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BUREAU OF EDUCATION

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PRIVATE AND ENDOWED SCHOOLS
OFFERING TRADE AND INDUSTRIAL
COURSES

BY

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Private and Endowed Schools Offering Trade and Industrial Courses

With an Appended List of Collegiate Schools of Technology

The information herein contained was compiled from recent catalogues where such were available and from a questionnaire issued by the Bureau of Education. Some schools which doubtless should have been included have been omitted by reason of lack of direct information. The list is in the nature of a directory and carries no indorsement of any school by the Bureau of Education. The schools included range from those of elementary grade, giving a few fundamental industrial courses, to schools of college grade that in addition to their degree-granting courses also offer some trade courses. Only the trade and industrial work offered by any of the schools is noted. The tuition fees are liable to variation from year to year, and the tendency to increase over previous catalogue reports is evident in many cases.

PART I

(Schools Arranged Alphabetically According to States)

ALABAMA

Birmingham.—*Davis Barber College*, 2125½ Second Avenue N. A private day school open all the year, offering instruction in barbering, 6 days a week; 12 hours a day. The average time for completion of the course is from 8 to 12 weeks. Tuition fee, \$40. Tools must be purchased by pupil.

Birmingham.—*St. Mark's Normal and Industrial School*. A private boarding and day school for colored girls. Boys and men are admitted as day pupils. The school receives financial aid from the American Church Institute for Negroes and the diocese of the Protestant Episcopal Church of Alabama. Enrollment, about 300; instructors, 7; length of school year, 36 weeks. Students do the janitor work. Cooking is taught in all grades from seventh through twelfth, one 90-minute period weekly, 6 years; sewing and laundering, one 90-minute period weekly, 7 years; manual training for boys, carpentry, and blacksmithing, one 90-minute period weekly, 6 years.

School extension work is carried on in the neighborhood for the purpose of encouraging home gardening and a better sanitary condition of the home.

Brewton.—Downing-Shofner Institute for Girls. A private boarding and day school, national in scope, for white girls. The school owns 200 acres of land and is aided by private donations and about \$2,000 a year from the Alabama Conference and the General Board of the Methodist Episcopal Church South. Enrollment, about 150; instructors, 10. The school admits pupils from the fourth grade and takes them through senior high school, giving the course required by the State. Each pupil is expected to work as much as one-half hour a day in the kitchen and dining room. Some scholarships and loans are available. Charge for tuition and room and board, \$200 per school year of 9 months; for day pupils, tuition fee for 9 months, \$50. Courses are offered in sewing, cooking, dairying, and home economics. Not over twenty-five 40-minute periods per week for 36 weeks are given in industrial work. Diploma granted. Summer session, 3 months.

Calhoun.—Calhoun Colored School. A private day and boarding elementary and secondary school for colored boys and girls. The school owns a farm of 424 acres and has an endowment of \$197,331.49. Children may enter the day school at the age of 5. For boarding pupils, completion of fifth grade is required for entrance. Training for boys is offered in agriculture, blacksmithing, carpentry, and cobbling; for girls, domestic science, crafts, laundering, and sewing. A night school is maintained for those pupils who work during the day in the departments.

Camp Hill.—The Southern Industrial Institute. A private non-sectarian boarding and day school for white boys and girls over 16 years of age. The school owns a farm of 400 acres and derives income from benefactions and bequests. Enrollment, 125; instructors, 11. A limited number of free scholarships are available and a revolving loan fund is provided for first-year students who are without funds. Beginning and elementary classes are held in all the lower grades. The high school is accredited. Expenses: Boys' industrial scholarship, \$125 a year, 4 days each week in school and 2 days a week at work; \$150 a year, 5 days each week in school and 1 day's work a week; academic scholarship, \$200 a year, no work. Girls work three hours each day and one-half day on Saturday.

Huntsville.—The Oakwood School. A private boarding school for negro boys and girls, conducted by the Seventh Day Adventists, to supply gospel workers for the colored people. The school owns 900 acres of land. Numbers of instructors, 24; entrance requirements, 16 years of age and completion of sixth grade. Ten hours of work each week about the institution are required. Length of school year, 30

weeks. Estimated total monthly expenses for girls, \$24; for boys, \$26. Five weekly 55-minute periods are offered in cooking, sewing, agriculture, carpentry, printing, and woodwork.

Marion.—Lincoln Normal and Industrial School. A private boarding and day school for negro boys and girls of Alabama and the Southern States, conducted under the auspices of the Congregational Church. Pupils are taken from third grade through high school. One hour's work per day about the institution is required. Tuition fee, \$1.25 to \$2.75 per month; board, \$13 per month. In grades 7 and 8 cooking is taught, 6 weekly 40-minute periods, 3 weeks of the year for 2 years; sewing, grades 3 to 8, 4 weekly 40-minute periods 32 weeks per year. High school: Cooking, 6 weekly 40-minute periods, 16 weeks per year for 4 years; sewing, 4 weekly 40-minute periods, 16 weeks per year, 2 years; woodworking, 4 weekly 40-minute periods, 32 weeks per year, 2 years.

Tuskegee.—Tuskegee Normal and Industrial Institute. A private boarding institute for boys and girls from any part of the United States and foreign countries. The institute owns a farm of 1,850 acres and has an endowment of \$5,000,000, from which is derived an annual income of \$307,918. The physical valuation of the plant is \$2,201,536. Other resources are: State aid, \$5,000; Macon County, \$1,200; Federal aid, \$8,400; health work, \$1,200; Smith-Hughes work, \$7,200. Entrance requirements to the industrial school, completion of the sixth grade; other departments, 15 units of high-school work. All students are required to do some work on the farm or about the institution. Charge for board, \$18 per month; entrance fee, \$25; athletic fee, \$5. On entering each student should be prepared to pay \$70 to \$76. Students in the mechanical departments must provide themselves with tools. Military training is given all male students over 14 years of age. Teacher-training courses are offered in industrial arts, home economics, and agriculture. The summer school is conducted under the joint auspices of the Alabama State Board of Education and the Tuskegee Institute. Length of school year, 36 weeks. Three-year day trade courses, alternate days in class and shop, are offered in 23 trades for boys and 7 trades for girls; 9 courses are offered in vocational agriculture. The following subjects are taught: Architectural drawing, automobile mechanics, applied electricity, blacksmithing, brick masonry, cabinetmaking, carpentry, carpentry repairs, carriage and automobile trimming, linotype operating, machine-shop practice, painting, plastering, photography, plumbing, printing, sheet metal, shoemaking, steam engineering, steamfitting, tailoring, wheelwrighting, and woodturning. For girls: Domestic science, dressmaking, advanced dressmaking, laundering, home crafts, nursing, and plain sewing.

TRADE AND INDUSTRIAL COURSES

ARKANSAS

Magazine.—*Magazine Industrial Institute.* A private nonsectarian day and boarding school for white boys and girls over 14 years of age. The school owns 60 acres of land. Enrollment, 110. Day courses are given in dietetics, domestic arts, domestic science, agriculture, dairying, and blacksmithing.

Mountain Home.—*Mountain Home College.* A private national boarding school for white boys and girls over 14 years of age. The school owns 46 acres of land and receives annual appropriations from the Baptist Church. Tuition fee, \$20 to \$72 per year. Laboratory fees average \$7.20 per student per year. Students are employed to do all the work of the institution. Teacher-training courses are offered in industrial arts. Summer courses are given. The length of the school year is 36 weeks. Two-year courses are offered to girls in domestic science and domestic arts, five 90-minute periods a week each. One-half year of stenography is required. Two-year courses for boys are given in manual arts, five 90-minute periods weekly. One-half year of bookkeeping is required for boys.

CALIFORNIA

Los Angeles.—*National Automotive and Electrical School,* Figueroa and Santa Barbara Streets. A private day and evening school open all the year for boys over 16 years of age. No previous education is required for entrance. Individual and group instruction is given. Tuition fee, \$50 up, according to course. Courses are offered in auto mechanics and electricity, 30 hours per week, 1 to 4 months; general electricity, 30 hours per week, 3 to 9 months. Evening courses, 5 hours per week. Special course in automechanics in the Spanish language. Life scholarship, tuition fee, \$300, includes complete training in all of the 14 departments of the institution, and postgraduate privileges.

