
 apolis.  
 Ashby Hardware Co., Ashby.  
 Auction Fruit Co., Minneapolis.  
 Auto Radiator Manufacturing Co., Minne-  
 apolis.  
 Auto Service Co., St. Paul.  
 Baby Carriage Wicker Shop, Minneapolis.  
 Bankers Casualty Co., Minneapolis.  
 Barth & Schloser, Minneapolis.  
 Bastian Electrical Co., Moorehead.  
 Bayum, Andrew, Albert Lee.  
 Belden-Porter-Gray Co., Minneapolis.  
 Benson Optical Co., N. P., Minneapolis.  
 Berg Bros., Minneapolis.  
 Big Lake Pharmacy, Big Lake.  
 Bockstruck Co., Henry, St. Paul.  
 Boos, Henry P., Minneapolis.  
 Booth & Robinson, Minneapolis.  
 Boustead Electrical & Manufacturing Co.,  
 Minneapolis.  
 Boutell Bros., Minneapolis.  
 Bradley Engineering Service, St. Cloud.  
 Brockway Co., L. S., Minneapolis.  
 Broughton, Singer & Co., Minneapolis.  
 Budd, D. H., Minneapolis.  
 Buelder Woodworking Exchange, Minne-  
 apolis.  
 Bureau of Animal Industry, St. Paul.  
 Burroughs Adding Machine, St. Paul.  
 Butler, E. C., Austin.  
 Byron & Larned, Minneapolis.  
 Chicago, St. Paul & Milwaukee Railroad,  
 Minneapolis.  
 Cadillac Co., N. W., Minneapolis.  
 Camden Tire Service, Minneapolis.  
 Campbell Commission, H. M., St. Paul.  
 Campbell Co., Minneapolis.  
 Carlson, Andrew, Duluth.  
 Carey & Lewis, Minneapolis.  
 Cash Register Service Co., Minneapolis.

Central Machine Works, Minneapolis.  
 Central Pattern Works, Minneapolis.  
 Central Welding & Rod Co., St. Paul.  
 Chapman, Dr. E., Minneapolis.  
 Chase Automobile Co., Minneapolis.  
 Chase Electric Co., R. S., North Minneapolis.  
 Check, John, St. Paul.  
 Chevrolet Motor Co., Minneapolis.  
 Chicago Great Western Railroad, St. Paul.  
 Children's Protective Society, Minneapolis.  
 City Plumbing & Heating Co., Minneapolis.  
 Clay County, Moorehead, Minneapolis.  
 Clinton Falls Nursery Co., Owatonna.  
 Clyde Iron Works, Duluth.  
 Cooperative Machine & Tool Co., Minneapolis.  
 Cootey Co., Minneapolis.  
 Craddick, H. B., Minneapolis.  
 County Engineer's Office, St. Louis.  
 County Farm Agent, Ivanhoe.  
 Cronin & Baners, Minneapolis.  
 Daily News, Minneapolis.  
 Day-Nite Garage, Minneapolis.  
 Decker & Sons Co., Jacob, Minneapolis.  
 Dickinson & Gillespie, Minneapolis.  
 Donaldson Co., L. S., Minneapolis.  
 Dubliske, H. W., & Co., Minneapolis.  
 Duluth Boiler Works, Duluth.  
 Duluth, Missabe & Northern Railroad, Duluth.  
 Duluth Welding Works, Duluth.  
 Electric Store, Crookston.  
 Elks' Club, Minneapolis.  
 Emerson-Brantingham Co., Minneapolis.  
 Emporium Store, St. Paul.  
 Equitable Life Insurance Co. of Iowa, Minneapolis.  
 Esanell Electric Co., St. Paul.  
 Evans, Co., W. H., Minneapolis.  
 Evenson, M. M. & C. W., Minneapolis.  
 Ever Ready Tire Service Co., Minneapolis.  
 Ever Ready Tire Service Co., St. Paul.  
 Fairmont Creamery Co., Fairmont.  
 Fairmont Telephone Co., Fairmont.  
 Farley Co., E. P., Minneapolis.  
 Federal Filers (Inc.), Minneapolis.  
 Federal Grain Supervision, Duluth.  
 Federal Grain Supervision, Minneapolis.  
 Federal Lithographing Co.  
 Fire Brick Construction Co., Minneapolis.  
 First National Bank, St. Paul.  
 Flour City Ornamental Iron Co., Minneapolis.  
 Foley Bros. Grocery Co., St. Paul.  
 Foote, Schulze & Co., St. Paul.  
 Foroderville Nurseries, Wayzata.  
 Fort Ripley Garage, Fort Ripley.  
 Fowler Electric Co., Minneapolis.  
 Free Press Co., Mankato.  
 French Furniture Co., Minneapolis.  
 Friedman Bros., St. Paul.  
 Fulton & Stevens, Minneapolis.  
 Gainsday Electric Co., Minneapolis.  
 Gately-Hurly Co., St. Paul.  
 General Service Co. (Inc.), Minneapolis.  
 Geneva Optical Co., Minneapolis.  
 Gordon-Ferguson Co., St. Paul.  
 Granite City Produce Co., St. Cloud.  
 Gray Motor Co., Minneapolis.  
 Gray Tractor Co., Minneapolis.  
 Great Northern Railroad Co., Breckersridge.  
 Great Northern Railroad Co., Minneapolis.  
 Great Northern Railroad Co., St. Paul.  
 Great Western Inst. Co., Minneapolis.  
 Griggs, Cooper & Co., St. Paul.  
 Grund, Fred, Minneapolis.  
 Hallbert, C. H., Minneapolis.  
 Hanson Electric Co., Minneapolis.  
 Hargrave Co., C. J., Minneapolis.  
 Harper Motor Co., Minneapolis.  
 Hart & Murphy Cigar Co., St. Paul.  
 Hart Parr Co., Minneapolis.  
 Hertz, W. O., Electric Co., Minneapolis.  
 Hawkinson C. G., Minneapolis.  
 Hawley Manufacturing Co., Minneapolis.  
 Hawley Motor Co., Hawley.  
 Healy Plumbing & Heating Co., Mountain Iron.  
 Heist Studio of Taxidermy, St. Paul.  
 Heldbrink, J. A., Minneapolis.  
 Hennipin Garage Co., Minneapolis.  
 Hinch, F. M., Minneapolis.  
 Home Backing Co., Austin.  
 Hopkin & Hopkin, Minneapolis.  
 Hopwood & Hopwood, Minneapolis.  
 Hormel & Co., Geo. A., Austin.  
 Hotel Plaza, Minneapolis.  
 Howell Electric Co., St. Paul.  
 Hutchinson Electric Service Co., Hutchinson.  
 Independent Commission Co., St. Paul.  
 Indian Refining Co., Minneapolis.  
 Jannay Semple Hill Co., Minneapolis.  
 J. & S. Motor Sales Co., St. Paul.  
 Johnson, Aaron, Jewelry Manufacturing Co., Minneapolis.  
 Johnaton Manufacturing Co., St. Paul.  
 Jones Davis Agency, Minneapolis.  
 Jordan & Anduser, Minneapolis.  
 Juster Bros., Duluth.  
 Journal, The, Minneapolis.  
 Kammann Advertising Service, Minneapolis.  
 Kelley Hardware Co., Duluth.  
 Kelly Co., M. C., Minneapolis.  
 King Detective Agency, Minneapolis.  
 Kirchner & Benick, Minneapolis.  
 Klemmer Bros., Owatonna.  
 Knoff Manufacturing Co., Mankato.  
 La Cross Auto Co., Minneapolis.  
 Lakewood Cemetery Association, Minneapolis.  
 Larson, Harold P., Minneapolis.  
 Latham Realty Co., Minneapolis.  
 Latinsky & Weiss, Minneapolis.  
 Lawson & Nelson, Minneapolis.  
 Le Doyle, Arthur, Owatonna.  
 Lee Bros., Minneapolis.  
 Levin Bros. (Inc.), Minneapolis.  
 Lind, Chas., St. Cloud.  
 Lugsdin Co., G. H., Minneapolis.  
 Lunquist Co., C. W., Minneapolis.  
 Lunquist & Olson, Minneapolis.  
 McClellan Paper Co., Minneapolis.  
 McDougall Duluth Co., Duluth.  
 McGill-Warner Co., St. Paul.  
 McKnight, A. G., Duluth.  
 Madison Detective Service, Minneapolis.  
 Mallon Manufacturing Co., Minneapolis.  
 Mankato Citizens Telephone Co., Mankato.  
 Marshall & Merthaler, St. Paul.  
 Marshall Oil Co., Minneapolis.  
 Marshall Wels Co., Duluth.  
 Marwick-Mitchell-Peat & Co., Minneapolis.  
 Mattson Bakery Co., Minneapolis.  
 Meinke Land & Investment Co., Minneapolis.  
 Melby Studio, Minneapolis.  
 Melrose Granite Co., St. Cloud.  
 Metzger Auto Co., Minneapolis.  
 Midland Motors Co., Minneapolis.  
 Miller-Davis Co., Minneapolis.  
 Miller Rubber Co., Minneapolis.  
 Milne, D. S., Fairmont.  
 Minneapolis Artificial Limb Co., Minneapolis.  
 Minneapolis Athletic Club, Minneapolis.  
 Minneapolis Baby Carriage Co., Minneapolis.  
 Minneapolis Central Electric Co., Minneapolis.  
 Minneapolis Dry Goods Co., Minneapolis.  
 Minneapolis Drug Co., Minneapolis.  
 Minneapolis Electric Equipment Co., Minneapolis.  
 Minneapolis Motor & Tire Co., Minneapolis.  
 Minneapolis Photo Engr. Co., Minneapolis.  
 Minneapolis Reed & Furniture Co., Minneapolis.  
 Minneapolis-St. Louis Railroad, Minneapolis.  
 Minneapolis, St. Paul-St. Marie Railroad, Alexandria.  
 Minneapolis Steel Machine Co., Minneapolis.  
 Minneapolis Welding & Manufacturing Co., Minneapolis.  
 Minnesota Forest Service, Duluth.  
 Minnesota Iron Store Co., Minneapolis.

- Minnesota Roofing & Cornice Co., Minneapolis.  
 Minnesota, St. Paul & S. Ste. Marie Railroad, Minneapolis.  
 Minnesota Welding & Manufacturing Co., Minneapolis.  
 Mittit, Hans, Bemidji.  
 Monson, George S., St. Paul.  
 Moorman & Co., St. Paul.  
 Moreau, T. V., Co., Minneapolis.  
 Morse-Oppenhimer & Peterson, St. Paul.  
 Morterud, Kenecany Co., Duluth.  
 Motor Inn, Lakeville.  
 Motor Maintenance Co., Minneapolis.  
 Mumby, Art K., Minneapolis.  
 Muni Savr Products Co., Minneapolis.  
 Northern Pacific Railroad Co., Brainerd.  
 Northwestern National Bank, Minneapolis.  
 National Real Estate Co., Minneapolis.  
 Nelson & Nelson, Minneapolis.  
 New Savoy Theater, Minneapolis.  
 Newcomb & Co., Duluth.  
 Nicolet Vulcanizing Co., Minneapolis.  
 Noble Electric Co., Minneapolis.  
 North Side Sash & Door Co., Minneapolis.  
 Northwestern Reed & Rattan Co., Minneapolis.  
 Northern Fixture Co., Minneapolis.  
 Northern Motor Co., Duluth.  
 Noyes Bros. & Cutler, St. Paul.  
 Nyetrom, Albert, Minneapolis.  
 O'Brien, C. D., St. Paul.  
 Ohmann & Lornz, St. Paul.  
 Olen & Co., J. E., St. Paul.  
 Oliver Iron Mining Co., Coleraine.  
 Oliver Mining Co., Hibbing.  
 Olsen & Sherley, Minneapolis.  
 P. & S. Electric Co., St. Paul.  
 Pan Motor Co., St. Cloud.  
 Park Department, St. Paul.  
 Patterson, M. F., Dental Supply Co., St. Paul.  
 Peterson & Sons Drug Co., Minneapolis.  
 Pierson Wilcox Electric Co., Minneapolis.  
 Pluck, L. S., Jewelry Co., Minneapolis.  
 Plaza Hotel Co., Minneapolis.  
 Powers, B. F., Motor Co., St. Paul.  
 Powers Mercantile Co., Minneapolis.  
 Pure Oil Co., Minneapolis.  
 Qualle, David, Co., St. Paul.  
 Rapidan Garage, Rapidan.  
 Rath's Mills & Bell (Inc.), St. Paul.  
 Reinhardt Bros., Minneapolis.  
 Reins Auto Co., Broomfield.  
 Remington Typewriting Co., Minneapolis.  
 Remington Typewriter Co., St. Paul.  
 Rentz Bros., Minneapolis.  
 Rex Cigar Co., Minneapolis.  
 Robertson Bros., Minneapolis.  
 Rosacker, Hans, Minneapolis.  
 Rosness & Sime, St. Paul.  
 Ruben Tire Co., Minneapolis.  
 St. Cloud Typewriter Co., St. Cloud.  
 St. Paul Boiler & Manufacturing Co., St. Paul.  
 St. Paul Gas Light Co., St. Paul.  
 St. Paul Welding & Manufacturing Co., St. Paul.  
 Sand Beach Sanatorium, Lake Park.  
 Savage Co., M. C., Minneapolis.  
 Schnalz & Son, A., St. Paul.  
 Schupp, William, Co., Minneapolis.  
 Schwartz Bros., Minneapolis.  
 Security Machine Co., Minneapolis.  
 Security State Bank, Wamamungo.  
 Service Jewelry Manufacturing Co., Duluth.  
 Silvers Sanitary System, Minneapolis.  
 Sloan, E. J., Minneapolis.  
 Smith, George R., Hanson, H. Stanley, Minneapolis.  
 Smith, L. C., Bros. Typewriter Co., St. Paul.  
 Smith & Wyman, Minneapolis.  
 Sommers, G., & Co., St. Paul.  
 Soo Line, Minneapolis.  
 Sorenson Shoe Stores (Inc.), Minneapolis.  
 Splady, Albee & Hagenson, Minneapolis.  
 Spriggs, F. J., St. Paul.  
 Standard Clothing Co., Minneapolis.  
 Standard Sign College (Inc.), Minneapolis.  
 Staring Co., Minneapolis.  
 Starkel Bakery, Stillwater.  
 Staude, E. G., Manufacturing Co., St. Paul.  
 Steel Machinery Co., Minneapolis.  
 Stone Co., Minneapolis.  
 Strandberg Cut Glass Co., St. Paul.  
 Strong, Scott Manufacturing Co., Minneapolis.  
 Stuck, Carl F., Minneapolis.  
 Swift & Co., St. Paul.  
 Thoen Bros., Minneapolis.  
 Thompson Lumber Co., Minneapolis.  
 Thompson Yards, Fergus Falls.  
 Thompson Yards (Inc.), Minneapolis.  
 Thronquist, John, tailor, St. Paul.  
 Times Publishing Co., St. Cloud.  
 Toro Motor Co., Minneapolis.  
 Transit Supply Co., Minneapolis.  
 Trapskin, S., Minneapolis.  
 Traux & Swanson, St. Paul.  
 Tripp, A. J., Grand Forks.  
 Tri-State Repair Co., Minneapolis.  
 Tri-State Telephone & Telegraph Co., St. Paul.  
 Twin City Engineering & Pattern Co., Minneapolis.  
 Twin City Mission Furniture Co., St. Paul.  
 Twin City Producers Association, Minneapolis.  
 Twin City Rapid Transit Co., Minneapolis.  
 Typewriter Clearing Association, Minneapolis.  
 United States D. Realty Co., Minneapolis.  
 Underwood Typewriter Co., Minneapolis.  
 Underwood Typewriter Co., St. Paul.  
 United Business Brokers (Inc.), Minneapolis.  
 United Motors Service Co., Minneapolis.  
 United States Federal Grain Supply, Minneapolis.  
 United States Forest Service, Bly.  
 United States Post Office, Minneapolis.  
 Walman Optical Co., Minneapolis.  
 Warren Electric Co., A. L., Minneapolis.  
 Washburne Crosby Co., Minneapolis.  
 Watkins Co., J. R., Winona.  
 Watkins State Bank, Watkins.  
 Webb-Frankle Co., Minneapolis.  
 Wenzel, B. R., & Co., Minneapolis.  
 Western Motor Supply Co., Minneapolis.  
 Wilcox, John F., Co., Minneapolis.  
 Winona Battery Co., Winona.  
 Winona Machine Foundry Co., Winona.  
 Wonling's Lakewood Greenhouse, Minneapolis.  
 Woodruff Lumber Co., Duluth.  
 Wooley Manufacturing Co., St. Paul.  
 Wright Co., Charles, Fergus Falls.  
 Yungbauer, William, St. Paul.
- MONTANA.
- A. C. M. Co., smelter, Great Falls.  
 Ainsworth Service Station, Helena.  
 Allen Electric Co., Helena.  
 Anaconda Copper Mining Co., Butte.  
 Auto Electric Shop, Great Falls.  
 Battery Service Co., Missoula.  
 Billings Cabinet Co. (Inc.), Billings.  
 Bozeman Vulcanizing Co., Bozeman.  
 Budd, D. H., Co., Bozeman.  
 Butte Battery Co., Butte.  
 Butte Dental Laboratory, Butte.  
 Cascade Silver Mines & Mills, Nedhart.  
 Cavender, J. A., Missoula.  
 Central Auto Supply Co., Great Falls.  
 Champion Shoe Shop, Great Falls.  
 City Shoe Shop, Miles City.  
 Collins Plumbing Co., Great Falls.  
 Doran Co., Frank E., Lewistown.  
 Electric Service Station, Billings.  
 Fergus County Creamery, Lewistown.  
 Foldel Undertaking Co., Helena.  
 Great Falls Electric Supply Co., Great Falls.  
 Great Northern Shops, Great Falls.

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Great Western Sugar Co., Billings.  
Grimes, Harry J., Miles City.  
Hayn Elite Studio, Great Falls.  
Kavon, Joe A., Plentywood.  
Leader Co., Leader, Great Falls.  
Lee Forest Garage, Great Falls.  
Long, C. W., Bozeman.  
Lund Sandborn Co., Bozeman.  
McGrew Service Shop, Butte.  
MacKinnon, Colin, Miles City.  
Miller Dental Laboratory, Butte.  
Modern Dentists, Billings.  
Montana Inn, Great Falls.  
Montana Power Co., Great Falls.  
Montana Power Co., Norris.  
Montana Power Co., Wolf Creek.  
Montana Sash & Door Co., Billings.  
New Methods Shoe Repair Co., Billings.  
North Butte Machine Shop, N. Butte.  
O'Rourke Shoe Co., Butte.  
Rapid Repair Shoe Co., Butte.  
Benwick Implement Co., Billings.  
Silver Bow Automobile Co., Butte.  
South Butte Shoe Repairing Co., Butte.  
Spaulding, R. L., Helena.  
State Nursery & Seed Co., Helena.  
Sullivan Electric Co., Butte.  
Torgerson Bros., Billings.  
Travis, Thomas, Vulcanizing Plant, Helena.  
Underwood Typewriter Co., Billings.  
United States Forest Service, Dillon.  
Wedner, Daniel, Chinook.  
Westover Garage, Billings.  
Yellowstone Tire & Vulcanizing Co., Billings.  
Yellowstone Rubber Co., Miles City.