Oakland.—*Polytechnic College of Engineering,* 1310 Madison Street. A private coeducational school open all the year. No age limit. High-school or equivalent education is required for entrance to technical courses. Two-year, or 24 months' intensified, practical courses are offered in civil, electrical, mechanical, mining, architectural, aeronautical, and structural engineering. Tuition for 2 years, including laboratory fees, \$475; degrees granted. Special one-year, 12 months', nondegree courses in which no entrance examinations are required are offered in auto mechanics, machine shop, electricity, surveying, mechanical drafting, architectural drafting, electrical drafting, and building estimating; tuition fee, \$275. Six months' course in automobile battery, automobile mechanics, airplane mechanics, and riggers, \$175; three months' battery shop course, \$100.

San Francisco.—*The California School of Mechanical Arts* (commonly called the Lick School) and the *Wilmerding School of Industrial Arts*, Sixteenth and Utah Streets. These two schools are combined with the Lux School in a tripartite agreement under one head, but are maintained under separate endowments, the former having an endowment of \$631,000 and the latter \$900,000. The schools have a dormitory for boys. The Wilmerding School is for boys only. Both schools admit only residents of California, under 21 years of age, who have a grammar-school education. Students are enrolled concurrently in both schools. The boys have a two-year preliminary course, followed by apprenticeships in various lines of shopwork, stonework, cabinetmaking, sheet-metal work, plumbing, automechanics, machine-shop practice, and electrical work; or in technical lines, including drafting, architectural drafting, industrial chemistry, and commercial art; or they may take a college preparatory course for engineering in the universities.

San Francisco.—*Cogswell Polytechnic College*, 3000 Folsom Street. A private day school for boys and girls who have completed the eighth grade. Endowment, \$1,222,847.50; buildings, \$394,368; no tuition fee; practice material, \$5 per term of 20 weeks. Courses are offered in woodwork and pattern making, five 90-minute periods per week, 30 weeks-1 year; forge and foundry, five 90-minute periods a week, 20 weeks 1 year; machine shop, elective, five 90-minute periods, 20 weeks 1 year. Provision is made for advanced training in woodwork and pattern making, machine shop, auto shop, machine and architectural drawing.

San Francisco.—*Heald Technical Schools*, 1101 Sutter Street. A day and night technical and trade school open 50 weeks of the year offering courses in electricity and automobile mechanics, and 2-year engineering courses in mechanical, civil, and structural engineering. Average attendance, day, 375; night, 300. The school conducts two distinct departments, technical and trade, in both day and night school. For the high-school graduate the technical course requires 30 to 36 months day school, and the night school 5 to 6 years. To complete the automobile course requires 9 months day school; night school, 18 months. Two-year mechanical engineering course, B. S. degree, tuition fee, \$475. Short courses from 3 months to 1 year in length; tuition fee, according to course.

San Francisco.—*Hiles Watchmaking and Engraving School*, 5330 Mission Street. A private school open all the year, offering courses in watchmaking, 18 months; jewelry making, 12 months.

San Francisco.—*Industrial Association of San Francisco Trades Schools*, 1120 Howard Street. A private evening school for boys and men from 18 to 35 years of age. No tuition fee. The ap-

prentice gets his tools from the Industrial Association at wholesale cost. Length of school year, 50 weeks. Four-year courses are offered in painting and decorating, four 2-hour periods weekly; electrical work, 3 periods weekly; molders and coremakers, 2 periods weekly. Three-year course for plumbers is offered in five 3-hour periods weekly; 6-months' course for plasterers (ornamental), five 3-hour periods.

San Francisco.—*The Lutz School of Industrial Training*, Seventeenth and Hampshire Street. A private day school for girls of California under 21 years of age who have a grammar-school education. Endowment, \$1,000,000. This school is combined with the California School of Mechanical Arts and the Wilmerding School of Industrial Arts in a tripartite agreement under one head. There is no charge for tuition. A fee of \$3 quarterly is charged to cover cost of materials. Girls between 16 and 18 years of age who have not completed the grammar school will be permitted to enroll in such vocational courses as they may seem qualified to undertake. Applicants are accepted without examination, upon recommendation of former teachers. The school is organized and equipped for vocational courses in the following subjects: Plain sewing, dress-making, millinery, and other work in textiles; preparation, processing, manufacturing, serving, and use of foods in the household and in commercial establishments; activities pertaining to health and sanitation, including physical training, hygiene, dietetics, laundering, for those looking forward to nursing, employment in medical or dental offices, nutrition work, social service, institutional management; costume design, commercial art, house decorating, furnishing, draping, trimming; salesmanship, store service, and merchandising by cooperative plan with commercial establishments. School diploma awarded for full four-year course.

COLORADO

Denver.—*Moler System of Colleges* (barbering), 1229 Seventeenth Street. A private day and evening school open all the year for white boys and girls over 16 years of age. Educational requirements, completion of eighth grade. Tuition fee for complete barber course, \$150; tools and textbooks, \$35; tuition fee for complete beauty course, \$200; tools, etc., \$32. Eight hours a day practice, 3 hours night practice.

Denver.—*Denver Junior College*, Sixteenth and Lincoln Streets, Y. M. C. A. building. Unit courses conducted by the Young Men's Christian Association are offered in business and technical subjects, including architectural drafting, aviation, mechanics, traffic management, oil geology, radio, and telegraphy. Tuition charges according to course.

CONNECTICUT

Waterbury.—*Waterbury Institute of Craft and Industry*, 29 Leavenworth Street. A private day and evening school for girls and women. Courses of 16 lessons, one 2-hour period a week, offered in dressmaking, millinery, weaving, basketry, wood blocking, wood carving, tooled leather, parchment-shade decorating, batik, and design. Tuition fee, \$5 to \$15, according to course.

DELAWARE

Clayton.—*St. Joseph Industrial School for Colored Boys.*—A private Roman Catholic boarding school for negro boys over 12 years of age. Enrollment, 83. The school is supported from the proceeds of a 400-acre farm, charitable contributions, and subscriptions to a small religious magazine. If able, the boys pay \$5 a month tuition fee. Length of training, 6 years. The boys work on the farm, in the dairy, and in the different shops 4 hours a day, and study 4 hours a day, 6 days a week for 52 weeks of the year. Courses are given in printing, carpentry, tailoring, and shoemaking. Some military training is given.

DISTRICT OF COLUMBIA

Takoma Park.—*Bliss Electrical School.* A private special technical boarding school for white boys over 18 years of age. A common-school education, including a good working knowledge of arithmetic, is required for entrance; high-school graduation preferred. Enrollment in 1927, about 350. The school conducts but one course, a condensed course in theoretical and practical electrical engineering, designed to be completed in one college year, beginning the last week in September and closing the first week in June. Charge for tuition, including room and board, \$800 a year; books, tools, and other supplies, including graduation fee, \$60. It costs the student in round figures, including personal expenses, about \$1,000 to complete the course. Five 55-minute periods weekly each in mechanical drawing, mathematics, and electrical recitations are given for 32 weeks of the year; machine department, wiring, and testing departments, ten 55-minute periods weekly for 10 weeks. During the year 12 electrical examinations are held. The school work is designed to occupy the student's entire time during the day. It also requires 3 or 4 hours each evening for study. In a limited number of cases the school extends to certain worthy boarding students, who would otherwise be unable to take the course, an opportunity to work out a total of not more than \$200 in general utility work about the institution.

Washington.—*The Columbia School of Drafting*, Fourteenth and T Streets NW. A private day and evening school open all the year.

No special training or education is required for entrance. Each session consists of 2 hours' instruction, either day or night. Time allotted for completing the course is 9 months, when the student attends 2 sessions a week; or 6 months, 4 sessions a week. Tuition fee, \$108. Home work is assigned in all courses. Women are admitted as students.

Washington.—*Lewis Hotel Training School (Inc.)*, Twenty-third Street and Washington Circle. This school offers correspondence courses in 50 lessons in hotel and tea-room management and maintains a resident school offering a 6 months' course in hotel management and a 3 months' course in tea-room management.