## DISTRICT NO. 11.

### WYOMING.

Denness, W. E., Cheyenne.  
Frison & Sons, J. C., Tendeep.  
Hawk Springs Land & Development Co., Torrington.  
Midwest Refining Co., Laramie.  
Osage Shallow Oil Syndicate, Casper.  
Plaines Automobile Co., Acme.  
Wigwam Co., Casper.

### COLORADO.

A. T. & S. F. Railway Co., La Junta.  
Abramowitz, David D., Denver.  
Adkins, C. A., Denver.  
Ainsworth & Co., Wm., Denver.  
Alamo Garage, Colorado Springs.  
American Beet Sugar Co., Lamar.  
American Fixture Co., Denver.  
American Tire Repair Co., Denver.  
Andrew, Wm. H., Denver.  
Anslander, Edward, Denver.  
Aovredes Shoe Repair Co., Denver.  
Arms Truck Co., Denver.  
Athens Corporation Co., Denver.  
Athens Shoe Repair Shop, Denver.  
Auto Equipment Co., Denver.  
Auto Wrecking & Metal Co., Denver.  
Automotive Electric Service Co., Pueblo.  
Automotive Supply Co., Denver.  
Bancroft, W. H., Shop, Colorado Springs.  
Bankers Reserve Life Insurance Co., Denver.  
Barnett, W. W., Denver.  
Barrett Oldsmobile Co., Denver.  
Bartel's Confectionery, W. B., Colorado Springs.  
Beck Shoe Repair Co., Denver.  
Beggs Drug Co., Henry, Pueblo.  
Bell Filling Station, Denver.  
Bennets Garage, Trinidad.  
Bertrand & Sullivan, Denver.  
Bliss Auto Top Co., Denver.  
Blue Front Shoe Repair, Denver.  
Boldt Engineering Co., Denver.  
Botterill, Tom, Garage, Denver.  
Boyle, Erwin T., Colorado Springs.  
Brandenberg, H. P., M. D., Denver.  
Brion, Chas. E., Denver.

Broadway Auto Top & Paint Co., Denver.  
Broadway Metal Welding Co., Denver.  
Brown, Dr. L. G., Colorado Springs.  
Cahn Foster Electric Co., Denver.  
California State Garage, Denver.  
Camera Craft Studio, Loveland.  
Camarata Shoe Shop, Trinidad.  
Camblin, Geo. A., Albany Hotel Engr., Denver.  
Capitol Electric & Manufacturing Co., Denver.  
Carbondale Item, Carbondale.  
Carey Optical Co., Pueblo.  
Carrillo Shoe Shop, Lamar.  
Carter Motor Co., Denver.  
Cass, J. D., Farm Machine Co., Denver.  
Chambers Engine Co., Gerald S., Denver.  
Chandler, Earl M., Animas.  
Chase Studio, Boulder.  
Chevrolet Motor Co., Denver.  
Cimarron Garage, Cimarron.  
Clark, Chas. H., Co., Denver.  
Cole Motor Car Co., Pueblo.  
Colorado Electric Co., Colorado Springs.  
Colorado Electric Co., Denver.  
Colorado Ice & Storage Co., Denver.  
Colorado Labor Department, Denver.  
Colorado Light & Power Co., Colorado Springs.  
Colorado Machine & Auto Co., Trinidad.  
Colorado Motor & Machine Co., Denver.  
Colorado Packing Corporation, Canon.  
Colorado & Southern Railroad Shops, Denver.  
Colorado Springs Gazette, Colorado Springs.  
Colorado Statesman, Denver.  
Colorado Springs Int. Ry. Co., Colorado Springs.  
Columbia Theater, Sugar City.  
Conklin, H. M., Denver.  
Conner Advertising Agency, Denver.  
Continental Land Corporation, Denver.  
Cross, Kent E., Dr., Denver.  
Crossland, C. V., Auto Top Co., Denver.  
Cuban Cigar Co., Denver.  
D. & R. G. Railroad Co., Denver.  
Daniels & Fisher Co., Denver.  
Danielson's Shoe Repair, Denver.  
Davis & Vores Undertaking Co., Pueblo.  
De Lees Cigar Co., Denver.  
De Lue's Detective Agency, Denver.  
De Lux Studio, Denver.  
Denver Auto Goods Co., Denver.  
Denver Custom Garment Co., Denver.  
Denver Dry Goods Co., Denver.  
Denver Engine Works, Denver.  
Denver Hog Ranch Co., Denver.  
Denver Novelty Works, Denver.  
Denver Post, Denver.  
Denver Rock Drill Manufacturing Co., Denver.  
Denver & Salt Lake R. R., Denver.  
Denver Sign Show Card Co., Denver.  
Denver Tramway Co., Denver.  
Detroit Electric Battery Co., Denver.  
Drake & Sons, Chas. L., Denver.  
Drinkard Emmert Commission Co., Denver.  
Dubiske & Co., H. V., Denver.  
Duncan, S. M., Colorado Springs.  
Einbeinder Bros., Denver.  
Elberson Dental Laboratory, Denver.  
Electric Service & Engine Co., Denver.  
El Paso County Democrat, Colorado Springs.  
Evening Telegraph Co., Colorado Springs.  
Farmers Life Insurance Co., Denver.  
Feinberg & Son, Denver.  
Flora & Sinton, Colorado Springs.  
Ford Auto Co., Pueblo.  
Foster Auto Supply Co., Denver.  
Fridbarn Sign Co., Denver.  
Fulton Garage, Pueblo.  
Gainer Erb Manufacturing Co., Denver.  
Gallup Saddlery Co., Pueblo.  
Gates Half Sole Service Station, Denver.  
Gates Rubber Co., Denver.  
Gearless Steam Auto Manufacturing Co., Denver.  
Gibson Auto Service, Pueblo.  
Giddings & Kirkwood, Colorado Springs.

- Gilbert, Henry Co., Denver.  
 Gladieux & Gulley, Denver.  
 Globe Printing Co., Denver.  
 Globe Shoe Repair Co., Denver.  
 Golden Cycle Mining & Reduction Co., Colorado Springs.  
 Goodyear Shu-Fix, Denver.  
 Gordon Shoe Repair Co., Pueblo.  
 Gorman Stationary Engineers, W. State Capitol, Bessy, Denver.  
 Grange, Dr. C. H., Longmont.  
 Great Western Motor Co., Denver.  
 Great Western Sugar Co., Sterling.  
 Grill-Goodhue Implement Co., Colorado Springs.  
 Grossman, A., Haberdasher, Denver.  
 Guaranty Battery & Electric Co., Colorado Springs.  
 Hardesty Manufacturing Co., H., Denver.  
 Harley Battery Co., Colorado Springs.  
 Hassell Iron Works, Colorado Springs.  
 Hayes, R., Colorado Springs.  
 Heath Bros. Machine & Welding Co., Denver.  
 Heindel, J. C., Denver.  
 Heiser Co., Denver.  
 Hext Music Co., Colorado Springs.  
 Hinman Bros., Kremmling.  
 Hoeffer-Shuler Photograph Co., Denver.  
 Hoffman, E. H., Denver.  
 Hoffman & Carter, Denver.  
 Hoffman's Tire Shop, Denver.  
 Holberg, Frank, Greenhouse, Denver.  
 Holmes Hardware Co., Pueblo.  
 Hopkins, Allen, Denver.  
 Hotel Adams, Denver.  
 Hotel Brown Place, Denver.  
 Hover & Co., W. A., Denver.  
 Howard Mortuary, Denver.  
 Hower Advertising Agency Co., Denver.  
 Hutchison Co., J. E., Denver.  
 Ideal Shoe Repair, Denver.  
 Independence Coffee & Spice Co., Denver.  
 Ingersoll-Rand Co., Littleton.  
 International Harvester Co., Denver.  
 International Welding Co., Denver.  
 Interstate Lumber Co., Denver.  
 Irving Plumbing & Heating Co., Denver.  
 Jackson Compressor Co., Denver.  
 Jepson & Son, A., Denver.  
 Jewel Tea Co., Denver.  
 Jonas Bros., Denver.  
 Kactus Oil Products Co., Denver.  
 Kaufman, Joseph, Denver.  
 Kent Auto Co., Denver.  
 King, Harlow H., La Junta.  
 King Investment Lumber Co., Pueblo.  
 Knight Campbell Music Co., Denver.  
 Kumpf Motor Car Co., Denver.  
 Kurtz, L. G., Las Animas.  
 L. & P. Electric Co., Lamar.  
 Labor Club (Inc.), Denver.  
 Lamar Live Stock Co., Lamar.  
 Lang & Connors Printing Co., Denver.  
 Larson Motor Co., Lamar.  
 Leyner Engine Works Co., J. Geo., Littleton.  
 Lincoln Hat Works, Lincoln.  
 Littleton Garage, Littleton.  
 Lohndorf & Kent, Denver.  
 Loveland Bee & Honey Co., Loveland.  
 Lowell, George, Las Animas.  
 Luthi & Bros., Denver.  
 McCarthy & Crandall Plumbing Co., Denver.  
 McFarlane-Eggers Machine Co., Denver.  
 McPhee & McGint, Denver.  
 Madison Orchards, Denver.  
 Maler, C. F., Denver.  
 Manhattan Shoe Shop, Denver.  
 Manhorter, J. K., Repair Co., Pueblo.  
 Markshaffel Motor Co., Colorado Springs.  
 Marr Grocery Co., H. A., Denver.  
 Martin Co., H. D., Denver.  
 May Co., clothing store, Denver.  
 Metropolitan Engine & Service Co., Denver.  
 Metropolitan Film Corporation, Denver.  
 Meyer Undertaking Establishments, Denver.  
 Mile High Photo Co., Denver.  
 Mint Garage, Denver.  
 Mitchell, Herbert R., Fort Collins.  
 Model Shoe Repairing Co., Denver.  
 Model Tire & Vulcanizing Co., Denver.  
 Modern Shoe Repair Co., Denver.  
 Moreland, C. F., Brush.  
 Morse Bros., Machine & Supply Co., Denver.  
 Motor Generator Co., Denver.  
 Mountain Coal Co. (Inc.), Pueblo.  
 Mountain States Telephone & Telegraph Co., Denver.  
 National Realty & Investment Co., Denver.  
 National Sign Co., Denver.  
 New York Machine & Welding Works, Denver.  
 Nick Springfield O. K. Shoe Shop, Denver.  
 Norton Buick Auto Co., Denver.  
 O'Harrow Ranch, Elizabeth.  
 Olathe Garage & Plumbing Shop, Olathe.  
 Olson, Arvid, contractor, Denver.  
 O'Malley Kelly Oil & Auto Supply Co., Denver.  
 Omer Land & Cattle Co., Wiggins.  
 Omeara-Green Auto Co., Denver.  
 Oplinger & Natales Shoe Store, Denver.  
 Oregon-California Corporation, Englewood.  
 Orvid-Olson Construction Co., Denver.  
 Out West Electric Co., Denver.  
 Palmer, Hunter, druggist, Canon City.  
 Park Floral Co., Denver.  
 Panatorium, Denver.  
 Patterson Shoe Co., Trinidad.  
 Poindexter Supply Co., Denver.  
 Porter Plumbing & Heating Co., Pueblo.  
 Postal Telegraph & Cable Co., Denver.  
 Powell, George, Las Animas.  
 Prey Bros., Live Stock Commission Co., Denver.  
 Provident Life & Trust Co., Denver.  
 Publishers' Press Room & Bindery Co., Denver.  
 Pueblo Auto Co., Pueblo.  
 Pueblo Carriage Works, Pueblo.  
 Pueblo Electrical Co., Pueblo.  
 Pueblo Motor & Sales Co., Pueblo.  
 Pueblo Shoe Repair Co., Pueblo.  
 Purcell, Lawrence M., Denver.  
 Randish, Sam, Trinidad.  
 Red Front Shoe Shop, Denver.  
 Relche, R. E., Denver.  
 Reid, J. G., Longmont.  
 Reliable Cleaners & Dyers, Denver.  
 Robertson, W. A., Denver.  
 Rodgers Live Stock Commission, Denver.  
 Royal Typewriter Co., Denver.  
 Ruse Stephen Auto Co., Colorado Springs.  
 St. Luke Garage, Denver.  
 Santa Fe Railroad Shops, La Junta.  
 Scully-Morris Motor Co., Denver.  
 Sedman Realty Co., Denver.  
 Service Truck Sales Co., Denver.  
 Sethman Electric Co., Denver.  
 Shoe Repair Shop, Denver.  
 Sherman Riggs Auto Repair Co., Pueblo.  
 Shubert Cigar Co., Trinidad.  
 Siegel-Champion Live Stock Commission Co., Denver.  
 Simon & Silver, Denver.  
 Sinton, Dr. J. R., Colorado Springs.  
 Smick, A. U., Welding Co., Denver.  
 Smith, L. C., Bros. Typewriter Co., Denver.  
 Smith, Phillip S., Denver.  
 Smith, Thomas H., Denver.  
 Smuggler Union Mining Co., Telluride.  
 Solis Cigar Co., Denver.  
 Stanley, H. L., Colorado Springs.  
 Star Shoe Repair Co., Denver.  
 Stearns-Rogers Manufacturing Co., Denver.  
 Strang Garage, Colorado Springs.  
 Studebaker Sales Co., Denver.  
 Stutz Motor Sales Co., Denver.  
 Swanson Auto Co., Denver.  
 Sweet, Causey, Foster & Co., Denver.  
 Swift Co., Denver.  
 Swift Packing Co., Denver.  
 Taggart, Frank D., Denver.  
 Taylor Shoe Repairing, Denver.  
 Temple Drug Co., Denver.  
 Thorney Auto Co., Denver.

Tire Sales Co., Denver.  
 Toedter, Ben., Auto Repair, Pueblo.  
 Tranway Co., Denver.  
 Triangle Cleaning & Dyeing Co., Denver.  
 Trinidad Light & Power Co., Trinidad.  
 Tritch Hardware Co., Denver.  
 Typewriter, The Shop, Denver.  
 Union Avenue Garage, Pueblo.  
 Union Health & Accident Co., Denver.  
 Union Pacific Railroad, Denver.  
 Union Stock Yards, Denver.  
 United Motors Service, Denver.  
 United States Fidelity & Guaranty Co., Denver.  
 United States Welding Works, Denver.  
 Uslick Funeral Home, Rocky Ford.  
 Vulcan Iron Works, Denver.  
 Warner Realty & Co., Colorado Springs.  
 Warner Realty & Co., Denver.  
 Wathen, Chas., & Co., Denver.  
 Webb Shoe Repair Co., Denver.  
 Weintraub, Sam, Denver.  
 Weiss Instrument Co., Denver.  
 Wester, Dr. E. N., Colorado Springs.  
 Western Auto Supply Co., Denver.  
 Western Chemical Group, Denver.  
 Western Clinic Association, Denver.  
 Western Colorado Power Co., Ouray.  
 Western Supply Co., Denver.  
 Western Typewriter Co., Denver.  
 Western Union Telegraph Co., Denver.  
 Wheeler Novelty Works, Denver.  
 Whiting, F., Denver.  
 Whitney Electric Co., Colorado Springs.  
 Williams Battery Service, Fort Morgan.  
 Windsor Garage, Windsor.  
 Winkler, F., Denver.  
 Wolber Car Manufacturing Co., Denver.  
 Wood, A. H., Denver.  
 Woolworth Store, Fort Collins.  
 Wright, Swann & Co., Denver.  
 Yellow Front Shoe Shop, Denver.  
 Yellowstone Production Co., Lakeside.  
 Zang Investment Co., Broomfield.

## NEW MEXICO.

A. T. & H. R. R., Raton.  
 A. T. & S. P. R. Co. Shop, Albuquerque.  
 Aemo Vulcanizing Works, Albuquerque.  
 Alarida Shoe Shop, Santa Fe.  
 Albuquerque Gas & Electric Co., Albuquerque.  
 Allen's Shoe Shop, Albuquerque.  
 American Garage, Albuquerque.  
 American Repairing Shop, Raton.  
 Amonett, E. T., Roswell.  
 Arno Hunting Electric Co., Albuquerque.  
 Auto Welding & Machine Shop, Albuquerque.  
 Bodrill Tire Co., Albuquerque.  
 Chauvin, A., Albuquerque.  
 City Electric Shoe Shop, Albuquerque.  
 City Welding Works, Albuquerque.  
 Condit, W. W., Albuquerque.  
 Day, Chas. K., Undertaking Co., East Las Vegas.  
 Frost & Frost, Albuquerque.  
 Guarantee Shoe Shop, Las Vegas.  
 Hauser, W. A. A., Albuquerque.  
 Henry Electric Shoe Shop, Clayton.  
 Houser's Saddlery, Albuquerque.  
 King Electric Shoe Shop, Albuquerque.  
 Madrid Shoe Shop, Albuquerque.  
 Martinez Publishing Co., East Las Vegas.  
 Morris, L. C., Albuquerque.  
 Mull, O. S., Santa Fe.  
 Murray, M. D., Louis, Silver City.  
 Nabs Electric Co., Albuquerque.  
 New State Repair Shop, Albuquerque.  
 Oldratie, John, Roton.  
 Passmore & Son, Thos. I., Albuquerque.  
 Phelps Dodge Corporation, Tyrone.  
 Plunkett Ranch, Moses.  
 Price Electric Co., Albuquerque.  
 Quickel Auto & Supply Co., Albuquerque.  
 Raton Shoe Shop, Raton.

Right Way Shoe Shop, Albuquerque.  
 Romero, U. D., Shoe Shop, Piasy Las Vegas.  
 Santa Fe Shop, Belen.  
 Santa Fe Railroad Shop, La Junta.  
 Santa Fe Water & Light Co., Santa Fe.  
 Shoe Hospital, Silver City.  
 Sloan Electric Co., Santa Fe.  
 Vasquez, E., Albuquerque.