Washington.—*Livingstone Academy*, 1517 Rhode Island Avenue NW. A private coeducational boarding, day, and evening school, offering 1 and 2 year day courses, 10 weekly 2-hour periods in commercial art, interior decorating, and costume designing. Three-year day course, 10 weekly 2-hour periods in mechanical drafting; 1-year day course, 10 weekly 2-hour periods in advertising and applied arts. Evening courses: One-year and two-year courses in commercial art, interior decorating, and costume designing, 5 weekly 2-hour periods. Three-year course in mechanical drafting, 5 weekly 2-hour periods. One-year course in advertising and in applied arts, 5 weekly 2-hour periods. Length of school year, 36 weeks; tuition fee, \$150 a year; room and board, \$450.

Washington.—*Loomis Radio School*, 405 Ninth Street NW. A private evening school for white men and boys over 16 years of age having at least a grammar-school education. The school offers a commercial operator's and junior engineering course, 4 nights weekly, 2 to 3 hour periods, 40 weeks. Tuition fee, \$200. Amateur course, 2 to 4 weeks; tuition fee, \$4 weekly. Special private instruction in theory. Advanced finishing course, \$5 weekly.

FLORIDA

Jacksonville.—*Boylan Home Industrial Training School*. A private boarding and day school for negro girls 6 to 20 years of age, from Florida and the South, supported by the Methodist Episcopal Church, special gifts, and scholarships. Enrollment, over 100; length of school year, 36 weeks; board and tuition fee, \$12 a month. Each girl is required to give 1 hour a day to industrial work. Three-year courses are offered in household science and domestic arts, two 40-minute periods weekly in high school. Household science and domestic arts are given one 2-hour period weekly in all grades and senior high school. Courses for special students are offered in dressmaking, five 2-hour periods a week. Day tuition fee, \$1 to \$2 per month. Teacher-training courses are offered.

GEORGIA

Athens.—Know Institute and Industrial School. A private boarding and day elementary and high school for colored boys and girls of all ages from all States of the Union, conducted under the auspices of the American Missionary Association of the Congregational Church. Enrollment, 231; price of room and board, \$12 a month. One or more hours of work each day, and two or more on Saturday, are required of each boarder. Tuition fee, 50 cents to \$5 a month. Courses in woodworking and mechanical drawing for boys, and cooking and sewing for girls, are offered in the sixth, seventh, and eighth grades. Printing for boys, and sewing, cooking, and home economics for girls, are given in the first two years of high school.

Macon.—Macon Linotype School. A private school for white men and women from 18 to 35 years of age who have at least a high-school education. Enrollment, 30. Cooperation is received from publishers. Tuition fee, \$225; books, \$6.20. Day courses are offered in operating and mechanics, 6 weekly 8-hour periods 4 to 8 months. One 5-hour a week evening session is held.

McIntosh.—Dorchester Academy. A private boarding school for negro boys and girls over 14 years of age, beginning with the first grade. The school receives \$15,000 annually from the American Missionary Association of the Congregational Church, and owns a farm of 120 acres. Required work about the farm, 1½ hours daily from each student. Military drill, 15 minutes daily. Courses are offered in sewing, cooking, manual training, and agriculture 2 weekly 45-minute periods, 36 weeks per year.

Mount Berry.—Mount Berry School for Boys, Martha Berry School for Girls, and Berry College, the latter established in 1926. A private nonsectarian Protestant boarding institution open to white boys and girls over 15 years of age from the rural and mountain districts of the Southern States for the purpose of training them for country life. The school owns 600 acres of cultivated land and several thousand acres in forest, and is supported largely by private donations, with very little State and county aid. Tuition fee and board, \$150 a year; books, \$15; clothing, \$50. Two days a week are required of students in work about the institution. Opportunities are offered for self-help for a limited number of students. The course of study extends from the first grade through high school, covering 9 years. Twelve weekly 50-minute periods, 32 weeks of the year, are given in mechanical drawing, 2 years; forging, carpentry, cabinetmaking, and farm mechanics, 1 year each. Evening courses in English, algebra, and geometry are offered boys who are working their way through. Teacher-training courses in industrial arts are also offered.

Mount Zion.—Mount Zion Seminary. A day and boarding school for white boys and girls from 8 to 20 years of age, under the auspices of the Methodist Church. State and county aid, \$1,500. One hour of work a day required about the farm. Tuition fee depends on grade. College entrance course and vocational course are offered.

IDAHO

Weiser.—Intermountain Institute. A private coeducational high school under the auspices of the Congregational Church. The school owns a farm of 2,000 acres. Entrance requirement, completion of eighth grade. Tuition fee, \$40 each semester; board and room, \$110. Available work at the rate of 25 cents an hour will be given such students as can not afford to pay their way. Work is not guaranteed to anyone. Courses are offered in manual training, ten 45-minute periods, 38 weeks a year. One year required, 3 years elective.

ILLINOIS

Chicago.—Ambu Engineering Institute, 2632 Prairie Avenue. A private day school for men and boys over 18 years of age who have completed the eighth grade. Courses offered in automotive electricity, 44 hours a week for 8 weeks. Tuition fee, \$175.

Chicago.—The Joseph G. Branch Institute of Engineering, 3917 Grand Boulevard. Instruction is confined almost entirely to the Latin countries, complete correspondence courses being given in the English, Spanish, and Portuguese languages. A small residence school is maintained in Chicago for the enrollment of students from Latin countries. Correspondence courses are offered in electrical engineering in 12 lessons; price, \$50. Courses complete with diploma in automotive engineering, \$70; mechanical engineering, \$125; civil engineering, \$200; electrical therapeutics, \$150.

Chicago.—Chicago Painting School, 150-152 West Austin Avenue. A private day and evening school for white men and women over 16 years of age. Day courses are offered 6 hours a day, 5 days a week in sign painting and decorating, 14 weeks each; show-card writing, 10 weeks; paperhanging, house painting, graining, and marbling, 6 weeks each. Tuition fee, \$125 to \$300, according to course. Evening course, 2-hour periods 3 evenings a week, in sign painting, 32 weeks; decorating, 32 weeks; show-card writing, 20 weeks; paperhanging, house painting, graining, and marbling, 16 weeks each.

Chicago.—Chicago School of Printing, 1230 West Jackson Boulevard. A private school open all the year for white boys and girls over 14 years of age who have finished the eighth grade, in the city of Chicago and vicinity. Day courses run 32 weeks, 11 periods per week, in hand composition, 2-hour periods; monotype, 4-hour pe

riods; operation of presses, 4-hour periods; English, 1½-hour periods. Evening courses, 32 weeks of the year, from 1½ to 4 hours a week in hand composition, monotype, operation of presses, English, printing advertising, and advertising typography, proof reading, imposition, and lock-up. Tuition fee, according to course.

Chicago.—*Illinois Technical School for Colored Girls*, 4910 Prairie Avenue. A private Roman Catholic boarding school for negro girls 6 to 15 years of age. Financial aid is received from Cook County. Tuition fee, \$20 per month. Training is given in the domestic arts 1½ to 3 hours per day for 40 weeks in the year.

Chicago.—*Chicago Technical College*, 118-132 East Twenty-sixth Street. A private day and evening school for boys over 16 years of age. Women are admitted. Day students who have not completed the high-school course will have the necessary high-school subjects included in their course at college. Two-year courses in architecture, architectural engineering, civil, mechanical, electrical, and structural engineering, lead to the college diploma. Three-year courses in these subjects lead to the degree of bachelor of engineering. A special 8-month builders' course is offered, also short courses in drafting and design. Tuition fee, cash rate, regular day courses for one school year of 9 months, \$275; short courses, \$150. Evening school, 1 year of 12 months, \$115. Home-study courses are also offered.

Chicago.—*Chicago School of Watchmaking*, 4844 Lincoln Avenue. A day and evening school which aims to cover all-branches of watchmaking and repairing. All individual personal instruction. Short courses are given in jewelry engraving, \$90. Short courses in jewelry manufacturing and repairing, stonemasonry, etc., \$90.

Chicago.—*Coyne Electrical School*, 1300 West Harrison Street. A private day and evening school open all the year. All branches of electricity are taught. A common-school education is all that is required for entrance. Twelve-week courses are offered in electricity and practical drafting.

Chicago.—*Greer College of Engineering, Electrical and Automotive*, 2024 Wabash Avenue. A private day and evening school open all the year. Applicants to enter must understand either the English or Spanish language. No age limit. Courses are offered in electrical repair shop practice, battery, radio engineering, radio operator, and machine-shop practice. The "job sheet" method is used, also group instruction.

Chicago.—*McCarrie School of Mechanical Dentistry*, 1388 South Michigan Avenue. Branches also at Detroit, Cleveland, Philadelphia, and Boston. This school offers 4 to 6 months' day courses in dental laboratory work, including construction of all kinds of vulcanite and metal base plates and patented attachments. Night courses, 8 to 12 months.

Chicago.—Northern Illinois College of Optometry, 4043 Drexel Boulevard. This school is open all the year to high-school graduates, men and women over 21 years of age. A 2-year course is offered leading to the degree of doctor of optometry. Length of course, 16 months, and a minimum of 2,000 hours class attendance. Tuition fee, \$450; entrance fee, \$25. Special course, 1,000 hours in a minimum of 8 months, \$200. Night courses, 1,000 hours, \$12.50 per month, \$200. Short-term courses, postgraduate and review courses, from \$20 to \$50. Mechanical optics shop course, \$50.

Chicago, Pullman.—The Pullman Free School of Manual Training, 250 East One hundred and eleventh Street. A private, free vocational, 4-year high school for boys and girls 12 to 18 years of age, who have finished the eighth grade, and who live in the southern part of Chicago or whose parents are employed in Pullman. Endowment, \$2,500,000. Size of campus, 40 acres. At the beginning of the sixth semester each student decides whether he will take the college preparatory course or one of the vocational courses. Day courses are offered in automechanics, electrical work, machine-shop work, and drafting, 10 to 30 weekly 42-minute periods, 40 weeks a year, 3 years. Evening courses are offered in automechanics, electrical work, drafting, machine-shop work, six weekly 60-minute periods 32 weeks of the year.

Chicago.—Siebel Institute of Technology, 958-964 Montana Street. This school has absorbed and operates the Technological College of Zymotechnic Institute. The staff and faculty members act as analysts, technical counselors, and industrial engineers to manufacturing establishments within the scope of the institution's activities. The school is open to white men 21 years of age and over who have at least a high-school education. Eight weeks, 6 hours daily, resident courses, including lectures and discussions in physics and chemistry, microscopy, bacteriology, and yeast fermentation, baking materials and baking technology, are offered in scientific baking; tuition fee, \$225; and refrigeration engineering, \$250; also special and short courses in scientific milling, cake and pastry baking, and carbonated beverages. Cake course, 6 hours daily for 2 weeks. Home-study courses are given in baking technology, 28 lessons; refrigeration engineering and carbonated beverages, 20 lessons each; \$95 cash for each course; milling technology, \$75 cash.

Chicago.—Winter's School of Jewelry Engraving, 90 South Oak Park Avenue. A private day, evening, and home-study school open all the year, for boys and men 15 to 40 years of age. No educational requirements for entrance. Tuition fee, \$30 a month; tools extra. One-year courses are offered, 5½ days a week, in designing and engraving of all styles of letters, monograms, crests, and orna-

mentations on jewelry and on silver, ivory, and other articles in the jeweler's line.

Des Plaines.—St. Mary's Training School. A nonsectarian boarding school for dependent boys 4 to 14 years of age, supported by the Catholic charities and aided by Cook, Kankakee, and Grundy Counties. The school owns a farm of 650 acres. From fifth to eighth grades, five 2½-hour periods a week for 40 weeks a year are required in greenhouse, printing shop, shoe shop, carpenter shop, electrical department, bakery, paint shop, and laundry.

Effingham.—Illinois College of Photography. A private school open all the year for boys and girls over 16 years of age. Enrollment, about \$200 a year. No educational requirements for entrance. Room and board can be obtained in Effingham at reasonable rates. The school offers a 6 months' course in photography; 8 months' course in photo-engraving and 3-color work. Tuition fee, \$300; laboratory fee, \$20; supplies, \$50 to \$200.

Glenwood.—Glenwood Manual Training School. A private nonsectarian home school for dependent boys from 10 to 17 years of age from the State of Illinois. The school has an endowment of \$1,000,000, contributions \$65,000 a year, and a farm of 403 acres. The boys work one-half day at some form of industrial work and one-half day in school. The following industrial subjects are taught: Farming, greenhouse work, dairy, machine shop, printing, carpentry, shoe mending, baking, office practice. Tuition fee, \$10 to \$40 a month. Military training, 3 hours a week.

Mooseheart.—Mooseheart High School. A private free boarding school maintained and financed by the Loyal Order of Moose for the dependent children of deceased members of the order from the United States and Canada. The school owns a farm of 1,023 acres. Enrollment, about 1,175. The school is organized on the 6-3-3 plan and is in session 48 weeks of the year. Hall duties are required. In the junior high school a period of 1½ hours daily is given to an "experiment in trades," a 3 months' trial in each of the different trades. Twenty 45-minute periods a week are given in sign painting, cement work, drafting, printing, machine shop, sheet metal, woodwork, and painting for boys. For girls, cooking, lunch-room management, garment making, bookkeeping, typing, and secretarial work.

Peoria.—Bradley Polytechnic Institute. Vocational courses are offered in automobile mechanism, drafting, electricity, machine-shop practice, sheet-metal work, woodwork and carpentry, and horology. Any young man over 16 years of age with general qualifications to profit by the instruction may enter any of the 1 or 2 year courses. Tuition fee, \$150 a year of 9 months. Material in some courses may cost \$30 a year. The student spends 7 hours a day in shop work,

5 days a week and 4 hours on Saturday, 4 hours in the trade and 8 hours in shop or class work supplementary to the trade. The school offers a 1-year practical trade course for sheet-metal workers, 4 hours a day in shop work, 2 hours in drawing, and 1 hour in mathematics of the sheet-metal worker's trade. Evening courses are given in some vocational subjects. Teacher-training courses in industrial subjects—4-year program—are offered. The school in horology is open to men and women throughout the year.

INDIANA

Indianapolis.—*Central Y. M. C. A. Technical School*, 310 North Illinois Street. An evening school open to men and women. Enrollment, 285. Courses are offered in mechanical drafting, 2-year course, two 2-hour periods a week, 32 weeks a year; architectural drafting 1 year, 82 weeks, two 2-hour periods a week; welding two 2-hour periods a week, 14 weeks; radio construction, 1 year, 2 weekly 2-hour periods; battery building, 32 weeks, two 2-hour periods weekly; starting and ignition, 16 weeks, one 2-hour period a week; chemistry, 40 weeks, 2 weekly 2-hour periods. Special courses: Show card writing, 14 weeks, two 2-hour periods weekly; window trimming, 12 weeks, one 2-hour period weekly; electricity, 32 weeks, two 2-hour periods weekly; plan reading and estimating, 32 weeks, two 2-hour periods weekly.

La Porte.—*Polk College of Piano Tuning*, 609 Lincoln Way. A private school open to men and women, offering a 12-week course in piano tuning, 80 lessons, 30 to 40 minute periods, including general repair work on electric coin-operated and reproducing pianos. Tuition fee, \$285.

Valparaiso.—*Dodge's Telegraph, Railway Accounting, and Radio (wireless) Institute.*—A private school open all the year for the training of young men and women to become railway and commercial operators. The school maintains 3 departments, Morse, railway accounting, and radio telegraphy and engineering. Typewriting is also included in the Morse department. Tuition fee, time unlimited, including a 5-month course in typewriting, \$95; 8 months, same course, exclusive of typewriting, \$62.50. Radio, time unlimited, including all laboratory work and the Continental-Morse code, \$100; 3 months, \$70. Railway accounting, \$40; textbook and necessary supplies, \$7.

IOWA

Des Moines.—*Hohenschuh Carpenter College of Embalming*, 720 Sixth Avenue. This school is open to men and women over 18 years of age who have finished the eighth grade. The course includes

lectures and laboratory work in the modern accepted methods of embalming, 40 weekly 45-minute periods for 39 weeks. Tuition fee per quarter, \$125. Extension service course, \$55.