## UTAH.

Anderson, J. Louis, Salt Lake City.  
 Association of Dentists, Salt Lake City.  
 Automotive Service Station, Salt Lake City.  
 Barker Bakery, Salt Lake City.  
 Bureau of Animal Industry, Salt Lake City.  
 Capitol Electric Co., Salt Lake City.  
 Chantry, Thomas, Wellington.  
 Chesman Automobile Co., Ogden.  
 Chigg, Frank, Auto Painting Co., Salt Lake City.  
 Coles Electric Co., Salt Lake City.  
 Dennis Co., Salt Lake City.  
 Diebold Electric Co., Salt Lake City.  
 Eagle Garage, Salt Lake City.  
 Edington Motor Car Mechanical Co., Salt Lake City.  
 Edwards Warden Motor Parts Co., Salt Lake City.  
 Electric Supply Co., Salt Lake City.  
 Farr Electric Service Co., Salt Lake City.  
 Federal System of Bakeries (Inc.), Salt Lake City.  
 Gold Shop, Salt Lake City.  
 Goodyear Shoe Repair Co., Salt Lake City.  
 H. & E. Ignition & Repair Co., Salt Lake City.  
 Higson & Rossiter Co., Salt Lake City.  
 Hoyle & Co., J. A., Salt Lake City.  
 Hyneer & Oyler Garage Co., Garland.  
 Inter-Mountain Electric Co., Salt Lake City.  
 International Smelting Co., Toole.  
 Johndahl Boiler Works, Salt Lake City.  
 Jud-Power Auto Co., Salt Lake City.  
 Knight Carriage & Auto Co., Salt Lake City.  
 Landers & Co., Salt Lake City.  
 Liberty Garage, Payson.  
 Lighting & Ignition Co., Salt Lake City.  
 Lincoln Garage, Salt Lake City.  
 Mazda Producing Co., Salt Lake City.  
 Merabelle Tailoring Co., Salt Lake City.  
 Moore, H. W., & Co., Salt Lake City.  
 Mutual Motors Co., Salt Lake City.  
 Nielson, Emar, Salt Lake City.  
 Occidental Life Insurance Co., Salt Lake City.  
 Peterson, Henry A., Salt Lake City.  
 Petty Garage, Salina.  
 Pierce Arrow Garage, Salt Lake City.  
 Regal Cleaning & Dyeing Co., Salt Lake City.  
 Reynolds, W. L., Co., Payson.  
 Royal Bakery Co., Salt Lake City.  
 Royal Shoe Repairing Co., Salt Lake City.  
 Salt Lake Accessories Co., Salt Lake City.  
 Salt Lake Cabinet & Fixture Co., Salt Lake City.  
 Smith, F. Paus Druw W., Salt Lake City.  
 Sommers Tire & Rubber Co., Salt Lake City.  
 Southern Bee & Honey Co., Cedar City.  
 Southern Pacific Railroad Shop, Ogden.  
 Thomas Electric Repair Co., Salt Lake City.  
 Unwood Typewriter Co., Salt Lake City.  
 United States Tire Company, Salt Lake City.  
 Utah Bill Posting Co., Salt Lake City.  
 Utah Copper Co., Garfield.  
 Utah Light & Traction Co., Salt Lake City.  
 Utah National Bank, Ogden.  
 Utah Plumbing & Heating Co., Ogden.  
 Utah Shoe Repairing Co., Salt Lake City.  
 Walker Electric Co., Ogden.

Wellington Auto Top Co., Salt Lake City.  
Western Optical Co., Salt Lake City.  
Whitehouse Drapery & Furniture Co., Salt Lake City.

## DISTRICT NO. 12.

## CALIFORNIA.

A. B. C. Generator Co., Los Angeles.  
A., T. & S. F. Railway Shops, Richmond.  
Abernathy Co., Berkeley.  
Adams & West, San Francisco.  
Advancement Southern Pacific Co., San Francisco.  
Aero-Battery Co., Los Angeles.  
Aetna Insurance Co., San Francisco.  
Alameda Battery Co., Alameda.  
Alameda Garage, Alameda.  
Allen, The Sign Man, Los Angeles.  
Allen, S. F. & Wiley B., Co., San Francisco.  
Alum Products Co., Oakland.  
American Bosch Magneto Co., San Francisco.  
American Motor Repair Co., San Francisco.  
American Railroad Express Co., San Francisco.  
Anthony (Inc.), Earl, San Francisco.  
Arend & Trueblood, Sacramento.  
Arnold, Harold, Co., Los Angeles.  
Art Floral Co., San Francisco.  
Atkinson, T. E., San Francisco.  
Atlas Manufacturing Co., Orlando.  
Auto Electric Co., San Francisco.  
Auto Electric Service Co., Lodi.  
Auto Electric Service Co., Oakland.  
Auto Electric Service Co., San Francisco.  
Auto Engineering Co., Los Angeles.  
Auto Fender & Radiator Works, San Francisco.  
Auto Sheet Metal Works, Los Angeles.  
Auto Style Co., San Francisco.  
Auto Truck & Tractor Co., Santa Rosa.  
Backes, H., Stockton.  
Baer-Hatt Co., Los Angeles.  
Bahmeyer, H. F., Durham.  
Bailey, W. F., Willits.  
Baker, F. E., & Sons, San Jose.  
Baker Iron Works, Los Angeles.  
Baker Ranch, Davis.  
Bakersfield Garage, Bakersfield.  
Ballard, Merrill O., Red Bluff.  
Bannich-Berkeley, C. J., Berkeley.  
Barlas, P., San Francisco.  
Beacon Light Co., Los Angeles.  
Beetler-Bilt Battery Co., Los Angeles.  
Besaw, Geo. A., Santa Rosa.  
Biddell, G. C., & Co., San Francisco.  
Black & White Shop, San Francisco.  
Blair, H. H., Oakland.  
Blue Bird Appliance Co., San Francisco.  
Bond & Goodwin, San Francisco.  
Boxall, James, Los Angeles.  
Brass Bros., San Francisco.  
Brewster, E. E., San Diego.  
Brown, Henry, San Francisco.  
Brunton, Robert, Studios, Los Angeles.  
Bunting, Mr., San Jose.  
Burbank, D. W., San Francisco.  
Burnett Manufacturing Co., Los Angeles.  
Bushnell Studios, Los Angeles.  
Byrne, James, San Francisco.  
California Central Creameries Co., San Francisco.  
California Garage, San Francisco.  
California Optical Co., San Francisco.  
California Orchard Co., King City.  
California Packing Corporation, San Francisco.  
California Sales Co., Los Angeles.  
California Shoe Repair Co., San Francisco.  
California Storage Battery Co., Chico.  
California State Highway Commission, San Francisco.  
California Taxi Co., San Francisco.  
California Telephone Co., Los Angeles.  
Camp Curry, Yosemite.  
Canet Co., Ventura.  
Carlson & Simpson, San Diego.  
Carson Glove Co., San Rafael.  
Cashe Creek Grave Co., San Francisco.  
Cattle Creek Ranch, Holtville.  
Chico Garage Co., Chico.  
Christenson, Ernest, San Francisco.  
City Garage, San Francisco.  
Clark Machine Works, San Francisco.  
Clay & Co., Sherman, San Francisco.  
Cleveland Tractor Co., San Francisco.  
Coast Counties Gas & Electric Co., Hollister.  
Coleman, Prof., Big Spur.  
Colombo, F., San Francisco.  
Connell, J. F., Los Angeles.  
Cook, N. N., Belling Co., San Francisco.  
Cook Mammoth Hatchery, Alhambra.  
Cooper, Coate & Casey, Los Angeles.  
Country Hortic. Comm., Visalia.  
Courtney & Flisk, Patterson.  
Crist, W. K., Santa Rosa.  
Cudahy Packing Co., Los Angeles.  
Daudo Studio, Los Angeles.  
Davidson, Frank, San Francisco.  
Davis, Edward, San Diego.  
Davis & Co., Herman, Sacramento.  
Davis Garage, Davis.  
Davis Taxi Service Co., Corona.  
Day, Thomas, San Francisco.  
Dayton Title Guarantee Building, Los Angeles.  
Dean Reversible Window Co., San Francisco.  
Dental William, San Francisco.  
Dessen Bros., Burlington.  
Diamond Match Co., Chico.  
Dowd, Al., San Francisco.  
Dragon Co., H., San Francisco.  
Draper & Engman, Los Angeles.  
Drew & Rosenthal, San Francisco.  
Duplex Printing Co., San Francisco.  
Edison Co., Los Angeles.  
Edwards, Mr., Ravendale.  
Electric Supply & Repair Co., San Francisco.  
Elite Tire & Auto Supply Co., San Francisco.  
Elitgre Ranch, El Cajon.  
Emerson Manufacturing Co., San Francisco.  
Enemack, L. H., San Francisco.  
Ettinger, R., San Francisco.  
Everhard, E. F. & Son, Los Angeles.  
Fairbanks Morse Co., San Francisco.  
Fairchilds, R. E., Redlands.  
Federal Telegraph Co., Palo Alto.  
Fink & Schindler, San Francisco.  
Fireproofing Products Co., Oakland.  
Fontana Land Co., Fontana.  
Fort Mason, c/o Gen. Shop, Office, San Francisco.  
Foster & Alfa Auto Shop, San Francisco.  
Fowler, Edw. M., Co., Lathrop.  
Fryas Manufacturing Co., San Francisco.  
Gas Eng. Machine Shop, San Luis Obispo.  
Gaskal Welding & Auto Works, Oakland.  
Gault, Chas. A., Los Angeles.  
Gemmill, David, Los Angeles.  
General Ignition Co., Los Angeles.  
Georges Vulcanizing Plant, San Francisco.  
Golden Gate Repair Shop, San Francisco.  
Goldman & Kaplan, San Francisco.  
Goldwyn Studios, Culver City.  
Goodhue & Davis Garage, San Mateo.  
Gordon, C. W., Co., San Francisco.  
Gould, F. D., Co., San Francisco.  
Grace Motor Car Co., Corona.  
Graham & Lamas Co., Sacramento.  
Great Western Power Co., San Francisco.  
Guill, J. H., Jr., Chico.  
Hall White Co., Oakland.  
Hambley, R. H., Co., San Francisco.  
Hamilton, T. A., San Francisco.  
Hampton, Jesse D., Los Angeles.  
Hanna, J. O., San Francisco.

- Hunt Auto Repair Co., San Francisco.  
 Hanson, N. M., Electric Co., San Francisco.  
 Harder, F. H., San Francisco.  
 Harris, L., Lancaster.  
 Harrison, F. B., San Diego.  
 Harrison, H. O., San Francisco.  
 Hartman Pacific Co., San Francisco.  
 Haussler, F. O., Los Angeles.  
 Haverly, Thomas Co., Los Angeles.  
 Hedges Laboratory, Los Angeles.  
 Herold's Shoe Store, San Jose.  
 Herrari Co., San Francisco.  
 Hester Shoe Repair Co., San Jose.  
 Hogan Lumber Co., Oakland.  
 Hogg & Gottscheel, Los Angeles.  
 Holstead, E. P., San Francisco.  
 Hooper Creamery Co., San Francisco.  
 Hopkins, G. H., Placena.  
 Horticultural Commission, Sacramento.  
 Hosford, Henry, Marysville.  
 Hotel Alexandria, Los Angeles.  
 Hotel St. Frances, San Francisco.  
 Hubbard Auto Sales Co., Los Angeles.  
 Hubert, Alfred, San Francisco.  
 Hughton Co., Oakland.  
 Huntington Park Garage, Los Angeles.  
 Geo. P. Ide & Co., Los Angeles.  
 Ince Studios, Thos., Culver City.  
 Independent Auto Paint Co., Fresno.  
 International Hair Co., Los Angeles.  
 Jenson Creamery Machinery Co., Oakland.  
 Johnson & Richman, San Francisco.  
 Johnson, H. S., Oakland.  
 Jonsson Shoe Repair, Julius, Los Angeles.  
 Joost Bros., San Francisco.  
 Kairnes, H. E., Los Angeles.  
 Kankakee Ranch, Newman.  
 Kaplan, A. V., shoe repairing, San Francisco.  
 Karemp, H. M., Los Angeles.  
 Kay & Burbuck, Los Angeles and Long Beach.  
 Kearney Café and Restaurant, San Francisco.  
 Kelly Auto Repair Shop, San Francisco.  
 Keys & Hatley, Denuba.  
 Kilgore & Hammon, Drs., San Francisco.  
 King River Park Co., Fresno.  
 Kintzelman, J., Berkeley.  
 Kleiber Truck Co., San Francisco.  
 Kraus, B., San Francisco.  
 Kuehne, Carl, Los Angeles.  
 Ladehoff, Henry A., Windsor.  
 Lando Clothing Co., San Francisco.  
 Larkins & Co., San Francisco.  
 La Sevillana, San Francisco.  
 Lavelle & Flatings, San Francisco.  
 La Vene, N., San Francisco.  
 Lee, Don, Coach & Body Works, Los Angeles.  
 Levering, James, Ravendale.  
 Lewis, Dr., Oakland.  
 Lewis, S. F., barber, Oakland.  
 Embyn Lewys, San Francisco.  
 Liberty Auto Co., East Oakland.  
 Lietz & Co., San Francisco.  
 Lockwood Advertising Co., Los Angeles.  
 Los Angeles Addressing & Mailing, Los Angeles.  
 Los Angeles Auto Engineering Co., Los Angeles.  
 Los Angeles Co., road agent, Los Angeles.  
 Los Angeles Ship Building & Dry Dock Co., San Pedro.  
 Lubenstein, R., San Francisco.  
 Lucurto Motor Co., San Jose.  
 McAdams Co., M. V. B., San Francisco.  
 McCahey Co., Grant, Los Angeles.  
 McCaspey Register Co., San Francisco.  
 McClenrehan, S. P., Palo Alto.  
 McCormick Steamship Co., San Francisco.  
 McKann, H. K., San Francisco.  
 McKarley, William, Oakland.  
 MacDonald, Mayfield & Long, Vallejo.  
 Mackay & Austin, Oakland.  
 Mr. Malloy, Ocean Park.  
 Mansfeldt, Hugh, San Francisco.  
 Mansfield, I. W., Oakland.  
 Maple Leaf Garage, Chico.  
 Marsh Drug Store, San Diego.  
 Marshall & Marshall, San Francisco.  
 Maschvish, S. J., San Jose.  
 Mathews, Mrs. R. E., San Pedro.  
 Mayhew, Thomas Coyle.  
 Meiner, Carl, Pija.  
 A. Melster & Sons, Sacramento.  
 Merchants Calculating Machine, San Francisco.  
 Mercury Newspaper Co., Madera.  
 Millard, Edward, Los Angeles.  
 Miller's Carburetor Co., Los Angeles.  
 Miller Manufacturing Co., E. A., Los Angeles.  
 Miner Sargent Barre, San Francisco.  
 Mission Woolen Manufacturing Co., Santa Ana.  
 Modern Battery & Electric Co., Coalinga.  
 R. Mohr & Sons, San Francisco.  
 Molley & Co., F. E., Los Angeles.  
 Molley Shoe Shop, Edward, Venice.  
 Monarch Garage, San Francisco.  
 Moore Shipbuilding Co., Los Angeles.  
 Morey Dental Laboratory, San Francisco.  
 Morris Ranch, Woodland.  
 Muller, Otto, Madera.  
 Nash Motor Co., San Francisco.  
 National Ice & Cold Storage Co., San Francisco.  
 New York Lubricating Oil Co., San Francisco.  
 New Market, San Francisco.  
 Nixon, Dr. I. T., San Francisco.  
 Oakland Bank of Savings, Oakland.  
 Oakland Ice & Cold Storage Co., Oakland.  
 Oliver Manufacturing Co., Oakland.  
 Oliver Rubber Tire Co., San Francisco.  
 Olympic Garage, San Francisco.  
 Orange Blossom Candy Factory, San Francisco.  
 Otis Elevator Co., Los Angeles.  
 Owl Garage, San Francisco.  
 Pacific Commerce Co., San Francisco.  
 Pacific Dental Laboratory, Sacramento.  
 Pacific Gas & Electric Co., San Francisco.  
 Pacific Manifold Book Co., Berkeley.  
 Pacific Telephone & Telegraphy Co., San Francisco.  
 Pacific Wasserman Laboratory, Los Angeles.  
 Pacific Waste Products Co., Oakland.  
 Parks, Oliver, Davis.  
 Paulson Grill, San Francisco.  
 Peacock Motor Co., San Francisco.  
 Peck & Hill Furniture Manufacturing Co., Los Angeles.  
 Peninsula Rapids Transfer Co., Burlingame.  
 People's Water Co., San Francisco.  
 Perley, F. G., Los Angeles.  
 Perrin, Edwin, San Francisco.  
 Peters & Co., San Francisco.  
 Phillips Ranch, Ione.  
 Pierce-Arrow Garage, Sacramento.  
 Pierrem, Antonio, Hollywood.  
 Pig & Whistle Candy Co., San Francisco.  
 Pioneer Market, San Francisco.  
 Poroshen, Nicholas, Sacramento.  
 Potrero Auto Repair Shop, San Francisco.  
 Princess Theater, Los Angeles.  
 Prough Bros. Garage, Hanford.  
 Provident Life & Trust Co., San Francisco.  
 Red Ledge Mining Co., North Columbia.  
 Reed & Rattan Manufacturing Co., Los Angeles.  
 Reisner & Honey, San Francisco.  
 Republic Motor Truck Co., Los Angeles.  
 Reversible Window Co., San Francisco.  
 Rialto Building, San Francisco.  
 Richmond Record-Herald, Richmond.  
 Rose, Lou H., San Francisco.  
 Royal Type, Co., San Francisco.  
 L. Ruffeux, San Francisco.  
 Russell Ranch, Oroville.  
 Southern Pacific Railroad Shops, San Francisco.  
 Salinas Valley Ice Co., Salinas.  
 San Francisco Call, San Francisco.  
 San Francisco Chronicle, San Francisco.  
 San Francisco Examiner, San Francisco.  
 San Pedro Co. Transfer, San Pedro.  
 Santa Anita Ranch, Santa Anita.



Schlam, M. S., San Francisco.  
 Schmidt, R., San Francisco.  
 Schmidt Lithographic Co., San Francisco.  
 Schueer & Scheeline, San Francisco.  
 Scott, H. L., Niles.  
 Scott Co., San Francisco.  
 Scott & Crickton, San Francisco.  
 Seaside Oil Co., Summerland.  
 Service Ignition Works, Los Angeles.  
 Sespee Ranch, Elmore.  
 Severn Garage, Burlingame.  
 Shaffer, Ben, Marysville.  
 Sheriff's Office, San Diego.  
 Shore Acres Dairy, San Leandro.  
 Simon, Julien, Farm, Corosl.  
 Sister & Sister, San Francisco.  
 Skinner, C. J.  
 Slough, J. P., Los Angeles.  
 Small, G. L., Dinuba.  
 Small Co. (Inc.), L. K., Los Angeles.  
 Smith, Mrs. Malle, Independence.  
 Snow, John F., Dyeing & Cleaning, San Francisco.  
 Southern California Edison Co., Los Angeles.  
 Southern California Hardware Manufacturing Co., Los Angeles.  
 Southern California Telegraph Co., Los Angeles.  
 W. P. Splers, Santa Rosa.  
 Splidordf Electric Co., San Francisco.  
 Square Deal Furniture Co., San Diego.  
 Square Deal Tire Co., San Diego.  
 Stahl Co., G. W., San Francisco.  
 Standard Oil Co., Point Richmond.  
 State Highway Commission, San Francisco.  
 State Industrial Accident Commission, San Francisco.  
 Sternberg, Mr., San Francisco.  
 Stone & Webster, San Francisco.  
 Strong, S., San Francisco.  
 Sullivan, C. E. (Mission Hall), Yuba.  
 Superior Tire & Repair Co., San Francisco.  
 Swin Ranch, Dave, Vacaville.  
 Tate Motor Sales, Oakland.  
 Thomas, C. W., Woodland.  
 Thompson, Lawrence C., San Francisco.  
 Thrane Bros., San Francisco.  
 Thylln, A., San Francisco.  
 Times Square Auto Supply Co., San Francisco.  
 Tire & Rubber Co., Oakland.  
 Torrison, J. J., Oakland.  
 Trade Extension Department, Los Angeles.  
 Underwood Typewriter Co., San Francisco.  
 Union Lumber Co., Bakersfield.  
 United Dyers & Cleaners, Los Angeles.  
 United States Electric Co., Los Angeles.  
 United States Forestry Service, Hot Springs.  
 United States Tractor & Auto Exchange, Los Angeles.  
 United States Tractor, Truck & Auto Engineers, Los Angeles.  
 Universal Film Co., Los Angeles.  
 Verhelle Bros. City Nursery, Santa Barbara.  
 Vermont Marble Works, San Francisco.  
 Victory Motor Co., Niles.  
 Vidlecoq, San Francisco.  
 Von Salzen Co., Oakland.  
 Von Sternbergs, San Francisco.  
 Wagner, Edward, San Francisco.  
 Wagner, Max, San Francisco.  
 Waldrow, Earl B., San Francisco.  
 Wallace, Robert, San Francisco.  
 War Risk Insurance Bureau, San Francisco.  
 Watts Electric Co., San Francisco.  
 Wayne Strong Shoe Repair Shop, Pasadena.  
 Weigle, C. C., San Francisco.  
 West Coast Lumber Co., San Francisco.  
 Western Auto Electric Co., Fresno.  
 Western Gas & Electric Co., Chico.  
 Western Lithograph Co., Los Angeles.  
 Western Soap Products Co., Modesto.  
 Western States Gas & Electric Co., Stockton.  
 Westinghouse Electric Co., San Francisco.