Nevada.—Oak Park Academy.—(Successor to Stuart Industrial Academy.) Operated by the Seventh Day Adventists for the training of young men and women for Christian service. Minimum monthly charge for room, board, and tuition, \$23. Students are required to give 48 hours a month in farm, laundry, janitor, kitchen, and dining room work. Courses are offered in printing, woodworking, 2 semesters second year; cooking, 2 semesters second year; sewing, 2 semesters third year; and hydrotherapy, 2 semesters.

KENTUCKY

Berea.—Foundation Junior High School of Berea College. A private nonsectarian boarding school for white boys and girls from the Appalachian region, over 16 years of age, from first grade up, who have not completed the ninth grade. The Berea institution owns a 600-acre farm, 60-acre garden, 75-acre campus, and 6,000 acres of forest reserve. Endowment, \$7,500,000. Price of room and board, \$3.15 a week for girls, and \$3.40 a week for boys. Incidental fees, about \$16 a year. Students work two hours a day about the institution for which they are paid in labor credits, and earn an average of 76 per cent of their expenses. Courses are offered in agriculture, business, auto mechanics, electricity, general shop, drafting, home economics, paperhanging and painting, printing and linotype, sign painting, and weaving.

Lincoln Ridge.—Lincoln Institute of Kentucky. A nonsectarian endowed normal and industrial institute for negro men and women. No tuition fee. All necessary expenses, except clothing, for the school year amount to about \$160. The institute furnishes a large amount of labor by means of which students may earn part of their expenses. Every young woman is trained in home making, cooking, and sewing. Certificate course, four years. Courses are given in power-plant care and operation, ice making and refrigeration, steam engineering, building construction, and cabinetmaking.

LOUISIANA

New Orleans.—Isadore Newman Manual Training School. A private preparatory school for white boys and girls from 5 to 18 years of age. Endowment, \$100,000. Tuition fee, \$75 to \$240. Length of school year, 36 weeks, 5 weekly 45-minute periods. In industrial subjects 4-year courses are offered in woodworking and mechanical drawing; 2-year courses in printing, sewing, and cooking.

New Orleans.—*The Mergenthaler Linotype School*, 549 Baronne Street. Open all the year, classes beginning on the 1st and 15th of each month, 8 hours a day, half day Saturday. Every owner of a linotype machine purchased from the Mergenthaler Co. is entitled to a free scholarship or is privileged to recommend an employee for the 6 weeks' or 2 months' course of instruction. Two-thirds of the student's time is devoted to the mechanism, care, and adjustments of the linotype, and one-third to keyboard practice. A limited number of pay students who have had at least 2 years' actual printing experience can be accepted. The tuition fee is \$50 for the 6 weeks' course; \$70 for 2 months' course, and \$100 for 3 months' linotype machinist course.

MARYLAND

Baltimore.—*The Maryland Institute for the Promotion of the Mechanic Arts*, Market Street Building. Day, night, and Saturday schools are conducted. Day school, September 15 to June 15, includes mechanical and architectural drafting, English, and mathematics. Tuition fee, \$75 a year. Night school offers 4-year courses in mechanical, architectural, marine, automobile, sheet-metal drafting, and interior decoration. Students undertaking the first year's work must be over 14 years of age and are admitted without examination. The 4-year marine drafting course includes the underlying principles of construction of ships, hull construction, fittings, etc., design and construction, or design of the machinery connected with ships. Two-hour periods are given 3 nights a week, October 1 to March 31. Tuition fee, \$10 to \$12 a year. Saturday school, October 2 to May 21, 3-hour period, mechanical and architectural drawing and teacher-training course, \$4 a year.

Baltimore.—*Tri-City Barber School*, 817 East Baltimore Street. A private school for training white barbers. From 3 to 10 weeks required for training. Tuition fee, \$45, without tools, or \$57.50, including a standard set of tools.

McDonogh.—*McDonogh School*. A private free boarding and day school for dependent white boys 6 to 20 years of age, from the city of Baltimore and State of Maryland. The school owns a farm of 835 acres, has an endowment of \$1,500,000, and receives State aid in the amount of \$3,500 annually. A very limited number of boys may be accepted as pay students. Required work about the institution, 1½ hours a day. Length of school year, 36 weeks. Courses are given in printing, 6 weekly 1-hour periods, 5 years; wood shop and automechanics, 12 weekly 40-minute periods each, 3 years. Military drill 30 minutes a day during the school term. Officers are appointed each year from among the boys.

Ridge.—Cardinal Gibbons Institute. A national Roman Catholic boarding school for colored boys and girls, over 14 years of age, who have completed the seventh grade. Enrollment, 45. The institute has property valued at \$125,000, including a 200-acre farm, and relies largely upon donations for its support. Two hours of work daily and 6 hours on Saturday about the institution are required of all students. Tuition fee, \$3 per month; board, \$16; stationery, \$2. A limited number of students will have an opportunity to work off all or a part of their expenses. Instruction is given in home economics, five 90-minute periods weekly, 16 weeks of the year for 2 years. Boys are taught auto and farm mechanics.

Takoma Park.—Bliss Electrical School. (See District of Columbia.)

MASSACHUSETTS

Boston.—Back Bay Candy College, 4 Victoria Street. Professional candy-making courses are offered for men and women, morning, afternoon, and evening. Length of single course, 4 to 7 days. Complete professional course, \$45.

Boston.—Berkeley Auto School, 117 Berkeley Street. Automobile courses are offered for men and women all the year, day and evening. Fees: Driving course, \$5 for 6 lessons; chauffeur's course, \$14.

Boston.—Blanchard Linotyping School, 46 Portland Street. The school is open all the year. Courses are offered in linotyping for men and women, 3 months to a year in length, depending upon pupil. Two-year high-school education required for admission. Fees: \$5 for week of 6 hours; \$20 for week of 24 hours; \$25 for week of 30 hours.

Boston.—Boston Candy School, 918 Beacon Street. Candy-making courses are offered for men and women all the year, day and evening. Fees: First course, \$10; second course, \$23; advanced course, \$20; special course, \$10.

Boston.—Boston School of Cookery, 48 A Gloucester Street. Open from October to June, day and evening. Cooking courses for women. Fees: \$6 to \$30, depending on course.

Boston.—Coyne State Steam Engineering School, 121 Haverhill Street. Open for instruction every week day and 5 nights each week the year around. This school offers to train engineers and firemen to enter the State service and meet the requirements of the license law. Average time necessary to qualify pupils to pass the examinations, 6 to 14 days. Tuition fee, \$20 to \$60. Special terms for engineers wishing to qualify for marine license, the position of boiler inspector for insurance companies, and State examiners of engineers.

Boston.—Eastern Radio Institute, 899 Boylston Street. Radio courses open for men and women all the year, day and evening, 2-hour

periods 8 evenings a week. Day course, 6 months, \$120; advanced course, 3 months, \$60; evening course, 9 months, \$90.

Boston.—The Farm and Trades School, Thompson's Island. A private Protestant boarding school, with farm of 157 acres, where worthy boys of limited means between the ages of 10 and 14, above the fifth grade, may have a home, receive an education, and learn the rudiments of a trade. Enrollment, 106. The school furnishes clothes, books, and all necessities, and the boys' parents pay tuition, according to their means. Regular school courses are taught from the sixth grade through second year high school. Courses are offered in agriculture, twenty 40-minute periods weekly, 45 weeks of the year, and in printing, machine-shop practice, forging, painting, cobbling, instruction in office work, the handling of boats, care of boilers, steam and gasoline generators, steam-heating system in the power house, household duties, and laundry work.

Boston.—Faust School of Tuning, 27 Gainsboro Street. Courses in piano and organ tuning for men and women, beginning September and continuing 40 weeks. Fees: Full course, \$240; individual courses, \$40 to \$225. Private lessons available.

Boston.—Franklin Union, 41 Berkeley Street. A technical institute for men and women under the charge of the Franklin Foundation. Day courses are open October to May; evening courses October to August. Applicants must be at least 17 years of age and able to speak and write English. Practical industrial experience will be accepted as a substitute for high-school preparation. One-year trade courses are arranged to give intensive training, for 8 months in electrical wiring and maintenance, automobile repair and operation, industrial chemistry, industrial electricity, and pharmacy—also 2-year, 3-year, and 4-year courses. Evening classes are conducted in drafting, electricity, surveying, building construction, chemistry, pharmacy, ship and design calculations, navigation, steam engines and boilers, heating and ventilating, architectural office practice, estimating, plumbing, metallurgy, radio, automobile engines, self-starting and lighting, 2, 3, and 4-year courses. Tuition fee for day course, \$175 per year; evening course, registration fee, \$10 to \$35, depending on course.