Westinghouse Electric & Manufacturing Co., Los Angeles.  
 Weston, H. D., Alameda.  
 Wholesale Typewriter Co., San Francisco.  
 Willard Service Station, San Francisco.  
 Willys Overland Co., San Francisco.  
 Wilson & Co., Los Angeles.  
 Wolf & Bird, San Francisco.  
 Wurflitzer Co., Rudolph, San Francisco.  
 Yale Market, Marysville.  
 Yuba Manufacturing Co., Marysville.  
 Zenith Carburetor Co., Los Angeles.

NEVADA.

Cameras Corporation, Sparks.  
 Menardi-Judd Co., Reno.  
 Norton, E. G., Fallon.  
 Pardee, Joseph, Reno.  
 Reno Optical Co., Reno.  
 Swanson, A., Reno.  
 Warren, Harry, Webuska.

ARIZONA. --

Arizona's Pioneer Home, Prescott.  
 Button & Leonard, Phoenix.  
 Brooks Garage, Bisbee.  
 Casa Grande Garage, Casa Grande.  
 Davis Realty Co., Phoenix.  
 Ferguson-Keeler Co., Phoenix.  
 Foster & Foster, Globe and Miami.  
 Journal Miner, Prescott.  
 Lowell Auto Co., Lowell.  
 Music Store, Prescott.  
 Nash Motor Co., Tucson.  
 R. D. Roper Motor Co., Glendale.  
 Sonora Development Co., Nogales.  
 State Engineers Shops, Phoenix.  
 State Highway Department, Phoenix.  
 Western Machinery Co., Tucson.  
 Whitney, J. F., Undertaking Establishment, Phoenix.  
 Wilson Studio, Tucson.  
 Wolf, Walter, Phoenix.

DISTRICT NO. 13.

WASHINGTON.

Acme Electric Co., Seattle.  
 Acme Sign Co., Seattle.  
 Ahrens & Ahrens, Spokane.  
 Alderwood Navor Dem. Fram., Seattle.  
 Allen General Tire Co., Seattle.  
 Allstrum Printing Co., Tacoma.  
 Almira Electric Co., Everett.  
 Astoria Iron Works, Seattle.  
 Bades Bros., Walla Walla.  
 Bailey, A. R., Seattle.  
 Bayley's Garage, Seattle.  
 Berry Arts & Crafts Store, Seattle.  
 Binyon Optical Co., Seattle.  
 Black Manufacturing Co., Seattle.  
 Blanda, Joe, Spokane.  
 Blossom & Smith, Seattle.  
 Bonnell's Nursery, Seattle.  
 Bradley, H. D., Kent.  
 Bremerton Searchlight Co., Bremerton.  
 Brinkley Supply Co., Georgetown.  
 Bryant, Dr. Frank A., Seattle.  
 Builders Supply Co., Everett.  
 Butler Contracting Co., Seattle.  
 Chicago, Milwaukee & St. Paul Railway, Seattle.  
 California Oil Co., Seattle.  
 Carmichael Dairy Farm, Yakima.  
 Carnation Milk Co., Stanwood.  
 Castleton Thompson Co., Seattle.  
 Central Sign Co., Seattle.  
 Chandler (Inc.), Fred, Yakima.  
 Chilberg, R. R., Seattle.  
 Church Advertising Agency, John, Seattle.  
 City Car Shops, Georgetown.  
 City Electric Co., Seattle.  
 City Light & Power Co., Seattle.  
 City Meter Department, Seattle.  
 City Park Board, Seattle.

Clarke Co., J. M., Seattle.  
 Coates Electric Works, Sidney N., Seattle.  
 Coburn & Bristol, Spokane.  
 Coleman Electric Co., Tacoma.  
 Columbia Optical Co., Spokane.  
 Cow Testing Association, Seattle.  
 Culbertson, Grote, Rankin Co., Spokane.  
 Culton, Moylan, Kelley Auto Co., Seattle.  
 Currin Greene, Shoe Co., Seattle.  
 Dalton Adding Machine Co., Seattle.  
 Davis, Dr. Geo. A., Seattle.  
 Deer Park Lumber Co., Deer Park.  
 De Long, H. B., Co., Spokane.  
 Diamond Carriage Co., Spokane.  
 Diamond Cut Glass Co., Seattle.  
 Diamond Ice & Storage Co., Seattle.  
 Dinklespell, L., Co. (Inc.), Seattle.  
 Duncan & Sons, Seattle.  
 Eagle Brass Foundry Co., Seattle.  
 Eastlake Sheet Metal Works, Seattle.  
 Electric Co., Seattle.  
 Electric Construction Co., Tacoma.  
 Elite Studio, Spokane.  
 Elsworth Shoe Shop, Pullman.  
 Empire Electric Service Co., Spokane.  
 Empire Ice & Shingle Co., Spokane.  
 Empire Theater, Anacortes.  
 Enierim, George C., Seattle.  
 Everett Sash & Door Co., Everett.  
 Firestone Truck Co., Seattle.  
 Flaungan Shoe Shop, Tacoma.  
 Foreman, Ben, Wakato.  
 Forester & Schroeder Shoe Co., Seattle.  
 Foss Electric Co., Brewerton.  
 Foster & Kleiser, Seattle.  
 Frazer & Patterson, Seattle.  
 Frost & Seynel, Seattle.  
 General Tire Co., Seattle.  
 Gommoll Co., E. L., Seattle.  
 Great Northern Railroad, Everett.  
 Gulowson Grel Engineering Co., Seattle.  
 Hawkins Co., Elvin H., Seattle.  
 Henderson, Austin O., Spokane.  
 Hennington & Co., Tacoma.  
 Henson, Lee, Repair Shop, Seattle.  
 Hollywood Farm, Hollywood.  
 Holmquist, J. V., Everson.  
 Hoper-Kelly, Seattle.  
 Hoskins Machine Shop, Seattle.  
 Hubbell Auto Sales Co., Bay City.  
 Hughson, W. J., Seattle.  
 Hutton-Tingling Co., Spokane.  
 Inland Garage, Hanford.  
 Jenson Bros., Seattle.  
 Johns-Mansville & Co., Seattle.  
 Johnson & Norton Co., Seattle.  
 Kelley Clarke Co., Spokane.  
 Kilbourne & Clark Manufacturing Co., Seattle.  
 Kilner & Sons Co., Spokane.  
 La Grande Electric Co., Seattle.  
 Lamke Fuel Co., Seattle.  
 Liberty Buildings, Dentists, Liberty.  
 Liberty Shoe Repair Shop, Spokane.  
 Linden Machine & Tool Co., Seattle.  
 Little Bee Hive (Inc.), Seattle.  
 Lockon-Shelton Co., Seattle.  
 Loka, P. L., Shoe Repair, Seattle.  
 Ludlow, Charles H., Elk.  
 McCullough, Craig, Dentist, Seattle.  
 McGoldrick Lumber Co., Spokane.  
 McGregor Dental School, Laboratory, Seattle.  
 MacDougall & Southwick Co., Seattle.  
 Madison Shoe Shop, Seattle.  
 Markey Machine Works, Seattle.  
 Metropolitan Audit Co., Seattle.  
 Metropolitan Press Co., Seattle.  
 Metropolitan Theater, Seattle.  
 Metropolitan Tire Co., Seattle.  
 Meyer, Jos., & Co., Seattle.  
 Middleton's Barber Shop, Seattle.  
 Milwaukee Railway, Seattle.  
 Morris Safe & Lock Co., Spokane.  
 Morrison Mill Lumber Co., Blaine.  
 Motion Picture Operator Union, Seattle.  
 Municipal Street R. R. Co., Seattle.  
 Nelson, Frederick, Seattle.  
 Nelson Painting & Decorating Co., Seattle.  
 Nelson-Robinson Co., Yakima.  
 Nixon Kimbell Co., Spokane.  
 Northern Pacific Machine Shop, Tacoma.  
 Northern Pacific Railroad, Pasco.  
 Northwest Auto Electric Co., Bellingham.  
 Northwest Furniture Manufacturing Co., Seattle.  
 Norton Co., H. R., Seattle.  
 O'Donnell Storage Battery Service Station, Seattle.  
 Ohio Dental Parlors, Seattle.  
 Olalla Auto Repair Shop, Olalla.  
 Olsen & Warren, Seattle.  
 Pacific Coast Welding Co., Seattle.  
 Pacific Fruit & Produce Co., Seattle.  
 Pacific Hog Ranch, Kirkland.  
 Pacific Steamship Co., Seattle.  
 Pallady Welding Co., Seattle.  
 Pathe Exchange Co., Seattle.  
 Patterson, M. F., Dental Supply Co., Seattle.  
 Peck Towboat Co., Seattle.  
 Peterson & Fritz, Seattle.  
 Pinella, M., Tailoring, Seattle.  
 Pitchford Tire Shop, Seattle.  
 Power Machine Works, Seattle.  
 Public Library, Seattle.  
 Public Service Commission, Olympia.  
 Puget Sound Hat Factory, Seattle.  
 Puget Sound Milling Co., Tacoma.  
 Queen City Optical Co., Seattle.  
 Rattan Furniture Co., Seattle.  
 Regal Dental Parlors, Seattle.  
 Richmond Hotel Co., Seattle.  
 Riegel Bros., Spokane.  
 Riggs Optical Co., Seattle.  
 Rosala Bros., Seattle.  
 Running Co., B. J., Mount Vernon.  
 S. O. S. Garage, Seattle.  
 Sander Prentice Corporation, Spokane.  
 Sarda Motor Co., Seattle.  
 Schneider's Art Gallery, Seattle.  
 Seattle Light & Power Co., Seattle.  
 Seattle Municipal Railroad, Seattle.  
 Seattle Sign Co., Seattle.  
 Seattle Works, Seattle.  
 Sella Co., N., Seattle.  
 Shanplin & Parker, Seattle.  
 Sherwood, Edgar C., Spokane.  
 Shield Livengood Motor Co., Sequim.  
 Shoe Hospital, Spokane.  
 Smith Electric Co., Z. A., Tacoma.  
 Snoqualmie Forest Service, Darrington.  
 Sora & Harrison, Seattle.  
 Speck Bulck Co., Seattle.  
 Splittorf Electric Co., Seattle.  
 Spokane Surgical Supply Co., Spokane.  
 Spokane Tire Shop, Spokane.  
 Stanberry, Dr. C. J., Seattle.  
 Star Sheet Metal Works, Seattle.  
 Stettler Paper Box Factory.  
 Stoneway Garage, Seattle.  
 Stricklin, C. L., Undertaker, Centralia.  
 Stubb, J. T., & Co., Seattle.  
 Stubblefield, F. M., Walla Walla.  
 Studebaker Agency, Yakima.  
 Studebaker Garage, Seattle.  
 Summer Iron Works, Everett.  
 Sunset Electric Co., Seattle.  
 Sunset Electric Shoe Factory, Spokane.  
 Sunset Motor Co., Spokane.  
 Tacoma Cabinet Works, Tacoma.  
 Tacoma Dental Laboratory, Tacoma.  
 Tacoma Electric Fixture Co., Tacoma.  
 Thomas & Ingram Garage, Yakima.  
 Triangle Electric Co., Seattle.  
 Tull & Gibbs Co., Spokane.  
 United Dental Parlors, Seattle.  
 United Motors Service, Seattle.  
 Universal Auto Co., Seattle.  
 Universal Electric Co., Spokane.  
 Universal Shoe Repair Shop, Seattle.  
 Valley Rubber Co., Yakima.  
 Van Dyke Laboratory, Seattle.  
 Varsity Garage, Seattle.  
 Vogler, H. C., Hatton.  
 Walker, Claude H., Enumclaw.  
 Wallace Candy Co., Seattle.  
 Washington Shoe Co., Seattle.  
 Washington Tire & Rubber Co., Spokane.  
 Washington Water Power Co., Spokane.

We Serve Auto Co., Seattle.  
 Webster & Stevens, Seattle.  
 Welssenborn Decorating Co., Seattle.  
 Wenatchee Gas & Electric Co., Wenatchee.  
 Western Electric Co., Seattle.  
 Western Safety Service, Seattle.  
 Weyhauser Lumber Co., Everett.  
 Wheeler & Osgood Lumber Co., Tacoma.  
 Whiton Hardware Co., Seattle.  
 Wicksnith-Whitehead, Seattle.  
 Wiles, Fred, Contractor, United States Mail Department.  
 Willys Overland Co., Spokane.  
 Yakima Art Co., Yakima.  
 Yakima Binding & Printing Co., Yakima.  
 Young Printing Co., A. B., Tacoma.

## OREGON.

Albers Bros. Milling Co., Portland.  
 Apple City Electric Co., Hood River.  
 Auchair, W. M., Auto Mechanism & Repair, Echo.  
 Barrett, W. B., Heppner.  
 Bollow & Wright, Portland.  
 Bradley Co., Alexander, Portland.  
 Broadway Dye Works, Portland.  
 Central Motor Co., Bend.  
 Chanslor & Lyon, Portland.  
 Chilton Service Station, Portland.  
 City Auto Laundry & Garage, Portland.  
 City of Portland Engineering, Portland.  
 City Street Cleaning Department, Portland.  
 Coast Steel & Machinery Co., Portland.  
 Coffee & Conway, Portland.  
 Collins Cigar Store, Portland.  
 Columbia Battery Co., Portland.  
 Crown Mills, Portland.  
 Davies Studio, Portland.  
 Dinges, William.  
 Dodge, W. F., Corvallis.  
 Doernbecker, Furniture Factory, Portland.  
 Dorris, George A., Springfield.  
 Early Manufacturing Co., Portland.  
 Eastern & Western Lumber Co., Portland.  
 Economy Shoe Co., Pendleton.  
 Electro Painless Dentists, Portland.  
 Folstein Furniture Co., Portland.  
 Film Co., Portland.  
 Glasser Construction Co., Portland.  
 Hammond Lumber Co., Mills City.  
 Heldel, F. G., Summit.  
 Hillsboro Battery Service Station, Hillsboro.  
 Hotel Portland, Portland.  
 Iris Apartments (steam engineering), Portland.  
 Jagger-Sproufe Co., Portland.  
 Kerns, James & Abbott, Portland.  
 Kidwell & Caswell Co., Portland.  
 King Fisher Mattress Co., Portland.  
 Kirk & McKern, Albany.  
 Leck Co., C. E., Portland.  
 Malstrong Avenue Repair Co., A., Portland.  
 Martin & Campbell, Portland.  
 Meir & Frank Co., Portland.  
 Miller, Edward A., Portland.  
 Morris Bros., Portland.  
 Motor Service Co., Dallas.  
 Nicolae & Neppack.  
 Niklas & Son, Portland.  
 Niner & Reed Co., Tillamook.  
 North Pacific Den.  
 Northwest Electric Co., Portland.  
 North West Turpentine Co., Portland.  
 O. W. R. & N., Portland.  
 Oregon Auto Top Co., Portland.  
 Oregon Brass Works, Portland.  
 Oregon Welding Co., Portland.  
 Pacific Export Lumber Co., Portland.  
 Pacific Inter. Co., Portland.  
 Portland Boiler Works, Portland.  
 Portland Evening Telegram, Portland.  
 Portland Lumber Co., Portland.  
 Portland Radiator Co., Portland.  
 Portland Railway Light & Power Co., Portland.  
 Portland Railway & Telegraph Institute, Portland.  
 Reynolds, Lee, La Grande.

Riley, H. R., Bend.  
 Rolston Debe Co., Portland.  
 St. Helena Lumber Co., Portland.  
 Shenlin Hixon Co., Bend.  
 Southern Pacific Co., West Selo.  
 Standard Oil Co., Portland.  
 Street Cleaning Department, Portland.  
 Sunset Auto Repair Co. (Inc.), Portland.  
 Underwood Typewriter Co., Portland.  
 Union Laundry Co., Portland.  
 Union Oil Co. of California, Portland.  
 United States Custom Service, Portland.  
 United States Electric Co., Portland.  
 Walker Electric Works, Portland.  
 Washington Slide Co., Portland.  
 Wildman Tobacco Co., Portland.  
 Willard Commission Co., Portland.  
 Willamette Iron & Steel Co., Portland.  
 Willamette Valley Transportation Co., Salem.  
 Willow Craft Furniture Co., Orenco.

## IDAHO.

Bassett, W. I., District Engineer, Coeur d'Alene.  
 Bulck, Hugo, Co., Moscow.  
 Greens & Higgson, Pocatello.  
 Idaho Power Co., Boise.  
 Irrigation State Reclamation Service, Boise.  
 Judd Motor Corporation, Rigby.  
 Kimberly Milling Co., Kimberly.  
 Oregon Short Line Railroad Co., Pocatello.  
 Randall-Dodd Automobile Co., Boise.  
 Randall's Garage, Filer.  
 Robert Machine Works, Pocatello.  
 Rutledge Timber Co., Coeur d'Alene.  
 Second Street Garage, Coeur d'Alene.  
 Superior Honey Co., Idaho Falls.  
 Toggery (Inc.), Blackfoot.  
 Tourtelotte & Hummell, Boise.  
 Trist Auto Co., Pocatello.  
 Weaver, Dr. A. E., Boise.  
 Western Ignition Co., Boise.

## DISTRICT NO. 14.

## TEXAS.

A. & O. Garage, Dallas.  
 Acme Brick & Supply Co., Dallas.  
 Acme Cleaning & Pressing Co., San Antonio.  
 Adams, James K., Houston.  
 Adams & Adams, San Antonio.  
 Adolphus Hotel Co., Dallas.  
 Alamo Lumber Co., Abinal.  
 Alexandria Garage, Tyler.  
 Alexander Lumber Co., Fort Worth.  
 Allen Co., Dallas.  
 Alvin Light & Ice Co., Alvin.  
 Alvin Plant Farms, Alvin.  
 American Cleaner, Waco.  
 American Construction Co., Houston.  
 American Shoe Shop, Waco.  
 American Railway Express Co., Fort Worth.  
 Amicable Life Co., Waco.  
 Anderson Co., A. J., Fort Worth.  
 Anderson Elec. Work, San Antonio.  
 Anderson's Laboratory, Fort Worth.  
 Apperson Authorized Service & Parts Co., Dallas.  
 Asheroff, B. F. & Sons, Sulphur Springs.  
 Attidi, A. J., Austin.  
 Auto Electric Co., Dallas.  
 Auto Owners Co., Austin.  
 Auto Painting & Top Works, Houston.  
 Auto Repair Shop, Waco.  
 Avery Co. of Texas, Beaumont.  
 Avery Co. of Texas, Dallas.  
 Aviation Repair Depot, Dallas.  
 Baggett, T. M., San Augustine.  
 Barbers Supply Co., Waco.  
 Barker System of Bakeries, Houston.  
 Bates Adjustment Co., Dallas.  
 Battery Service Co., Austin.  
 Bazzell & Bazzell, Longview.  
 Beard & Stone, Waco.

- Beaumont Dry Docks & Ship Yards, Beaumont.  
 Beazley Auto Co., Denison.  
 Behrens Drug Co., Waco.  
 Herringer-Norton Co., Houston.  
 Beyer, A. F., Typewriter Co., San Antonio.  
 Blair & Saddleson, Fort Worth.  
 Booker, O. C., San Antonio.  
 Boren-Stewart Wholesale Grocery, Dallas.  
 Borne & Boren, Dallas.  
 Bounds, H. W., Dallas.  
 Branham Repair Garage, Temple.  
 Brazos Electric Co., Waco.  
 Brazos Valley Cotton Mills, Waco.  
 Brenham Compress Oil & Manufacturing Co., Brenham.  
 Brewer Undertaking Co., Dallas.  
 Bright's Garage, Macgdoches.  
 Brim, Photographer, Texarkana.  
 Brock, C. L., Houston.  
 Brown Auto Co., Dallas.  
 Brown-Woods Electric Co., Houston.  
 Bruck Dry Cleaning Co., Waco.  
 Brush Electric Co., Galveston.  
 Bulck Motor Co., Dallas.  
 Bureau of Animal Husbandry Industry, Fort Worth.  
 Bureau of Market, Waco.  
 Burn & Roundtree, Houston.  
 Burnett, J. B., Paris.  
 Butler Brothers, Dallas.  
 Callahan, S. X., San Antonio.  
 Callan, Jos. P., Garage, Austin.  
 Camp Dick Garage, Dallas.  
 Camp Street Garage, Dallas.  
 Campbell Garage, Palestine.  
 Campbell State Bank, Palestine.  
 Capps, Archie, Fort Worth.  
 Carter, Otto, Sweetwater.  
 Case, J. I., Waco.  
 Castaneda, Anthony, Victoria.  
 Central Texas Battery Co., Waco.  
 Chester Pump Station, Chester.  
 Chevrolet Motor Co. of Texas, Fort Worth.  
 Circle Auto Men Association, Dallas.  
 Citizens National Bank, Austin.  
 City Cleaning & Dye Works, El Paso.  
 City of Dallas, Dallas.  
 City Garage, Bowie.  
 City Garage, Longview.  
 City Garage Supply Co., Alvin.  
 City of Greenville, Greenville.  
 City Water Works, Fort Worth.  
 Cochran Brokerage Co., Fort Worth.  
 Columbia Garage, El Paso.  
 Columbia Service Station, Fort Worth.  
 Columbia Storage Battery & Ignition Co., El Paso.  
 Coming Shoe Shop, Dallas.  
 Cook-Boyd Motor Co., Fort Worth.  
 Cotton Belt Railroad Station, Greenville.  
 Cotton Belt Railroad Station, Pittsburg.  
 County Clerk of Bell County, Belton.  
 County Attorney, Assistant, Wichita Falls.  
 Craig, Fred, San Antonio.  
 Crescent Motor Co., Bonham.  
 Crespi & Co., Waco.  
 Cripple Shoe Shop, Paris.  
 Cruger Co., Waco.  
 Cunningham, W. H., Austin.  
 Dabney Service Station, Cisco.  
 Dallas Branch Dalton Adding Machine Co., Dallas.  
 Dallas Heating & Ventilating Co., Dallas.  
 Dallas Plumbing Co., Dallas.  
 Dallas Power & Light Co., Dallas.  
 Dallas Typewriter & Supply Co., Dallas.  
 Danneman Shoe & Harness Shop, Paris.  
 Darrow, Jake M., Cotton Co., Houston.  
 Deal & Hyatt, Arlington.  
 Dean, Granville M., Dallas.  
 Delco Lighting Ignition Co., Dallas.  
 Denton Record-Chronicle, Denton.  
 Depot of Santa Railroad, Post.  
 Diamond Auto Supply Co., Dallas.  
 Diamond Motor Co., Dallas.  
 Diamond Tire Service, Dallas.  
 Dietz Electric Co., Dallas.  
 Dittlinger Lime Co., N. Braunsfels.  
 Dixie Mold & Rubber Co., Dallas.  
 Dodge Service Station Sulphur Springs.  
 Doerr & Witliff Insurance Agents, Brownwood.  
 Duke, N., Garage, Dallas.  
 Duke Rubber Co., Dallas.  
 Echols Bros., Fort Worth.  
 Edison Dry Goods Co., Corpus Christi.  
 Edmond Auto Co., Waco.  
 Edwards Co., E. B., Crowell.  
 Edwards Wheel & Body Works, Dallas.  
 Elder, Will T., Beaumont.  
 Electric Specialty Co., Beaumont.  
 El Paso Battery & Ignition Co., El Paso.  
 El Paso Port of Entry, El Paso.  
 Ernest & Ernest, Dallas.  
 Eltelte-Dixon Undertaking Co., Waco.  
 Eureka Cleaning & Dyeing Co., El Paso.  
 Ever Ready Tire Service Co., Fort Worth.  
 Ewing, O. L., Dallas.  
 Exide Battery Co., Dallas.  
 Exner Tailoring Co., Ft. Worth.  
 Farmer, The (R. F. D. Brasher Works), El Paso.  
 Farmer's & Merchant National Bank, Abilene.  
 Federal Grain Supervisor, Fort Worth.  
 Federal Reserve Bank, Houston.  
 Federal Sales Co., San Antonio.  
 Ferrell Radiator Co., I. L., Greenville.  
 Ferris-Dunlap Co., Dallas.  
 Fillzolo Shoe Shop, Houston.  
 Fine Arts Shop, El Paso.  
 First National Bank, Rhoma.  
 Fishburn Motor Co., Dallas.  
 Fisher & Fisher, Dallas.  
 Fleischmans Yeast Co., Dallas.  
 Fort Worth Garage, Fort Worth.  
 Fort Worth Power Plant & Light Co., Fort Worth.  
 Fort Worth Typewriter Exchange, Fort Worth.  
 Four Sevens Garage, Houston.  
 Franklin Auto Top & Paint Co., Dallas.  
 Franklin Motor Car Co., Dallas.  
 Franz Motor Co., Victoria.  
 Fraternal Bank & Trust Co., Fort Worth.  
 Frederick, Ed., San Antonio.  
 Freel, D. H., Waco.  
 French Wheel & Body Co., Marshall.  
 Friedman Tailoring Establishment, Dallas.  
 Frost Bros., San Antonio.  
 Fulk's Detective Association, Wichita Falls.  
 Gabert Auto Works, Fort Worth.  
 Gentry Studio, Dallas.  
 George, R. B., Machine Co., Dallas.  
 Gildersleeve, F. A., Waco.  
 Gilliam Drug Co., Waxahachie.  
 Glover-Johns Auto & Tractor Co., Corpus Christi.  
 Godwin, E. J., Fort Worth.  
 Goldman, Ben F., Co., Paris.  
 Goldman J. L., Co., Dallas.  
 Goodyear Shoe Repair Co., Fort Worth.  
 Goodyear Tire & Rubber Co., El Paso.  
 Gordon Auto Supply Co., Houston.  
 Gouley Burcham Brokerage Co., El Paso.  
 Gragg, C. R., Dallas.  
 Graham Lennin Co., Dallas.  
 Grand Motor & Implement Co., Waco.  
 Gray Lumber Co., Hamlin.  
 Greenville Municipal Plant, Greenville.  
 Greenville National Bank, Greenville.  
 Guarantee Motor Co., San Antonio.  
 Guarantee Tailoring Co., San Antonio.  
 Guarantee Title & Abstract Co., Fort Worth.  
 Gulf Pipe Line Co., Lufkin.  
 Gulf Refining Co., Corpus Christi.  
 Gulf Refining Co., Fort Worth.  
 Gulf Welding Works, Beaumont.  
 Hagan Shoe Shop, Bill, Greenville.  
 Hambrick Electric Co., Fort Worth.  
 Hamilton & Co., Fort Worth.  
 Harrison, Joseph H., Arlington.  
 Health Shoe Shop, Austin.  
 Hedrick Construction Co., Houston.  
 Herrick Hardware Co., Waco.  
 Hertzberg, E., Jewelry Co., San Antonio.

- Hicks Upholstery Co., H. M., Denton.  
 Higgenbotham & Co., De Leon.  
 Higgenbotham, Abuley & Logan Co., Dallas.  
 Hills, Otis, Co., Dallas.  
 Home Parit & Paper Co., Gainesville.  
 Hotel Rice, Houston.  
 Houck, Will, San Antonio.  
 Household Furniture Co., San Antonio.  
 Houston Armature Works, Houston.  
 Houston Electric Co., Houston.  
 Houston Gas Appliance Co., Houston.  
 Houston Post, The, Houston.  
 Houston Structural Steel Co., Houston.  
 Hub Clothing Co., Dallas.  
 Hudgins, H. T., Fort Worth.  
 Hughes, Bert & Co., Port Arthur.  
 Hughes & Halcomb, Quanah.  
 Humble Oil Co., Hearns.  
 Hurlbert-Still Electric Co., Houston.  
 Hurst Bros. Clothing Co., Dallas.  
 International Harvester Co., Dallas.  
 Jackson Co., Hillsboro.  
 Jackson Street Garage, Dallas.  
 Jeffords-Schoenmann Produce & Brokerage Co., Houston.  
 Jenkins Shoe Co., J. W., Dallas.  
 Johnson Allen Co., Oplin.  
 Johnson Epstein & Schwartz, Fort Worth.  
 Jones Tailor Shop, Houston.  
 Justis, Frank G., Dallas.  
 K. C. Tire Co., Dallas.  
 Kimball Service Station, Dallas.  
 King Furniture Co., San Antonio.  
 Kingsville Pharmacy, Kingsville.  
 Kirby Lumber Co., Slisbee.  
 Knopp, C. L., Arlington.  
 Kolb Electric Co., Sherman.  
 Lamberth Motor Co., Dallas.  
 Lang & Mitchell, Dallas.  
 Laredo Public Service Co., Laredo.  
 Ledger Co., Fort Worth.  
 Lee, B. L., San Antonio.  
 Lee Motor Co., Nacogdoches.  
 Leonard, V. B., Dallas.  
 Lewis, Petten & Co., San Antonio.  
 Liberty Auto Top Co., El Paso.  
 Limestone Motor Co., Mexia.  
 Lincoln Paint & Color Co., Dallas.  
 Lindsay & Co., J. W., Dallas.  
 Little, S. G., Harrold.  
 Lockart & Co., Greenville.  
 Lone Star Motor Co., El Paso.  
 Lone Star Motor Truck & Tractor Co., San Antonio.  
 Longview Battery Co., Longview.  
 Loyd, E. J., Dallas.  
 Lucas Motor Co., Waco.  
 Lucey Manufacturing Co., Houston.  
 Lufkin Foundry & Machine Co., Lufkin.  
 McAlester Garage, Red Oak.  
 McCauley & Ward, Waco.  
 McChesney's Bit & Spur Factory, Pear Valley.  
 McCollough Davis Co., Waco.  
 McDode, W. L., Kosse.  
 McElroy, H. L., tailor, San Antonio.  
 M. K. & T. R. Co., Greenville.  
 M. K. & T. R. Co., De Leon.  
 M. K. & T. R. B. Shop, Denison.  
 Magnolia Petroleum Co., Dallas.  
 Marlin Hatters, Marlin.  
 Marshall Manufacturing Co., Marshall.  
 Mason, W. S., Waco.  
 Nasquellette Auditing Co., El Paso.  
 Mauzy, E. O., Dallas.  
 Mayfield Co., wholesale grocers, Ennis.  
 Merry Optical Co., San Antonio.  
 Metropole Barber Shop, Waco.  
 Miller's Garage, Albany.  
 Miller, Link Lumber Co., Orange.  
 Miller Storage Battery Co., Fort Worth.  
 Mitchell Reigger Co., Greenville.  
 Momson, Dunnegan & Ryan Co., El Paso.  
 Moore, Sam M., Granger.  
 Moore & Sons, A. P., Nacogdoches.  
 Moore & Hansell, Palestine.  
 Morgan Garage, Morgan.  
 Morgan-Woodward, San Antonio.  
 Motor Inn, Paris.  
 Munger Auto Co., Dallas.  
 Munn & Co., W. C., Houston.  
 Myers, Oliver, Furniture Co., Dallas.  
 Nach, G., Waco.  
 National Theater, San Antonio.  
 Nelson Co., N. O., Houston.  
 Nichols & Martin, Port Arthur.  
 Nichols, W. A., Shoe Shop, Arlington.  
 Nu-Life Manufacturing Co., El Paso.  
 Oak Cliff Buick Co., Oak Cliff.  
 Oliver Auto Co., Crookshack.  
 Oriental Hotel Association, Dallas.  
 Original Tire Vulcanizing Co., Temple.  
 Orr's Barber Shop, Dallas.  
 Otis Elevator Co., Houston.  
 Otto-Hille Co., Dallas.  
 Page Auto Co., Dallas.  
 Pantatorium, The, Houston.  
 Panther City Garage, Fort Worth.  
 Paris Battery Co., Paris.  
 Paris Taxicab Co., Paris.  
 Park Engraving Co., Houston.  
 Park's Garage, G. W., Hillsboro.  
 Parrant Garage, Fort Worth.  
 Pate Bros. Service Station, Fort Worth.  
 Pearce Auto Co., Denison.  
 Pecoraro, Anthony, Houston.  
 Post Office, Marshall.  
 Presto-Lite Co., Houston.  
 Preston Barber Shop, Dallas.  
 Puryear Garage, Dewey, Austin.  
 Quick Service Pressing Co., San Antonio.  
 Rabb, S. W., Corsicana.  
 Rakahr Boot & Shoe Shop, El Paso.  
 Randolph Cole & Co., Sherman.  
 Rea, Oscar J., Clifton.  
 Red Front Barber Shop, Waco.  
 Redrick Construction Co., Fort Worth.  
 Reeves, W. J., Dallas.  
 Reid, Wm. Roy & Co., Houston.  
 Reimers Co., Fort Worth.  
 Reynolds & Askew, Gilmer.  
 Rhome Garage, Rhome.  
 Richards & Co., George E., Amarillo.  
 Richardson & Co., A. H., Dallas.  
 Richardson & Wilson, Quanah.  
 Richter & Nabors Garage, Quanah.  
 Rio Grande Dairy Valley Association, El Paso.  
 Riter's Garage, Forney.  
 Rogers, R. B., Brownwood.  
 Ross Tailoring Co., Houston.  
 Rouse Drug Co., Houston.  
 Rowley, Geo., business agent, Austin.  
 Russell & Cockrill, Amarillo.  
 San Angelo Ice & Power Co., San Angelo.  
 San Antonio Machine Supply Co., San Antonio.  
 San Augustine Lumber Co., Keltys.  
 Sanders Overland Co., Marshall.  
 Sanger Bros., Dallas.  
 Scardine Barber Shop, Houston.  
 Schenks & O'Neal Cotton Co., Greenville.  
 Schew Bros., Clifton.  
 Schoellkopf Co., Dallas.  
 Scott & Co., W. H., Paris.  
 Sea Board Transport & Ship Co., Galveston.  
 Sears, Roebuck & Co., Dallas.  
 Security Motor Co., San Antonio.  
 Shaffer, A. H., San Antonio.  
 Shelby Battery & Ignition Co., Center.  
 Sherman Vulcanizing Works, Sherman.  
 Sinclair Gulf Refining Co., Houston.  
 Slaughters Garage, Arlington.  
 Smith, Goodhue, Waco.  
 Smith, W. V., Stoneburg.  
 Smith Electric Co., Waco.  
 Smith Electric Co., San Antonio.  
 Smith Milling Co., G. B. R., Sherman.  
 Smith Shoe Repairing Shop, Beaumont.  
 Sory Motor Co., Livingston.  
 South Texas Implement & Vehicle Co., Houston.  
 South Texas Motor Co., San Antonio.  
 Southern Architectural Cement Stone Co., Dallas.  
 Southern Battery Co., Marshall.  
 Southern Fuel Co., Dallas.  
 Southern Ice & Utilities Co., Dallas.

Southern Telephone Co., Fort Worth.  
 Southern Tire & Repair Co., Houston.  
 Southern Vulcanizing Co., Beaumont.  
 Southwestern Planing Mill Co., El Paso.  
 Southwestern Telegraph & Telephone Co., Fort Worth.  
 Southwestern Telegraph and Telephone Co., Victoria.  
 Southwestern Texas Oil & Refining Co., San Antonio.  
 St. Clair Garage, Brownwood.  
 Spencer Co., Howard, Waco.  
 Standard Auto Supply Co., Dallas.  
 Standard Motor Co., El Paso.  
 Starter Service Co., Fort Worth.  
 Steele & Cranberry Garage, Marshall.  
 Steen, Charles, San Antonio.  
 Steinberg Mass. Co., Houston.  
 Sterling Garage, Del Rio.  
 Stillman Oil Refinery, Niles City.  
 Sullivan, A. P., Houston.  
 Superior Electric Co., Dallas.  
 Sweeney, J. J., Jewelry Co., Houston.  
 Swift & Co., Fort Worth.  
 Swindell & Sons, Quanah.  
 Tanenbaum, Nat., & Co., Waco.  
 Tel. Electric Co., Houston.  
 Teller & Son, E. J., Houston.  
 Tennison Bros., Dallas.  
 Terry Bros., Clarksville.  
 Texas Co., Port Arthur.  
 Texas Advertising Co., Houston.  
 Texas Electric Co., San Antonio.  
 Texas Machine Tool Co., Dallas.  
 Texas Manufacturing Co., Fort Worth.  
 Texas Moline Plow Co., Dallas.  
 Texas Motor Supply Co., Waco.  
 Texas & Pacific Railroad Co., Millsap.  
 Texas Power & Light Co., Hillsboro.  
 Texas Power & Light Co., Palestine.  
 Texas Power & Light Co., Waco.  
 Texas Seed & Floral Co., Dallas.  
 Tholen's Auto Machine Works, Terrell.  
 Tomlin, Morrell Houston.  
 Trotsman Tire Co., Fort Worth.  
 Underwood Typewriter Co., Dallas.  
 United Motor Co., Houston.  
 United States Bureau of Animal Industry, Fort Worth.  
 United States Bureau of Markets, Waco.  
 United States Garage, Houston.  
 Universal Storage Battery Repair Co., Fort Worth.  
 Victory Barber Shop, Houston.  
 Victory Theater, Waco.  
 Wacha, The Tailor, Palestine.  
 Waco Branch Office, Waco.  
 Waco Electric Supply Co., Waco.  
 Walkera Garage, Goose Creek.  
 Walling Garage, Elkhart.  
 Walter Grocery Store, W. S., Goresback.  
 Waples-Platter Grocery Co., Dallas.  
 Waring Sign Works, Waco.  
 Warren, Rob, Waco.  
 Washer Bros., Fort Worth.  
 Wechsel Barber Supply Co., Dallas.  
 Wells & Neville, Waco.  
 West Houston Garage, Houston.  
 West Investment Co., Dallas.  
 Western Battery & Magneto Co., El Paso.  
 Western Electric Co., Dallas.  
 Western Union Telegraph Co., Waco.  
 Western Weighing Inspection Bureau, Dallas.  
 Wetzel Garage, Bowie.  
 Wheeler Bros., Hillsboro.  
 Wheeler Auto Supply Co., San Antonio.  
 White, L., Fort Worth.  
 Whittaker & Schmidt Co., Waco.  
 Wiley, F. H., Childress.  
 Willard Storage Battery Co., Dallas.  
 Willeford & Sons, Blooming Grove.  
 William & Ellis Real Estate Co., Dallas.  
 Williams, J. E., Dallas.  
 Williamson & Timberlake, Texarkana.  
 Willis Art Studio, Sweetwater.  
 Wilson-Millman Cleaning Works, El Paso.  
 Wolfe Manufacturing Co., L., Dallas.  
 Wood, F. O., Drug Store, Henrietta.  
 Wright Bros., San Antonio.