Boston.—Graves School, 59 Temple Place. Open all the year, day and evening. Courses for women are offered in drafting, designing, and dressmaking. Fees, \$7 to \$25, depending on course.

Boston.—Hawley School of Engineering, 115 Huntington Avenue. The school offers day and evening courses in steam and electrical engineering and for firemen. Applicants should be over 17 years of age and have the equivalent of a grammar-school education.

Tuition fee for steam engineer's course, \$20 to \$60; course in electricity, \$60 to \$100.

Boston.—Hecht Neighborhood House, 22 Bowdoin Street. A private Jewish day and evening school for boys and girls from 2½ years up, residents of the West End of Boston. Dues, nominal. Courses are given in hand and machine sewing, embroidery, dress-making, millinery, painting, drawing, woodwork, and cooking. Evening courses are given in lampshade making and rug making.

Boston.—Massachusetts Radio and Telegraph School, 18 Boylston Street. Open all the year, day and evening, for men and women. Day course, 4 hours daily, \$25 per month; evening courses, 2-hour periods 3 evenings a week, \$10 per month.

Boston.—Mullane-Kinslea Trade School, 26 Cambria Street. Open from September to May, 5 days a week, and 3 evenings a week. Enrollment may be made at any time. Applicants should be over 18 years of age. Instruction is largely on the individual basis. The following courses are offered: Automobile repairing and ignition, bricklaying, electricity, oil-burning installations, plumbing, plastering, paperhanging, steam engineering, welding, carpentry, clock and watch repairing. Length of course from 2 to 6 months. Tuition fee, \$20 to \$150.

Boston.—North Bennet Street Industrial School, 39 North Bennet Street. This school conducts experiments in educational activities for the benefit of the public schools and others. Courses in trade training are offered to men and women in cabinetmaking, carpentry, clay modeling, wood carving, printing, monotype operating, watch repairing, interior decorating and painting, power-machine stitching, dressmaking, and millinery. Fees, from \$2 to \$10, depending on course.

Boston.—Wentworth Institute, Huntington Avenue. A private day and evening school for boys 16 years of age and over. Endowment, \$5,000,000. Enrollment, day, 650; evening, 1,000. Educational requirements, for admission: For 2-year day course, high school or equivalent, or above high-school age with industrial experience. For 1-year day or evening courses, grammar school up. Part-time courses are available. Day courses are offered daily from September to June; evening courses from October to March 2-hour periods 3 evenings a week. Two-year day courses, 30 weekly 1-hour periods, 36 weeks a year are offered in machine construction and tool design, electrical construction, steam and electric power plant, architectural construction, foundry management and operation. One-year courses 40 weekly 45-minute periods, 36 weeks of the year, are offered in carpentry, electric wiring, machine work,

pattern making, foundry practice, forging, hardening, tempering, printing, photo-engraving, masonry, and plastering. In evening school 21 separate courses are offered similar to day courses as far as time permits.

Cambridge.—*Cambridge School of Professional Candy Making*, 315 Harvard Street, University. Open all the year day and evening for men and women. Fees: First course, \$20; second, third, and fourth courses, \$25 each.

Cambridge.—*Lowell Institute Evening School for Industrial Foremen*, Massachusetts Institute of Technology. The school comprises 3 courses, mechanical course, electrical course, and building course, each extending over 2 years. Applicants for admission to the first-year class must be over 18 years of age and pass successfully the entrance examinations. Considerable weight will be attached to the applicant's occupation and practical experience. Admittance to separate subjects is not given. Instruction is free. A registration fee of \$5 per school year is required.

Florence.—*Hill Institute*. An endowed free day school for children and adults from kindergarten age through the ninth grade, residents of Florence. Enrollment in manual training, 177; 62 adults. Evening classes for adults in drafting, basketry, domestic science, sewing, and dressmaking. Tuition fee, \$2 to \$5 per term of 20 lessons.

Milford.—*New England Jeweler's Institute*. A watch and clock-making school owned and operated by a group of retail jewelers located in each of the New England States, who conduct it along practical lines. Open all the year. Enrollment, 35. Tuition fee per year, \$100; tools, complete outfit, approximately \$200. Rooms at dormitory, \$3 per week up. Total yearly cost, approximately \$850.

MICHIGAN

Cedar Lake.—*Cedar Lake Industrial Academy*. A boarding and day school under the auspices of the Seventh Day Adventists, for Michigan boys and girls over 12 years of age, who have finished the eighth grade. The school owns a farm of 148 acres. The student's total regular expense for 9 months is estimated at \$293. One hour of work on the farm or about the institution is required of each student. Instruction is given for 1 year, 36 weeks, 3 weekly 90-minute periods in woodwork, cooking, and sewing; practical nursing one-half year; agriculture, 45-minute periods, 1 year.

Detroit.—*Detroit Institute of Technology, Y. M. C. A. School of Engineering*. A day and evening school offering courses in junior engineering and engineering trades, electrical and mechanical. In addition to the 4 and 5 year engineering courses leading to degrees in engineering, 3-year cooperative courses are open to men

who have completed their preparatory mathematics and who are equipped mentally and by practical experience to carry the courses offered. They are designed for the man who can not complete his high-school work. The mechanical engineering trades course offers a selection of a general course in drafting and design, and one in heat engines. Tuition fee, \$155 a year. The electrical engineering trades course is a short general course dealing in the essentials, as well as a longer course covering drafting and design, and advanced work in alternating currents, central stations, and transmitting systems:

Detroit.—*McCarrie School of Mechanical Dentistry*, 2539 Woodward Avenue. A day and evening school offering 6 and 8 months' day courses, 35 hours a week, in the making of dental plates, crowns, bridges, etc., prosthetic dentistry. Evening courses, 14½ hours a week, 6 months to a year. Tuition fee, \$240; tools \$35.

Detroit.—*Detroit School of Trades*, 217 Woodward Avenue. A private school open all the year, offering courses in carpentry, electricity, plumbing and heating, bricklaying, plastering, paperhanging and interior decorating, contracting and estimating, sign painting and show card writing, master course in automobile mechanics and toolmaking. Training is given until the student is able to pass examinations for a journeyman's license. Tuition fees range from \$100 to \$275, depending on course, five 6-hour periods a week. Evening, three 3-hour periods a week, 52 weeks a year.

Detroit.—*Henry Ford Trade School*, Ford Motor Co. The school shop is separate from the Ford Motor Co. and covers 3½ acres floor space, 18 departments. Enrollment, 1,800; instructors, 125. Only boys from Detroit between the ages of 12 and 15 who have attained age-grade standing are admitted, preference being given to needy boys. One week of academic work is followed by 2 weeks of work in the school shop. Each type of training supplements the other. Upon entering the boy receives a cash scholarship of \$7.50 a week; he receives a daily hot luncheon and \$2 a month for a savings account. As far as possible the boys are given an opportunity to work in the following order: Forge, die, gauge, hardening, foundry, sheet metal, nickel plating, valve repair, car repair, wood and metal pattern, carpentry, and tool repair. During the academic week the boy attends class work only. The entire course includes English, mechanical drawing, civics, auto mechanics, commercial geography, arithmetic, algebra, geometry, trigonometry, physics, chemistry, qualitative analysis, quantitative analysis, metallurgy, metallography, and shop theory. Boys who wish to attend college take history and foreign languages in some other school. Instruction in mechanical drawing is given during the entire course. The boards of education

for the State and of the city approve the work of the school. By the time the boy is 17 he should have a scholarship rate of \$18 a week. The class work covers 14 weeks of the year and is given in 45-minute periods. Three years' training are given in the following: English, 5 periods a week; mathematics, 10 periods a week; civics, 1 period a week; auto mechanics, 2 periods a week; shop practice, 3 periods a week; and mechanical drawing, 6 periods a week. One year in elementary chemistry, 5 periods a week; qualitative analysis and quantitative analysis, 5 periods a week each; metallurgy and metallography, 11 periods a week; commercial geography, 1 period a week.