Wright, Martin Co., San Antonio.  
 Y. & M. Service Garage, Bonham.  
 Yoder Auto Co., Van Alstyne.  
 Yorktown Cigar Co., Yorktown.

## ARKANSAS.

Abeles, Chas., & Co., Little Rock.  
 Argenta Sheet Metal Works, Argenta.  
 Arkansas Electric Co., Little Rock.  
 Arkansas-Missouri Lumber Co., Arkansas City.  
 Arkansas Short Leaf Lumber Co., Pine Bluff.  
 Baldwin, M. H., Caddo Gap.  
 Barnes & Burnette, Helena.  
 Berthe & Richardson, Little Rock.  
 Bowers, Ned, Shoe Repair, Morrilton.  
 Bryan Motor Co., Fayetteville.  
 Bush & Sons, G. O., Little Rock.  
 Castleberry Optical Co., Little Rock.  
 Central Power & Light Co., Walnut Ridge.  
 Championship Shoe Shop, Jonesboro.  
 Coffey-Cravens Auto Co., Fort Smith.  
 Colard, L. J., Gravette.  
 Crystal Theater, Little Rock.  
 Daws & Jackson, Blytheville.  
 Electric Construction Co., Little Rock.  
 Eureka Springs Electric Co., Eureka Springs.  
 Ever Ready Auto Works, Little Rock.  
 Fenkinder, F., Little Rock.  
 Fort Smith Light & Traction Co., Fort Smith.  
 Fort Smith Wagon Co., Fort Smith.  
 Foster, J., & Co., Fort Smith.  
 Frank's Dry Cleaning, Little Rock.  
 Goldstein, Tailor, Jonesboro.  
 Goodnow-Ward Co., Fort Smith.  
 Hall & Jackson, Blytheville.  
 Hawkins, J. E., Magnolia.  
 Hendricks Motor Car Co., A. L., Fort Smith.  
 Higgins, R. W., Little Rock.  
 Holman, W. B., Little Rock.  
 Holt Estep Tire Co., Little Rock.  
 Hurt Grocery Co., Paragould.  
 International Harvester Co., Little Rock.  
 Jole Theater Co., Fort Smith.  
 Jonesboro Machine Co., Jonesboro.  
 King Wholesale Drug Co., Helena.  
 Koller-McKim Plumbing Co., Fort Smith.  
 Landscape Developing Co., Hot Springs.  
 Ledgerwood, Judge V. S., Hot Springs.  
 Lenon Auto Co., Little Rock.  
 Lesser, Coldman Cotton Co., Little Rock.  
 Lindley & Kair Shop, Jonesboro.  
 Loose-Wiles Biscuit Co., Fort Smith.  
 Lyones, Joe, Mechanical Co., Little Rock.  
 Master Electric Co., Fort Smith.  
 Mettraller, A. & Co., Little Rock.  
 Missouri Pacific R. R., Caddo Gap.  
 Model Machine Works, Little Rock.  
 Murray Optical Co., Little Rock.  
 National Pump Works, Stuttgart.  
 Newburger Cotton Co., Little Rock.  
 Ozan Graysonia Lumber Co., Prescott.  
 Peters & Sons, Mena.  
 Poinett Lumber Manufacturing Co., Truman.  
 Rogers, W.-L., Camden.  
 Royal Theater, Hot Springs.  
 St. Francis Motor Co., Forest City.  
 Saline Lumber Co., Pine Bluff.  
 Security Bank & Trust Co., Helena.  
 Service Stove & Range Co., South Fort Smith.  
 Simpson-Leftwich Motor Co., Fort Smith.  
 Southern Battery Co., Little Rock.  
 Southern Rice Growers' Association, Stuttgart.  
 Southwest American (The), Fort Smith.  
 Standard Machine Co., Stuttgart.  
 Star Bakery, Paragould.  
 Startley White Machine Works, Stuttgart.  
 Thomas Auto Co., S. R., Little Rock.  
 Trece Garage, Marshall.  
 Tripplett, G., Pine Bluff.

United States Bureau of Public Roads,  
Little Rock.  
Valley Planing Mill Co., Hot Springs.  
Walters Dry Goods Co., Harrison.  
Western Union Telegraph Co., Hot Springs.  
Williams Mill Manufacturing Co., Texarkana.  
Zell, Dr. A. M., Little Rock.  
Zuendt Bros. Garage, Little Rock.

## OKLAHOMA.

American Electric Ignition Co., Oklahoma City.  
American Shoe Repair Shop, Oklahoma City.  
Anderson, J. M., Oklahoma City.  
Barton Bros., Chickasha.  
Bates Shoe Shop, Lawton.  
Bell Wayland Co., Oklahoma City.  
Bennett's Garage, Klefer.  
Blickford & Welchens, Oklahoma City.  
Boardman Co., John W., Oklahoma City.  
Boston Shoe Shop, Oklahoma City.  
Brown & Dunning, Garber.  
Bureau of Animal Industry, Oklahoma City.  
Butts, W. B., Oklahoma City.  
Butts Electric Co., Oklahoma City.  
Cadillac Gaston Co., Tulsa.  
Campbell, J., Oklahoma City.  
Capitol City Bakery, Oklahoma City.  
Capp's Garage, Vinita.  
Carroll, Mason & Hannold, Tulsa.  
Casden & Co., West Tulsa.  
Casden Pipe Line Co., Drumwright.  
Case Plow Co., J. I., Oklahoma City.  
Charles Vulcanizing Co., Sapulpa.  
City Garage, Altus.  
City of Tulsa, Tulsa.  
Clark Bros., Bristow.  
Cole Motor Co., Muskogee.  
Commercial National Bank, Nowata.  
Continental Supply Co., Bartlesville.  
Continental Supply Co., Duncan.  
Cooper, Tom, Ardmore.  
Cross Auto Market, Clinton.  
Cunningham, E. C., Tulsa.  
Darnell & Co., Oklahoma City.  
Dean Motor Co., Ryan.  
Deignau Motor Co., Oklahoma City.  
Denny & Allen, Tulsa.  
Dills Garage, Durant.  
Dodge Motor Co., Cordell.  
Dreamland Theater, Oklahoma City.  
Dunlap Bros., Cleveland.  
Enid Auto Electric Co., Enid.  
Estes Bakery, Ardmore.  
Fields, C. W., Muskogee.  
Fisk Rubber Co., Oklahoma City.  
Folly Theater, Oklahoma City.  
Forrester Welding Co., Tulsa.  
Frisco Bakery, Tulsa.  
Galloway Bros., general merchandise, Wagona.  
Gentry Motor Co., Enid.  
Goodyear Shoe Repair Co., McAlester.  
Graham, Sykes & Co., Muskogee.  
Gray, S. D., Mangum.  
Guaranty Investment Co., Oklahoma City.  
Hamilton Shoe Co., Ardmore.  
Harbour Furniture Co., Muskogee.  
Head Motor Co., G. M., Oklahoma City.  
Herndon, T. E., Enid.  
Hotel, Lee Huckins, Oklahoma City.  
Houghton Department Store, Coyle.  
Hudson Motor Car Co., Tulsa.  
Ideal Garage, Tahlequah.  
Identification Bureau, Police Department, Oklahoma City.  
Jacobs & Co., K., Chandler.

Jeffrys Sims Motor Car Co., Durant.  
Jennings Telephone Co., Jennings.  
Johnson Electric Co., Oklahoma City.  
Johnson & McGill, Ardmore.  
Klein Tire Co., Norman.  
Knox Auto Co., Oklahoma City.  
Layton, Smith & Fordyce, Oklahoma City.  
Lewis-Briggs Motor Co., McAlester.  
Lewis-Burba Motor Co., McAlester.  
Liberty National Bank, Weatherford.  
Lindsey News, Lindsey.  
Lukins, Charles, Auto Co., Tulsa.  
Lumbard, John, Tire & Supply Co., Muskogee.  
M. K. & T. R. R., Oklahoma City.  
McAlester Buick Co., McAlester.  
Magnolia Petroleum Co., Oklahoma City.  
Metropolitan Electric Service, Oklahoma City.  
Meyer Sign Service, Oklahoma City.  
Morris Motor Sales Co., Tulsa.  
Muller Tire & Rubber Co., Tulsa.  
Muskogee Gas & Electric Service, Oklahoma City.  
New State Ice Co., Oklahoma City.  
Okemah Ledger, Okemah.  
Oklahoma Barber Supply, Oklahoma City.  
Oklahoma Gas & Electric Co., Oklahoma City.  
Oklahoma Railway Co., Oklahoma City.  
Oklahoma Security Co., Oklahoma City.  
Oklahoma Starter & Battery Co., Sapulpa.  
Okmulgee Refining Co., Dighton.  
Osage Coal Co., Krebs.  
Ozark Garage, Oklahoma City.  
Ozment, Mat, Purcell.  
Patterson Audit Co., Oklahoma City.  
People's National Bank, Kingfisher.  
Perkins Hardware Co., Muskogee.  
Pollock & Sons, Tallhanna.  
Pruitts Storage Battery Co., Oklahoma City.  
Rorabaugh-Brown Dry Goods Co., Oklahoma City.  
Rose & Montgomery, Sulphur.  
Ross Bakery, Tulsa.  
Rowden Motor Co., Prague.  
Sanders-Rones, Tulsa.  
Sands Springs Railway Co., Tulsa.  
Segroves, G. F., Marietta.  
Schofield Cleaning Works, Tulsa.  
Spining, P. G., distributor, Studebaker Co., Chickasha.  
Stapleton Motor Co., Oklahoma City.  
Taylor Bros.'s Café, Marietta.  
Tennis & Griffith, Cushing.  
Thing, H. D., Coyle.  
Thompson, Fred F., Lawton.  
Throckmorton Co., Muskogee.  
Tishomings Motor Co., Tishomings.  
Treece & Cox, Cordell.  
Tulsa Armature Works, Tulsa.  
Tulsa Auto Manufacturing Co., Tulsa.  
Tulsa Machine & Tool Co., Tulsa.  
Tulsa Motor Co., Tulsa.  
Tuttle's Garage, Tulsa.  
Twin State Oil Co., Tulsa.  
Walk Over Shoe Co., Tulsa.  
Wallace, Dr. W. J., Oklahoma City.  
Walton Parks Auto Supply & Repair Co., Oklahoma City.  
Warren Motor Co., Durant.  
Waurika News-Democrat, Waurika.  
Western Newspaper Union, Oklahoma City.  
Western Union Telegraph, Yukon.  
White, A. W., Oklahoma City.  
White-Church Supply House, Ardmore.  
Wichita Motors Co., Oklahoma City.  
William Bros.'s Hattery, Oklahoma City.  
Williams, Butler & Wakefield, Oklahoma City.





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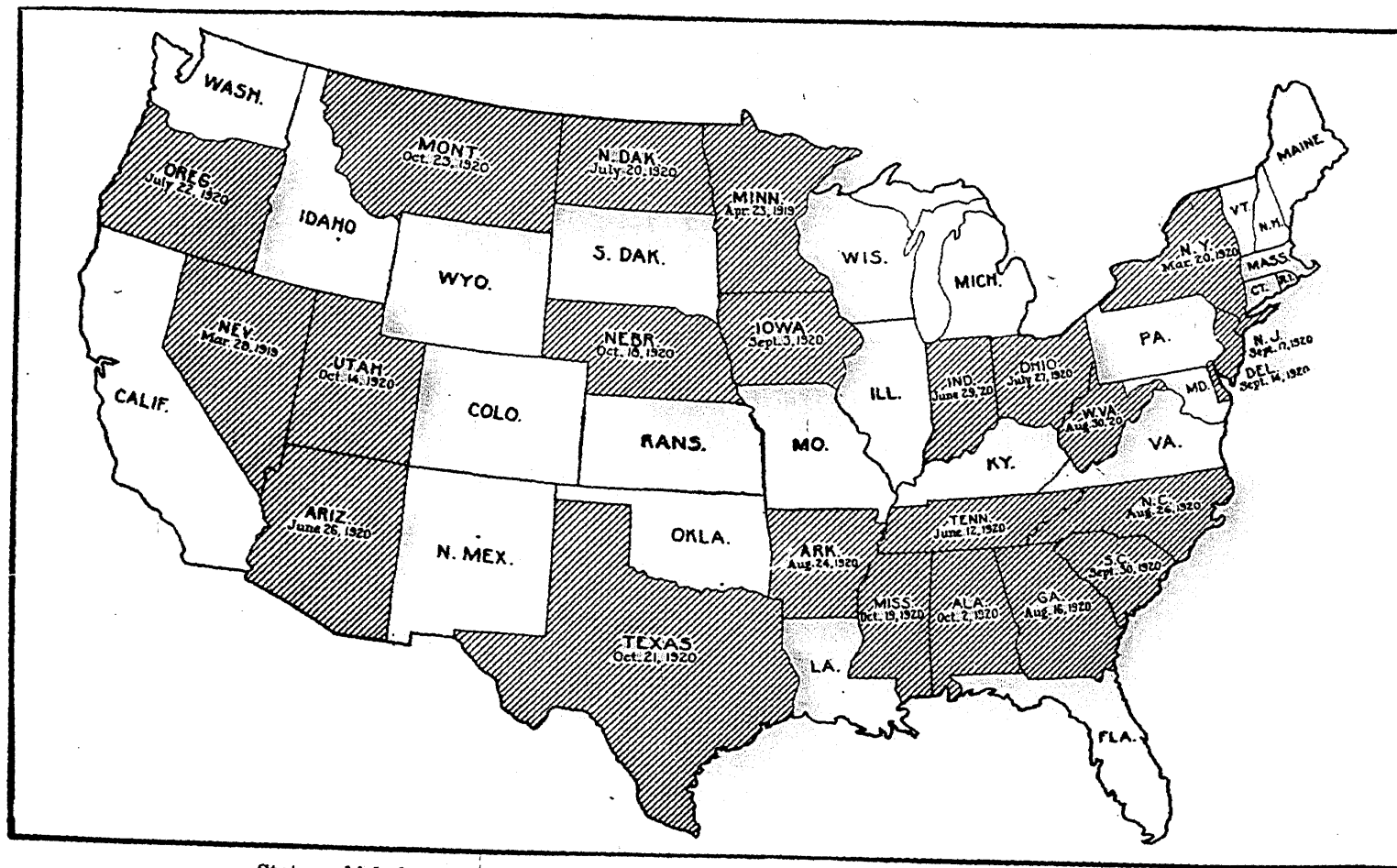
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## **SECTION III.**

**Report of the Industrial Rehabilitation Division—Vocational Rehabilitation  
and Return to Employment of Persons Disabled  
in Industry or Otherwise.**

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States which have accepted the industrial rehabilitation act (shaded area), with date of acceptance.

## **REPORT OF THE INDUSTRIAL REHABILITATION DIVISION—VOCATIONAL REHABILITATION AND RETURN TO EMPLOYMENT OF PERSONS DISABLED IN INDUSTRY OR OTHERWISE.**

The industrial rehabilitation act was approved on June 2, 1920. This law, which provides for the vocational rehabilitation of persons disabled in industry or otherwise and their return to remunerative occupation, completes a program of vocational rehabilitation proposed during the progress of the war. The stress of the war emergency resulted in the postponement of vocational rehabilitation as applied to injured workers, but the experience in retraining disabled ex-service men proves the soundness of the principle involved and the practical value of the plan.

The importance of the undertaking may be determined from the fact that the number of persons injured each year by accidents alone in the various industries of the country has been estimated to be more than twice as great as the total number of casualties among the American troops during the Great War. This does not include the large number of workers disabled by disease, either directly or indirectly traceable to conditions of employment, nor those crippled from childhood, nor that vast number injured in street accidents—all of whom may become beneficiaries of the act.

Under the law the Federal Board for Vocational Education is the agency charged with the administration of the act. A separate division was organized by the Board and an assistant director of industrial rehabilitation appointed.

In anticipation of the passage of the bill, the Board had made investigations in the field and held conferences through its representatives with State offices administering State rehabilitation laws. It was ready to begin work at once when the President's signature made industrial rehabilitation a law on June 2.

### **I. THE NATIONAL PROGRAM.**

The administrative procedure of the industrial rehabilitation act is similar to that provided for in the administration of the vocational education act. The vocational rehabilitation of disabled soldiers, sailors, and marines is the direct obligation of the Federal Government, and their training is provided and supervised by the Federal Board. But the rehabilitation of disabled workers is the responsibility of the State, and the Federal Government does not propose to

organize or direct the vocational restoration of individuals; this is the duty of the State. The same methods of administration and relationship with State boards will be maintained as far as possible in carrying out the provisions of this law as are now in force in the administration of the vocational education law.

While the Federal Government leaves the direction of industrial rehabilitation to State authorities, it agrees to make substantial financial contributions to its support. Specific obligations are imposed upon the States if Federal funds are accepted; the money must be spent in accordance with the provisions of the act.

In Bulletin No. 57 (Industrial Rehabilitation Series No. 1) the following four fundamental ideas are given as the basis for this co-operation of the States with the Federal Government: First, that vocational rehabilitation for persons disabled in industry or otherwise being essential to the national welfare, it is a function of the National Government to encourage the States to undertake this new and needed form of service; second, that Federal funds are necessary in order to equalize the burden of carrying on the work among the States; third, that since the Federal Government is vitally interested in the success of industrial rehabilitation it should participate in this work; and, fourth, that by creating such a relationship between the National and State Governments proper standards of efficiency in vocational rehabilitation can best be set up.

## II. REQUIRED LEGISLATION IN THE STATES.

Before a State can take advantage of the appropriations made in the act, it must, through legislative authority, accept the provisions of the act. In any State the legislature of which does not meet in regular session before January 1, 1921, if the governor of that State shall accept the provisions of the act the State shall be entitled to the benefits of the act until the legislature meets and has been in session 60 days.

The industrial rehabilitation act provides that the State board for vocational education shall act as the State agent for cooperation with the National Government; that the State treasurer be the custodian for the State's allotment of funds, paid to him quarterly by the Secretary of the Treasury upon the certification of the Federal Board; that an agreement be made between the State board and the agency administering the Workmen's Compensation in each State where such an agency exists, which plan of cooperation becomes effective when approved by the governor.