MINNESOTA

Minneapolis.—William Hood Dunwoody Industrial Institute, 818 Superior Boulevard. A free day, evening, and extension school for training boys and men of Minnesota in industrial and mechanical arts. The school owns a tract of ground equal to 6 city blocks, and has an endowment of \$6,000,000. Total enrollment, 4,000. Entrance age, 15 and over. Tuition fee for nonresidents, \$30 a month. To enter the 2-year day courses applicants should have completed the eighth grade. Two-year courses 40 weeks a year, 35 weekly 45-minute periods, are offered in building construction, automechanics, electricity, sheet metal, machine-shop practice, baking, and printing. In the evening school the courses are laid out on the unit basis, which permits students to choose any special instruction they desire. Courses vary from 5 to 50 lessons. Students may enter at any time. One-year, 2-year, and 3-year courses are offered. Miscellaneous trades in the evening school include boiler operation, gas manufacture, jewelry design, slide rule, general science and mathematics, tool making, heat treatment of steel, welding, interior decorating, and design. The extension school includes correspondence instruction and classes conducted outside of the Dunwoody building. The summer school offers instructor training.

Minneapolis.—The Moler Barber College and School of Beauty Culture, 215 Nicolett Avenue. A day and evening school for the study of practical barbering and related subjects in sanitation. A branch of the Hemphill Trade Schools, Ltd. State law requires that students who enter must have at least sixth-grade education. Tuition fee, \$150 for 6 months' course. Necessary tools, manual, etc., \$31. Reduction of \$25 in tuition during the summer months. Ladies' hair-cutting course, \$50; marcelling, \$50; permanent waving, \$50.

Minneapolis.—Smeby School, Chicago Avenue and Lake Street. Complete and short day and evening courses in show-card writing, window dressing, display management, and retail advertising. Com-

plete course, 8 to 12 weeks. Tuition fee, \$60 to \$200, depending on course.

Minneapolis.—Twin City Barber College, 204 Hennepin Avenue. Courses in barbering, massaging, hair cutting and bobbing, scalp, and facial. Six months' course (26 weeks), six 9-hour periods a week. Tuition fee, \$150; set of tools, \$25.

St. Paul.—The Stone School of Watchmaking. A school open all the year for white boys and men 16 to 35 years of age. Watchmaking course all day 6 months to 1 year. Tuition fee, \$100.

MISSISSIPPI

Brazton.—Piney Woods Country Life School. A school for negro boys offering courses in carpentry, cabinetmaking, cement and concrete work, drafting, electrical work, gas-engine mechanics, leather work, printing, and shoemaking.

Okolona.—Okolona Industrial School. A boarding and day school for the training of colored young men and women. The school owns 380 acres of land, 60 of which lie within the corporate limits of the town, and has some endowment. Intermediate, grammar, and normal-school courses are offered. Minimum age for entrance, 12 years in the boarding department. All students work 2 days weekly at some trade or industry. Board, including room and laundry, \$9 per month for men, \$11 per month for women. Tuition fee, \$2.50 per month; annual fees, \$6. Night school is conducted for worthy students. Industrial courses are offered in farming, electricity, steam engineering, shoe repairing, broom making, bricklaying, plumbing, blacksmithing, automobile repair, carpentry, and cabinetmaking for boys; cooking, sewing, millinery, housekeeping, and nursing for girls.

MISSOURI

Kansas City.—Keister College of Tailoring and Dressmaking, 208 Altman Building. A private day school, offering courses in tailoring and dressmaking 6 days a week from 9 to 4. Tuition fee, \$50 for 10 lessons.

Kansas City.—Universal Plumbing School, Twenty-first Street and Troost Avenue. Open all the year for white men over 17 years of age having a grammar-school education. Complete plumbing course, 5½ days weekly, all the year. The average pupil generally proves capable in about 10 weeks. Tuition fee, \$165. Special courses in shop management and for those contemplating starting a shop.

St. Louis.—The David Ranken Junior School of Mechanical Trades, 4420 Cook Avenue. A trade school which aims to fit boys and men for the mechanical or manual trades and occupations. Enrollment, about 1,500. The preparatory division admits boys from 14 to 16

years of age. Half of the day in this division is devoted to work in the shop and the remainder to drafting, mathematics, and English. The preparatory work covers a period of one year and is almost wholly individual. The regular day school is open to boys 16 years of age or over who have completed the sixth grade in the public schools or the equivalent. Applicants who have had experience in a trade may be admitted with less schooling. Tuition fee, \$45 a year; evening term, 12 weeks, \$10. Breakage and locker deposit, \$4. Two-year day courses, 44 weeks of the year, 20 weekly 1-hour and 40-minute periods are offered in carpentry, plumbing, painting, pattern-making, applied electricity, machine-shop practice, power-plant operation, automobile repair. Five-year evening courses, 24 weeks per year, 4 weekly 2-hour periods are offered in the same courses, with the addition of acetylene welding, refrigeration, and sheet-metal pattern drafting.

St. Louis.—St. Louis Watchmaking School, 5815 Easton Avenue. Courses are offered in watch, clock, and jewelry repairing, engraving, and optics. Individual instruction. The course should be mastered in about one year's time. Tuition fee, \$75. Cost of necessary tools, from \$35 to \$50. Special course is offered in optics, length of course depending upon the ability and previous preparation of the student.

St. Louis.—Tri-City Barber College, 811 Market Street. Open all the year. Pupils must be over 16 years of age. Tuition fee, \$25; cost of tools, \$15.

St. Louis.—Women's Training School, 1411 Locust Street (Y. W. C. A.). Instruction is given in arts and crafts, cooking, dressmaking, millinery, and practical nursing. Tuition rates, according to kind and length of course.

MONTANA

Billings.—Billings Polytechnic Institute. An interdenominational school for boys and girls, consisting of the polytechnic academy, school of electrical engineering, school of business, and vocational school. The school has property valued at \$550,000 and an endowment of \$1,250,000. All vocational students must be at least 16 years of age and must take a course in practical English, business or shop arithmetic, and penmanship and one of the five following subjects: Automotive engineering, practical electricity, carpentry, cabinetmaking, or agriculture. The manual training department offers courses of sufficient scope to educate and train mechanics for the various courses outlined and at the same time so arranges the work in the junior and senior years that teachers may be trained to handle this work in elementary schools through the country. Tuition fee,

board and room, \$325 to \$350, for men; for women, \$350 to \$400. The school of engineering offers a 2-year course for high-school graduates and an academic electrical engineering 4-year course. The radiotelegraphy course prepares students to take the United States Government examinations.

NEBRASKA

Lincoln.—*Lincoln Auto and Tractor School*, Twenty-fourth and O Streets. Open all the year for practical training on the individual basis in automobile and tractor engineering and repair, battery, welding, and automobile painting. Tuition fee, \$85 to \$150, according to course. Summer courses are offered.

NEW HAMPSHIRE

Manchester.—*New Hampshire Institute of Arts and Science*. A school of fine arts. The institute maintains a shoe and leather continuation school offering courses in shoe and leather work, including methods of manufacture and salesmanship. The course is offered to individuals connected with the shoe industry.

NEW JERSEY

Camden.—*Young Men's Christian Association Night School*, 806 Federal Street. Courses are given in architectural drawing, automobile mechanics, plastering, paper hanging, bricklaying, plan reading and estimating, strength of materials, blue-print reading and mechanical drawing. In the technical school 4-year courses are offered in junior mechanical engineering, junior structural engineering, and junior electrical engineering. Tuition fee, according to course.

Newark.—*Young Men's Christian Association School*, 107 Halsey Street. An evening school for boys and men over 18 years of age. Membership, \$5. Tuition fee, \$20 to \$50, according to course. Courses are offered in auto mechanics, 2 weekly 2-hour periods for 36 weeks; heating engineering, 2 weekly 2-hour periods, 32 weeks; mechanical drafting, 1 weekly 2-hour period, 32 weeks.