The Federal act for industrial rehabilitation requires that a plan outlining the methods proposed for carrying on the work shall be submitted by each State to the Federal Board. These plans must

be examined by the Federal Board and approved if found to be in harmony with the spirit of the act. They must show the kinds of vocational rehabilitation and schemes of placement for which the State will use the appropriation, the type of instruction to be provided, the courses of study, the qualifications of teachers and officers, the provisions for teacher-training, and the plan of administration and supervision. The essentials to be included in a State plan for the administration of this act are outlined by the Federal Board as follows:

- (a) Data relative to the acceptance of the Federal act—that is, certified copy of State legislation, or the governor's proclamation, or both.
- (b) Copy of the plan of cooperation between the State board for vocational education and the State agency administering the workmen's compensation act, if such agency exists.
- (c) Statement outlining the qualifications of beneficiaries of the act, which must include all types recognized by the Federal act.
- (d) Agreement that Federal funds will be matched by State or other funds and will be expended in accordance with the conditions of the act.
- (e) Agreement that all courses of vocational rehabilitation shall be available, under such rules and regulations as the Federal board shall prescribe, to civil employees of the United States disabled while in the performance of duty.
- (f) Kinds of vocational rehabilitation and schemes of placement for which it is proposed the appropriation shall be used.
- (g) The plan of administration and supervision by the State board.
- (h) Courses of study.
- (i) Methods of instruction.
- (j) Qualifications of teachers, supervisors, directors, and other necessary administrative officers or employees.
- (k) Plans for training of teachers, supervisors, and directors.

The Federal board suggests that the following points be covered in the plan of cooperation between the State compensation commission department, or bureau and the State board for vocational education:

- (a) Provision for prompt reporting to the rehabilitation service of all seriously impaired persons known to the compensation agency.
- (b) Provision for mutual assistance in minor investigations.
- (c) Provision for furnishing of information by the compensation agency to the rehabilitation service in cases where it is requested, on such points as physician's determination of injury, amount of compensation, whether payment is periodical or in lump sum, etc.
- (d) Provision for advice by the rehabilitation service to the compensation agency on such subjects as quality of medical care provided and suitability of prosthesis.
- (e) Provision that the compensation agency will consider the effect upon rehabilitation in awarding compensation in lump sum in permanent impairment cases, and will secure the advice of the rehabilitation service before taking such action.
- (f) Provision for statistical records on the part of the rehabilitation service which will supply information desired by the compensation agency.

(g) Provision for advisory board or advisory committee containing representatives of the two departments, or for liaison officers, or for both, the function of any advisory body to be the adjustment of any differences that may arise between the departments and the promotion of the effectiveness of cooperation.

(h) General agreement to cooperate.

The cooperation of the States is secured through the enactment of legislation specified in the act, which may be summed up as follows: The States shall—

(a) Accept, through the legislature, the provisions of the act.

(b) Empower and direct, through the legislature, the board designated or created as the State board for vocational education to cooperate in the administration of the provisions of the vocational-education act approved February 23, 1917, to cooperate with the Federal board in the administration of the act.

NOTE.—The State board designated or created as the State board for vocational education is the State agency which cooperates with the Federal board in the administration of the Federal vocational education act. Every State has, through its legislative authority, appointed or designated a State board to be the State board for vocational education. It is only through this designated or created State board that the Federal Government proposes to cooperate with the States in the act of rehabilitation of persons disabled in industry.

(c) Provide for a plan of cooperation between the State board for vocational education and the State workmen's compensation board or other State board, department, or agency charged with the administration of the State workmen's compensation or liability laws; this plan to be effective when approved by the governor of the State.

(d) Provide, through legislative authority, for the supervision and support of courses of rehabilitation to be provided by the State board in carrying out the provisions of the Federal act.

(e) Appoint, through legislative authority, as custodian for appropriations allotted its State treasurer, who shall receive and provide for the proper custody and disbursement of all moneys paid to the State from Federal appropriations provided by the Federal act.

NOTE.—If the legislature of any State does not meet in regular session between the date of the passage of this act, June 2, 1920, and December 31, 1920, the governor of such a State is authorized to accept the provisions of the Federal act, and upon the acceptance of the governor of the State, is entitled to the benefits of the act until the legislature of the State has met in due course and has been in session 60 days.

The limited number of mandatory provisions allows much latitude to the States in providing laws that will meet the variety of their needs. Different methods may be provided for securing funds to be used for the maintenance of those undergoing training. Some States may undertake the physical rehabilitation of the disabled, for which the Federal funds may not be used.

The whole problem of a basic State law providing for the rehabilitation of the injured is much more an individual State problem than the legislation accepting the vocational education act.

### III. HOW THE FEDERAL BOARD FUNCTIONS IN INDUSTRIAL REHABILITATION.

The Federal Board is the agency charged with the duty of administering the provisions of the act, through cooperation with the State boards. All official dealings relating to the vocational restoration of disabled workers must be between the Federal Board or its representatives and the State board for vocational education.

The duties of the Federal Board as specified in the act may be summed up as follows: The Federal Board shall—

(a) Cooperate with the State board in carrying out the purposes and provisions of the Federal act.

(b) Make and establish such rules and regulations as may be necessary or appropriate to carry into effect the provisions of the act.

(c) Provide (through cooperation with the States) for the vocational rehabilitation of disabled persons and their return to civil employment.

(d) Cooperate for the purpose of carrying out the provisions of the act with such public and private agencies as it may deem desirable.

(e) Examine plans submitted by State boards and approve the same if found to be in conformity with the provisions and purposes of the act.

(f) Annually ascertain whether the several States are using or are prepared to use the money received by them in accordance with the provisions of the act.

(g) On or before January 1 of each year certify to the Secretary of the Treasury each State which has accepted the provisions of the act and complied therewith, together with the amount which each State is entitled to receive under the provisions of the act.

(h) Deduct from the next succeeding allotment to any State whenever any portion of the fund annually allotted has not been expended for the purpose provided in the act a sum equal to such unexpended portion.

(i) Withhold the allotment of moneys to any State whenever it is determined that the moneys allotted are not expended for the purposes and conditions of the act.

(j) Require the replacement by withholding subsequent allotments of any portion of the moneys received by the custodian of any State under the act which by any action or contingency has been diminished or lost.

(k) Make an annual report to Congress on or before December 1 on the administration of the act, including therein the reports made by the State boards and the expenditure of the money allotted to each State.

(l) Make studies, investigations, and reports regarding the vocational rehabilitation of disabled persons and their placement in suitable or gainful occupations.

The Federal Board is obliged to administer the industrial rehabilitation act exactly as the law provides. There is no choice in dealing with certain mandatory provisions of the law. For instance, vocational restoration must be carried on under the supervision and control of the State board for vocational education. The expenditure of Federal funds for the purchase, preservation, erection, or repair of any building or buildings or equipment, or for the purchase or rental of any lands, is another provision which can not be modified.

There are certain provisions where the Board may use discretion and interpret the law in the light of local conditions in a way to bring about the maximum of efficiency in each State. The purpose of the act is to provide a way by which the worker, disabled through some catastrophe not of his own making, shall find contentment and happiness in a life of useful service. It is the duty of the Federal Board to cooperate with the States in making this way back to remunerative occupation the shortest and surest for the disabled man or woman.

Bulletin I (Industrial Series), just issued by the Federal Board, is a statement of policies to be observed in the administration of the industrial rehabilitation act. The bulletin states that while the policies outlined have been carefully considered, they must be regarded as preliminary, as sufficient time has not passed since the enactment of the law to permit the Board to view the problem from all angles. The bulletin contains a discussion of possible State legislation, and by the question and answer method states a number of questions raised at conferences held by the Federal Board and the rulings upon them.

Another bulletin, discussing methods of organization, relating particularly to the part the States are expected to take in the development of the work, is now in preparation.

#### IV. COOPERATION WITH EXISTING AGENCIES.

The law requires a plan of cooperation between the State board for vocational education and the workmen's compensation board, or any other agency charged with the administration of the workmen's compensation or liability laws. This agreement may provide for the prompt reporting to the State board all seriously disabled persons known to the compensation agency; it may also furnish information about them; it may plan for mutual assistance in investigations; and for the exchange of advice between the rehabilitation service and the compensation agency as to the proper prosthesis and medical care provided and as to the expediency of lump-sum awards in permanent impairment cases. Workmen's compensation benefits extend only through the period of disablement; industrial rehabilitation completes the job.

The extent of the cooperation between the State board and the workmen's compensation board, or the agency administering the law of compensation, is a matter to be determined by each State, subject to the limitation of the law that Federal money may be spent in each State under the control and supervision of the State board for vocational education.



## V. PERSONS ELIGIBLE.

State boards are responsible for determining the eligibility of persons who apply for training under the act. In this they will be guided by the general policies set up by the Federal Board. The only exception to this will be the special cases of civil employees of the United States disabled in the performance of duty. The law requires the action of the Federal Board in such cases, referring them individually to the State board selected for providing for their rehabilitation. The Federal Board is also responsible for those special cases where handicapped persons may be given training in institutions.

The act provides for the rehabilitation of "persons disabled in industry or in any legitimate occupation." The Federal Board (Bulletin 57, Industrial Rehabilitation Series No. 1) gives this as its interpretation of section 2 of the act, as to persons eligible for vocational rehabilitation:

By the definition contained in section 2, Congress has in effect declared that any person is eligible to receive the benefits of vocational rehabilitation under the act who, by reason of a physical defect or infirmity, whether congenital or acquired by accident, injury, or disease, is or may be expected to be totally or partially incapacitated for remunerative employment in industry or in any legitimate occupation, and who may reasonably be expected to be fit to engage in a remunerative occupation after completing a vocational rehabilitation course. A person deemed by the State board for vocational education as eligible for training under this general provision may receive the benefits of vocational rehabilitation under this act. Any civil employee of the United States, disabled while in the performance of his duty and for whom the Federal Board for Vocational Education considers vocational rehabilitation feasible, shall also be eligible to receive the benefits of vocational rehabilitation under this act.

The law does not require that the disability shall arise out of or be incurred in the course of employment.

The Federal Board for Vocational Education considers the sections and clauses referring to beneficiaries of the act to mean that the States will offer vocational rehabilitation to all persons of employable age who, by reason of a physical defect or infirmity, whether congenital or acquired by accident, injury, or disease, appear to be or may be expected to be totally or partially incapacitated for remunerative employment in industry or in any legitimate occupation, and who may be reasonably expected to be fit to engage in a remunerative occupation after receiving a vocational rehabilitation course. A limitation upon the above statement is that no portion of the appropriations may be used by an institution for handicapped persons except for the special training of such individuals entitled to the benefits of the act as shall be determined by the Federal Board.

The Federal Board recognizes the right of women to become beneficiaries of the act and believes it to be the duty of the States to provide equally for women as for men the vocational rehabilitation intended by the act. As State workmen's compensation laws apply

to all workers in those industries covered by the act, without regard to sex, in cooperating with the agencies administering the benefits of compensation legislation in the various States, the State boards for vocational education will find the names of women on the lists of disabled persons eligible for rehabilitation furnished by these compensation boards. Twelve million women in wage-earning occupations and 25,000,000 women serving in the homes are indicative of the possible size of the problem of their vocational restoration.

The Federal Board would suggest the desirability of appointing a woman as a member of the staff in each State. The outcome of industrial rehabilitation is generally conceded to be successful in proportion to the individual attention given each case, and women possess special qualifications to meet these requirements, particularly as the problem is related to disabled women.

#### VI. TRAINING.

The act provides that the State plans must include the kinds of vocational rehabilitation provided for disabled persons. The fundamental idea of this training is the restoration to remunerative occupation of those who are vocationally handicapped. To secure this, each case must be dealt with on its merits—for some a brief period of training on the job will be sufficient; for others supplementary general education courses may be needed; and for still others it will be necessary to provide special courses either in higher institutions of learning or in business establishments. It is the policy of the Federal Board to approve the use of existing institutions in so far as is possible to accomplish the intent of the act. The types of instruction, the length of the course, and the place for training are matters for the decision of the States. The Federal Board will approve plans, subject to the conditions of the law, which lead toward the industrial restoration of the disabled worker.

#### VII. PLACEMENT.

A successful course of training does not complete the obligation of the State boards to the handicapped. The law provides for "their return to civil employment." On the other hand, a State rehabilitation service providing placement only will fall short of accomplishing the purpose of the act, for the vocational retaining of the disabled is its real intent. The State board fulfills the duties imposed by the act only by providing the proper course of study, carefully supervising the training of the disabled, and satisfactorily placing them in remunerative occupation.

It is the belief of the Federal Board that a State will be successful in carrying on this work only to the extent to which it is able to secure agents conversant with the problems of rehabilitation and of industry.

## VIII. AVAILABLE FUNDS.

The act provides for an appropriation of \$750,000 for the fiscal year ending June 30, 1921, and for a period of three years following the sum of \$1,000,000 annually. This sum is to be allotted to the States in the proportion which their population bears to the total population of the United States, exclusive of the Territories. Five thousand dollars is the minimum allotment to any State. A State is entitled to its allotment of Federal money only when it has complied with the conditions imposed by the act. These conditions include the acceptance of the act by legislative action, or, in event of no session of the legislature before January 1, 1921, by a proclamation of the governor; the designation of the State board for vocational education as the State agency for the administration of the act and the State treasurer as custodian of Federal funds; the submission of State plans to the Federal Board for its approval; and a plan for cooperation between the State board for vocational education and the agency administering the workmen's compensation legislation in the State.

Federal grants to the States are subject to the following conditions:

There must be expended within the State for vocational rehabilitation State money equal at least to the amount of Federal funds received; there must be a State plan for rehabilitation; an annual report must be made to the Federal Board; no Federal money or money used to match Federal money must be expended for buildings or equipment; all courses for rehabilitation shall be available, under rules and regulations prescribed by the Federal Board, to civil employees of the United States disabled in the performance of his or her duty.

The law explicitly states that its purpose is "to provide for the promotion of vocational rehabilitation of disabled persons," and the appropriation is made to cooperate with the States in accomplishing this. In the judgment of the Federal Board "vocational rehabilitation" does not necessarily include physical restoration, nor the maintenance of persons undergoing rehabilitation; it, therefore, believes that medical care and maintenance are not legitimate expenditure from Federal funds. Occupational therapy may be provided out of Federal money only if it is a definite preparation for a specific occupation. In a very few instances a specialized vocational prosthesis of an instructional nature may be considered a legitimate expense. The necessary administrative expenses of the State boards, the tuition for persons undergoing vocational rehabilitation, special instruction for those needing it, instructional supplies necessary for individuals in training not customarily furnished by the particular type of training agency providing the course, necessary preliminary surveys, research work, so far as it relates to the rehabilitation work of the State, are among the things for which the expenditures of Federal funds are considered legitimate by the Federal Board.

The State treasurer must be the custodian of all Federal funds allotted the States. Upon the certification of the Federal Board, as provided in the act, the State treasurer will receive quarterly from the Secretary of the Treasury the sum to which the State is entitled. This money shall be paid out on the requisition of the State board as reimbursement for services already rendered for expenditures already incurred and approved by the State Board.

The Federal Board believes that the following fundamental principles should govern the appropriations from the National Government to the States for vocational rehabilitation. The money is designated—

(1) To encourage<sup>1</sup> the States to undertake a new and needed form of service—that for vocational rehabilitation—which the National Government believes necessary to the public welfare.

(2) To equalize, in part at least, the inequalities of burden among the States in carrying on this service.

(3) To secure for the National Government a reasonable degree of participation in the carrying on of this work in which the National Government is so deeply concerned.

(4) To establish standards of efficiency in vocational rehabilitation and to set up minimums below which work in vocational rehabilitation for which reimbursement from Federal moneys is desired can not be allowed to fail.

Two questions must always be met in determining whether a State is entitled to share in the distribution of Federal funds:

(1) Is the plan<sup>2</sup> proposed by the State one which the Federal Government considers feasible?

(2) Will or can the State properly carry out<sup>3</sup> the plan after the agreement is made?

<sup>1</sup> An act to provide for the promotion of vocational rehabilitation of persons disabled in industry or otherwise and their return to civil employment (title of act).

\* \* \* \* that the State board shall annually submit to the Federal Board for approval plans showing (a) the kinds of vocational rehabilitation and schemes of placement for which it is proposed the appropriation shall be used; (b) the plan of administration and supervision; (c) courses of study; (d) methods of instruction; (e) qualifications of teachers, supervisors, directors, and other necessary administrative officers or employees; (f) plans for the training of teachers, supervisors, and directors. (Sec. 1.)

<sup>2</sup> All moneys expended under the provisions of this act from appropriations provided by section 1 shall be upon the condition (1) that for each dollar of Federal money expended there shall be expended in the State under the supervision and control of the State board at least an equal amount for the same purpose: *Provided*, That no portion of the appropriation made by this act shall be used by any institution for handicapped persons except for the special training of such individuals entitled to the benefits of this act as shall be determined by the Federal Board; (2) that the State board shall annually submit to the Federal Board for approval plans showing (a) the kinds of vocational rehabilitation and schemes of placement for which it is proposed the appropriation shall be used; (b) the plan of administration and supervision; (c) courses of study; (d) methods of instruction; (e) qualifications of teachers, supervisors, directors, and other necessary administrative officers or employees; (f) plans for the training of teachers, supervisors, and directors; (3) that the State board shall make an annual report to the Federal Board on or before September 1 of each year on the work done in the State and on the receipts and expenditures of money under the provisions of this act; (4) that no portion of any moneys appropriated by this act for the benefit of the State shall be applied, directly or indirectly, to the purchase, preservation, erection, or repair of any building

The method of raising the money to match Federal funds is left to the States. The Federal act does not provide that this money be secured by taxation, nor does it specify what the source of the State money shall be. Donations may be received from private sources, provided they are given unconditionally, and are expended under the supervision and control of the State board for vocational education, for the vocational rehabilitation of disabled persons.

#### IX. PROGRESS OF INDUSTRIAL REHABILITATION IN THE STATES.

Before the act made Federal aid possible, 12 States—Massachusetts, Nevada, North Dakota, New Jersey, Minnesota, Rhode Island, California, Illinois, Pennsylvania, New York, Oregon, and Virginia, in the order named—realizing their responsibility, had made some provision for their handicapped workers. Anticipating the passage of the industrial rehabilitation bill three of these States included the acceptance of the Federal act within their original State acts. These States were Nevada, Minnesota, and New York. Other acts authorized cooperation with the Federal Government in any similar legislation that might be enacted.

Since the law has been effective 17 States—Tennessee, Arizona, Indiana, North Dakota, Oregon, Ohio, Iowa, West Virginia, Delaware, North Carolina, South Carolina, Arkansas, Utah, Mississippi, Texas, Nebraska, and Montana—have, through a proclamation of their respective governors, definitely accepted the provisions of the act, and three States—Georgia, Alabama, and New Jersey—have accepted the act through legislative action.

Some readjustment in several of the State acts will be necessary to make them conform to the requirements of the Federal act. In many of the States the industrial accident board or commission has been designated as the administrative agency. One State has given the work in charge of the department of public welfare and the

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or buildings or equipment, or for the purchase or rental or any lands; (5) that all courses of vocational rehabilitation given under the supervision and control of the State board and all courses for vocational rehabilitation maintained shall be available, under such rules and regulations as the Federal Board shall prescribe, to any civil employee of the United States disabled while in the performance of his duty. (Sec. 1.)

It shall be the duty of said board to ascertain annually whether the several States are using or prepared to use the money received by them in accordance with the provisions of this act; (8) to certify on or before the 1st day of January of each year to the Secretary of the Treasury each State which has accepted the provisions of this act and complied therewith, together with the amount which each State is entitled to receive under the provisions of this act; (4) to deduct from the next succeeding allotment to any State whenever any portion of the fund annually allotted has not been expended for the purpose provided for in this act a sum equal to such expended portion; (5) to withhold the allotment of moneys to any State whenever it shall be determined that moneys allotted are not being expended for the purposes and conditions of this act; (6) to require the replacement by withholding subsequent allotments of any portion of the moneys received by the custodian of any State under this act that by any action or contingency is diminished or lost: *Provided*, That if any allotment is withheld from any State, the State board of such State may appeal to the Congress of the United States, and if the Congress shall not, within one year from the time of said appeal, direct such sum to be paid, it shall be covered into the Treasury. (Sec. 4.)

workmen's compensation bureau, and the department of labor has been named in other States. Four States named the State board for vocational education which, according to the act, must be the board of administration, while other agencies are expected to aid by their cooperation. A plan for cooperation between the State board for vocational education and the board or agency administering the workmen's compensation law is a definite requirement of the Federal law.

Limitations as to the class of injuries which constitute eligibility for receiving the benefits of the act and residential restrictions form a part of some of the State acts. The views of the States also differed as to the best type of education to provide. Some acts authorized the use of existing institutions, while a few provide for the establishment of special schools.

The words "for carrying out the purposes of the act" have, however, a real significance in these various State laws providing for the retraining of the industrially disabled. The purpose of the act is two-fold; first, to give to the disabled a chance to become useful and self-respecting workers; second, to turn the States liability imposed by nonproductive citizenship into a real asset, gained through contented producers.

Money has been appropriated by 12 of the States to be used in the work of rehabilitating the industrially disabled. Massachusetts, New York, New Jersey, Pennsylvania, Virginia, Rhode Island, Minnesota, North Dakota, Oregon, California, Nevada, and Georgia have all provided a specific amount for the work. So far, only three of these States have made these appropriations on the basis of the allotments due them. The amount of the Federal funds received by each State will be in the proportion which their population bears to the population of the United States, no State receiving less than \$5,000, these amounts ranging from this minimum to the maximum of \$74,586.66, which will be the allotment for New York State.

The vocational rehabilitation of disabled men and women is an educational problem. It is the State's business. Its accomplishment must be brought about by State effort, encouraged by Federal aid. Every indication points to the fact that the States are ready to undertake the work. The above report shows how quickly they are falling into line.

A brief statement of the progress of vocational rehabilitation in the States may be of interest:

Massachusetts was the first State to enact any legislation leading to the vocational rehabilitation of disabled workers. The State law was passed May 28, 1918, and a division of the industrial accident board was made responsible for carrying out the purposes of the act.

Power was given the division to establish and maintain courses for the vocational rehabilitation of any person whose capacity to earn a living had been impaired or destroyed through industrial accident who was a resident of Massachusetts at the time of the accident.

On February 28, 1919, Nevada passed a law providing for the vocational rehabilitation of persons disabled in industry or otherwise, and the acceptance of any future Federal act for the rehabilitation of persons injured in industry was included in the State act. The State board for vocational education was designated as the administrative board, and an appropriation of \$10,000 was made for the ensuing biennial period, with the State treasurer as the custodian of the funds. Cooperation with the industrial board was authorized. It is of interest to note how many of the requirements of the Federal law were anticipated in the act of this far-western State.

North Dakota, another western State, was the third to provide for the retraining of the disabled. State legislation was enacted to assist industrial cripples to obtain appropriate training, education, and employment March 5, 1919, and on July 19, 1920, the Federal act was accepted by the governor. Fifty thousand dollars was the amount appropriated for all expenses of the workmen's compensation bureau, the agency designated for administering the act.

New Jersey created a State commission for the rehabilitation of physically handicapped persons at the same time the act for their vocational rehabilitation was passed (Apr. 10, 1919). Educational opportunities were to be centralized, and plans were made for the establishment of a memorial school for rehabilitation, with branches in several cities. Eligibility required a residence of one year in the State for any person over 15 suffering from any physical defect, congenital or acquired by accident or disease. The act included provisions for maintenance during training, and an appropriation of \$5,000 was made for surveys and \$100,000 for accomplishing the purposes of the act.

Minnesota passed a reeducation act April 23, 1919, giving the work in charge of the department of education. The benefits of the act are open to any person whose capacity to earn a living has been impaired through accident or otherwise who was a resident of the State at the time of the accident. An appropriation of \$30,000 was made for the next two years. Courses of instruction for the disabled are arranged through individual contracts or in groups or in any way that seems expedient to carry out the spirit of the act. The State rehabilitation law contained an acceptance of the Federal act.

Rhode Island enacted a State law April 23, 1919, authorizing the commissioner of education, with the approval of the State board of

education, to provide for the retraining of any person injured in industry in Rhode Island, at the same time appropriating \$5,000 for the fiscal year 1919.

An act to provide for the support of vocational reeducation and rehabilitation of workmen disabled in industry in the State of California was passed on May 5, 1919. When necessary, provision was made for living expenses to be paid during training. The industrial accident commission administers the law. A rehabilitation fund was created from death benefits of employees leaving no dependents.

The law for rehabilitating physically handicapped persons in Illinois was passed June 28, 1919. The department of public welfare was designated as the administrative board; the establishment of a State school of rehabilitation was authorized; any disabled person over 16 years of age, domiciled in the State for one year, is eligible to the benefits of the act. Nonresidents may receive these benefits upon the payment of the specified fee. Maintenance is provided for a limited time.

Pennsylvania passed a State law on July 18, 1919, establishing a bureau of rehabilitation in the department of labor and industry. A biennial appropriation of \$100,000 was made for carrying out the purposes of the act. Any person injured in industrial accidents occurring in Pennsylvania is eligible for rehabilitation and may receive maintenance for a limited period.

In New York, the law passed March 18, 1920, gave the direction of the work to the board of regents, which is designated as the State board for vocational education. An annual appropriation of \$75,000 was made to carry on the work, and any physically handicapped person over 16 living for one year in New York, except the aged, the blind, the feeble-minded, and the epileptic, is eligible for rehabilitation. Provision for maintenance during a limited period of training is made, and training courses are arranged for in schools and industries and commercial establishments. The Legislature of New York accepted the benefits of the Federal act on March 18, 1920, simultaneously with the passage of the State law.

Oregon's State law was passed January 12, 1920, and the industrial accident commission was designated as the board in charge of the work. The public schools of the State and the State schools for the deaf and the blind are expected to provide courses for the reeducation of men and women injured by accident while working under the protection of the State compensation law. Maintenance is provided for men and women in training. The governor, on July 22 of this year, accepted the benefits of the Federal act.

Virginia, in the State act passed March 20, 1920, authorized the division for rehabilitation under the industrial commission to provide for the rehabilitation of any resident of Virginia injured while



employed under the workmen's compensation act and not able to provide for themselves. Any suitable school within or without the State may be used for courses of training. An annual appropriation of \$10,000 was made.

The school laws of West Virginia authorize the acceptance by the State board of education of any appropriations of money made by Congress for educational purposes.

The governors of Arizona, Indiana, Iowa, Ohio, Tennessee, West Virginia, South Carolina, and Delaware, though these States have as yet no State vocational rehabilitation law, have accepted the benefits of the Federal law for their respective States since its passage in June.

Plans are being prepared for submission to the Federal Board in several States.

Arizona and Arkansas have submitted plans for the work. The plans of the State of Minnesota have been approved by the Federal Board.

Georgia, on August 16, 1920, passed a vocational rehabilitation law delegating the duties of administration to the State board for vocational education and making eligible all persons within the State disabled in industry or otherwise. The appropriation for the work for the fiscal year 1920-21 must be not less than the maximum allotment of Federal funds, which is \$21,353.29. The Federal act was accepted at the time of the passage of the State law.

*Allotments to the States under the industrial-rehabilitation act for the year ending June 30, 1921.*

State.	Total.	Allotted on basis of population.	Special allotment to guarantee minimum of \$5,000.	State.	Total.	Allotted on basis of population.	Special allotment to guarantee minimum of \$5,000.
United States	\$777,951.44	\$750,000.00	\$27,951.44	Montana	\$5,000.00	\$3,077.68	\$1,922.32
Alabama	17,498.35	17,498.35		Nebraska	9,757.19	9,757.19	
Arizona	5,000.00	1,672.45	3,327.55	Nevada	5,000.00	670.07	4,329.93
Arkansas	12,885.44	12,885.44		New Hampshire	5,000.00	3,522.84	1,477.16
California	19,458.08	19,458.08		New Jersey	20,764.41	20,764.41	
Colorado	6,539.29	6,539.29		New Mexico	5,000.00	2,678.68	2,321.32
Connecticut	9,123.27	9,123.27		New York	74,586.66	74,586.66	
Delaware	5,000.00	1,655.82	3,344.18	North Carolina	18,056.46	18,056.46	
Florida	6,159.50	6,159.50		North Dakota	5,000.00	4,722.68	277.32
Georgia	21,353.29	21,353.29		Ohio	39,014.68	39,014.68	
Idaho	5,000.00	2,664.69	2,335.31	Oklahoma	13,562.31	13,562.31	
Illinois	46,146.75	46,146.75		Oregon	5,505.97	5,505.97	
Indiana	22,104.22	22,104.22		Pennsylvania	62,731.95	62,731.95	
Iowa	18,207.73	18,207.73		Rhode Island	5,000.00	4,440.77	559.23
Kansas	13,838.88	13,838.88		South Carolina	12,402.17	12,402.17	
Kentucky	18,740.79	18,740.79		South Dakota	5,000.00	4,778.59	221.41
Louisiana	13,558.03	13,558.03		Tennessee	17,880.51	17,880.51	
Maine	6,075.63	6,075.63		Texas	31,839.66	31,839.66	
Maryland	10,601.23	10,601.23		Utah	5,000.00	3,065.54	1,934.46
Massachusetts	27,551.06	27,551.06		Vermont	5,000.00	2,913.18	2,086.82
Michigan	22,998.71	22,998.71		Virginia	16,872.42	16,872.42	
Minnesota	16,987.79	16,987.79		Washington	9,346.15	9,346.15	
Mississippi	14,707.75	14,707.75		West Virginia	9,993.75	9,993.75	
Missouri	26,952.96	26,952.96		Wisconsin	19,100.52	19,100.52	
				Wyoming	5,000.00	1,194.59	3,805.41

**X. TEXT OF THE INDUSTRIAL REHABILITATION ACT.**

[PUBLIC—No. 236—66TH CONGRESS.]

[H. R. 4438.]

An Act To provide for the promotion of vocational rehabilitation of persons disabled in industry or otherwise and their return to employment.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That in order to provide for the promotion of vocational rehabilitation of persons disabled in industry or in any legitimate occupation and their return to civil employment there is hereby appropriated for the use of the States, subject to the provisions of this Act, for the purpose of cooperating with them in the maintenance of vocational rehabilitation of such disabled persons, and in returning vocationally rehabilitated persons to civil employment for the fiscal year ending June 30, 1921, the sum of \$750,000; for the fiscal year ending June 30, 1922, and thereafter for a period of two years, the sum of \$1,000,000 annually. Said sums shall be allotted to the States in the proportion which their population bears to the total population in the United States, not including Territories, outlying possessions, and the District of Columbia, according to the last preceding United States census: *Provided*, That the allotment of funds to any State shall not be less than a minimum of \$5,000 for any fiscal year. And there is hereby appropriated the following sums, or so much thereof as may be needed, which shall be used for the purpose of providing the minimum allotment to the States provided for in this section, for the fiscal year ending June 30, 1921, the sum of \$46,000; for the fiscal year ending June 30, 1922, and annually thereafter, the sum of \$34,000.

All moneys expended under the provisions of this Act from appropriations provided by section 1 shall be upon the condition (1) that for each dollar of Federal money expended there shall be expended in the State under the supervision and control of the State board at least an equal amount for the same purpose: *Provided*, That no portion of the appropriation made by this Act shall be used by any institution for handicapped persons except for the special training of such individuals entitled to the benefits of this Act as shall be determined by the Federal board; (2) that the State board shall annually submit to the Federal board for approval plans showing (a) the kinds of vocational rehabilitation and schemes of placement for which it is proposed the appropriation shall be used; (b) the plan of administration and supervision; (c) courses of study; (d) methods of instruction; (e) qualification of teachers, supervisors, directors, and other necessary administrative officers or employees; (f) plans for the training of teachers, supervisors, and directors; (3) that the State board shall make an annual report to the Federal board on or before September 1 of each year on the work done in the State and on the receipts and expenditures of money under the provisions of this Act; (4) that no portion of any moneys appropriated by this Act for the benefit of the States shall be applied, directly or indirectly, to the purchase, preservation, erection, or repair of any building or buildings or equipment, or for the purchase or rental of any lands; (5) that all courses for vocational rehabilitation given under the supervision and control of the State board and all courses for vocational rehabilitation maintained shall be available, under such rules and regulations as the Federal board shall prescribe, to any civil employee of the United States disabled while in the performance of his duty.

**Sec. 2.** That for the purpose of this Act the term "persons disabled" shall be construed to mean any person who, by reason of a physical defect or infirmity, whether congenital or acquired by accident, injury, or disease, is, or

may be expected to be, totally or partially incapacitated for remunerative occupation; the term "rehabilitation" shall be construed to mean the rendering of a person disabled fit to engage in a remunerative occupation.

**SEC. 3.** That in order to secure the benefits of the appropriations provided by section 1 any State shall, through the legislative authority thereof, (1) accept the provisions of this Act; (2) empower and direct the board designated or created as the State board for vocational education to cooperate in the administration of the provisions of the Vocational Education Act, approved February 23, 1917, to cooperate as herein provided with the Federal Board for Vocational Education in the administration of the provisions of this Act; (3) in those States where a State workmen's compensation board, or other State board, department, or agency exists, charged with the administration of the State workmen's compensation or liability laws, the legislature shall provide that a plan of cooperation be formulated between such State board, department, or agency, and the State board charged with the administration of this Act, such plan to be effective when approved by the governor of the State; (4) provide for the supervision and support of the courses of vocational rehabilitation to be provided by the State board in carrying out the provisions of this Act; (5) appoint as custodian for said appropriations its State treasurer, who shall receive and provide for the proper custody and disbursement of all money paid to the State from said appropriations. In any State the legislature of which does not meet in regular session between the date of the passage of this Act and December 31, 1920, if the governor of that State shall accept the provisions of this Act, such State shall be entitled to the benefits of this Act until the legislature of such State meets in due course and has been in session sixty days.

**SEC. 4.** That the Federal Board for Vocational Education shall have power to cooperate with State boards in carrying out the purposes and provisions of this Act, and is hereby authorized to make and establish such rules and regulations as may be necessary or appropriate to carry into effect the provisions of this Act; to provide for the vocational rehabilitation of disabled persons and their return to civil employment and to cooperate, for the purpose of carrying out the provisions of this Act, with such public and private agencies as it may deem advisable. It shall be the duty of said board (1) to examine plans submitted by the State boards and approve the same if believed to be feasible and found to be in conformity with the provisions and purposes of this Act; (2) to ascertain annually whether the several States are using or are prepared to use the money received by them in accordance with the provisions of this Act; (3) to certify on or before the 1st day of January of each year to the Secretary of the Treasury each State which has accepted the provisions of this Act and complied therewith, together with the amount which each State is entitled to receive under the provisions of this Act; (4) to deduct from the next succeeding allotment to any State whenever any portion of the fund annually allotted has not been expended for the purpose provided for in this Act a sum equal to such unexpended portion; (5) to withhold the allotment of moneys to any State whenever it shall be determined that moneys allotted are not being expended for the purposes and conditions of this Act; (6) to require the replacement by withholding subsequent allotments of any portion of the moneys received by the custodian of any State under this Act that by any action or contingency is diminished or lost: *Provided*, That if any allotment is withheld from any State, the State board of such State may appeal to the Congress of the United States, and if the Congress shall not, within one year from the time of said appeal, direct such sum to be paid, it shall be covered into the Treasury.

**SEC. 5.** That the Secretary of the Treasury, upon the certification of the Federal board as provided in this Act, shall pay quarterly to the custodian of

each State appointed as herein provided the moneys to which it is entitled under the provisions of this Act. The money so received by the custodian for any State shall be paid out on the requisition of the State board as reimbursement for services already rendered or expenditures already incurred and approved by said State board. The Federal Board for Vocational Education shall make an annual report to the Congress on or before December 1 on the administration of this Act and shall include in such report the reports made by the State boards on the administration of this Act by each State and the expenditure of the money allotted to each State.

SEC. 6. That there is hereby appropriated to the Federal Board for Vocational Education the sum of \$75,000 annually for a period of four years for the purpose of making studies, investigations, and reports regarding the vocational rehabilitation of disabled persons and their placements in suitable or gainful occupations, and for the administrative expenses of said board incident to performing the duties imposed by this Act, including salaries of such assistants, experts, clerks, and other employees, in the District of Columbia or elsewhere as the board may deem necessary, actual traveling and other necessary expenses incurred by the members of the board and by its employees, under its orders, including attendance at meetings of educational associations and other organizations, rent and equipment of offices in the District of Columbia, and elsewhere, purchase of books of reference, law books, and periodicals, stationery, typewriters and exchange thereof, miscellaneous supplies, postage on foreign mail, printing and binding to be done at the Government Printing Office, and all other necessary expenses.

A full report of all expenses under this section, including names of all employees and salaries paid them, traveling expenses and other expenses incurred by each and every employee and by members of the board, shall be submitted annually to Congress by the board.

No salaries shall be paid out of the fund provided in this section in excess of the following amounts: At the rate of \$5,000 per annum, to not more than one person; at the rate of \$4,000 per annum each, to not more than four persons; at the rate of \$3,500 per annum each, to not more than five persons; and no other employee shall receive compensation at a rate in excess of \$2,500 per annum: *Provided*, That no person receiving compensation at less than \$3,500 per annum shall receive in excess of the amount of compensation paid in the regular departments of the Government for like or similar services.

SEC. 7. That the Federal Board for Vocational Education is hereby authorized and empowered to receive such gifts and donations from either public or private sources as may be offered unconditionally. All moneys received as gifts or donations shall be paid into the Treasury of the United States, and shall constitute a permanent fund, to be called the "Special fund for vocational rehabilitation of disabled persons," to be used under the direction of the said board to defray the expenses of providing and maintaining courses of vocational rehabilitation in special cases, including the payment of necessary expenses of persons undergoing training. A full report of all gifts and donations offered and accepted, together with the names of the donors and the respective amounts contributed by each, and all disbursements therefrom shall be submitted annually to Congress by said board: *Provided*, That no discrimination shall be made or permitted for or against any person or persons who are entitled to the benefits of this Act because of membership or nonmembership in any industrial, fraternal, or private organization of any kind under a penalty of \$200 for every violation thereof.

Approved, June 2, 1920.