NEW MEXICO

Albuquerque.—*Harwood School for Girls*, Mountain Road and Seventh Street. An elementary and 2-year high school for girls, under the auspices of the Methodist Episcopal Church. Tuition fee and board, \$108 per year. Each girl has a part of the housework for which she is responsible each day. Instruction is given in sewing, domestic arts, and domestic science.

NEW YORK

Brooklyn.—Pratt Institute, Ryerson Street, between De Kalb and Willoughby Avenues. The institute is liberally endowed. The School of Science and Technology is one of the four schools of the Pratt Institute. Day and evening courses are offered. Applicants should be not less than 18 years of age. Broad standards of admission are maintained, with due recognition of vocational experience. The entrance examination covers the practical essentials of English grammar and composition, industrial arithmetic, and algebra. Tuition fee in day school, 36 weeks, five 6-hour days, \$144 per year. Cost of books, drawing materials, and other supplies, \$45 to \$60 per year. Three intensive 2-year courses not of college type are offered in the day school: Industrial mechanical engineering, industrial electrical engineering, and industrial chemical engineering. Evening technical and trade-extension courses are offered. Evening courses are arranged in 12-week units, of which more than 50 are offered, 3 evenings a week during the months of September to March. No summer courses are offered.

Buffalo.—Institute of Technology, Y. M. C. A. Shops and laboratories. Three-year cooperative courses, 30 weekly 1-hour periods in class, 46 weeks, alternating 2 weeks in class and 2 weeks in industry, are offered in chemical, electrical, mechanical, and structural engineering. Entrance age, 18 years and over. High-school graduation or equivalent required. Tuition fee, \$175 per year. No summer courses. Evening courses, 32 weeks per year, are offered in boiler and steam engineering, 1 weekly 2-hour period; electrical engineering, 2 weekly 2-hour periods; mechanical drawing, 2 weekly 2-hour periods; industrial management, 3 weekly 2-hour periods.

College Point (Flushing Sta.)—Poppenhusen Institute, 254 Second Avenue. A private evening school for boys and girls of College Point and vicinity over 16 years of age. Endowment, \$228,000. Elementary-school education necessary for admission. No tuition charged. The following industrial 2-year courses are offered: Architectural drawing, mechanical drawing, machine-shop practice, cabinetmaking, 2 weekly 2-hour periods, 36 weeks per year. One-year course is offered in arts and crafts.

Freeville.—The George Junior Republic. The Republic owns 360 acres of land on which are 11 cottages, has an endowment of \$60,000, and receives some State aid. The community has assets worth half a million dollars, including its own bank, post office, courthouse, jail, government offices, fire department, and hospital. The school building will accommodate 200 pupils. The citizens of the Republic are 15 to 21 year old boys and girls of all social classes. No citizen may possess anything he has not worked for. Token money is used

in the village. The expense of running the Republic is borne principally by voluntary contributions. Payment for the board of citizens by parents, guardians, or societies is the second source of revenue. Grade, high-school, and college preparatory courses are taught. A 1-year course, five 45-minute weekly periods, 38 weeks per year, is given in carpentry. Training is also given in printing, baking, plumbing, agriculture, and gardening.

Ithaca.—*Empire State School of Printing*, 311 East Seneca Street. Supported by New York State Publishers' Association and American Newspaper Publishers' Association. Men and women over 18 years of age are admitted. Average enrollment, 25. Previous education required for entrance, two years of high school; exception is made for applicants over 21 years of age. Tuition fee, \$150 for 6 months. Entrance fee of \$10 covers the cost of all books and tools. Laboratory fee, \$30 additional for linotype course. The subjects offered are printing and advanced typography, 44 hours per week, 24 weeks per year; printing and linotype operation and mechanism, 44 hours weekly, 24 weeks per year. Special courses are given in various branches of printing.

New York.—*Baron de Hirsch Trade School*, 222 East Sixty-fourth Street. A liberally endowed free trade school established to assist Jewish young men. Applicants should be over 16 years of age, and, except for certain trades, it is not necessary that they be grade-school graduates. Short intensive courses in trade work are offered, covering a period of 5½ months. A thorough grounding is given in the fundamentals of the trade. Practical work and lectures, 635 hours; mechanical drawing, 50 hours; and shop mathematics, 40 hours, are given in auto mechanics, electrical work, machine-shop work, stationary engineering, and plumbing; printing, 685 hours; shop mathematics, 40 hours; show-card writing and sign painting, each, 685 hours; practical work and lectures; and 40 hours of shop mathematics.

New York.—*Bodee Dental Institute*, 1755 Broadway. (Schools also in Brooklyn, Philadelphia, and Buffalo.) A day and evening school which specializes in the teaching of mechanical dentistry through individual instruction. Open all the year. Average minimum time to complete the course, 3 months; average maximum time, 12 months. Minimum entrance age, 16 years. Educational requirements, grammar-school education. Tuition fee, \$250.

New York.—*Ethical Culture School*, Sixty-third Street and Central Park. Kindergarten, elementary, open-air, high school, and college preparatory departments are maintained. From two-fifths to three-fifths of the pupils must always be admitted on a free or part-free basis. The school is developing prevocational departments in art, business, industry, and domestic science. Tuition fee, from

\$250 to \$600, according to grade. Instruction is given, two 85-minute periods, 33 weeks per year, in mechanical drawing, craft woodwork, cabinetmaking, machine-shop practice, and printing. Students can take any course 2 years.

New York.—Hebrew Technical Institute, Stuyvesant and Ninth Streets. A manual training school for boys of New York City, 14 years of age and over. Tuition and tools are furnished free. Candidates for admission must pass a satisfactory examination in arithmetic, English, geography, and United States history. Three-year courses are offered in mechanical and free-hand drawing, woodwork, metal work, electrical work, automotive engineering, forging, applied science, construction work, and wood carving. Special courses, 2 hours a day.

New York.—Hebrew Technical School for Girls, 240 Second Avenue. One of the 91 institutions affiliated with the Federation for Support of Jewish Philanthropic Societies. Entrance age, 15 years or over. Grammar-school education required. Tuition free. Supplies are paid for by the girls. Manual work, forty 40-minute periods weekly, 18 months, is given in drawing, sewing, dressmaking, millinery, and cooking.

New York.—Mrs. Lemoke's Greater New York Cooking School, 26 West Ninety-fourth Street. Open all the year, day and evening. Instruction is given in cooking in all its branches and of all nationalities. Course of 10 lessons, 5-hour periods, \$30. Graduating course 80 lessons, \$85. Special lessons are given in marketing, private, \$10; class, \$5. Specialties, single lessons, \$3.50; 10 lessons, \$28; graduate course, \$80.

New York.—Mechanics' Institute. School of the General Society of Mechanics and Tradesmen of New York City, 16 West Forty-fourth Street. The society has a large endowment and is not connected with any organization or institution. A mechanic or tradesman, citizen of the United States, vouched for as to character, is eligible to membership in this society upon payment of the initiation fee of \$100, which payment constitutes him a life member, there being no dues or assessments. The school offers free instruction to young men employed during the day, two 2-hour periods weekly from September to April, in mechanical and architectural drafting, blue-print reading, and related work in electricity, machine-shop practice and applied courses in mathematics. Regular courses are three years in length.

New York.—Merchant Marine School, 25 South Street. Connected with the Seamen's Church Institute. Other schools of the institute are located at 201 Walnut Street, Philadelphia, and 101

South Harbor Boulevard, San Pedro, Calif. To American-born boys under 21 years of age, who desire to go to sea courses are free; to others tuition fee is \$100, \$50, and \$25, according to course. Enrollment, 91. Day courses are offered in practical astronomy, navigation, marine engineering, seamanship, and first-aid. Evening courses in navigation, marine engineering, seamanship, and first aid. Special courses for aviators (aviation). Instruction is continued until students are qualified to pass examinations.

New York.—*New York Cooking School*, 158 East Sixty-first Street. Open to men and women over 18 years of age. Courses of 10 lessons, \$25.

New York.—*The New York Electrical School*, 39 West Seventeenth Street. A day and evening school open the entire year, offering instruction in all branches of applied electricity. No entrance examinations are required. A student of average intelligence should finish the course in about 6 months. Night sessions, four 2-hour periods a week, cover about 12 months. Tuition fee, \$195; cost of tools, etc., about \$25.

New York.—*New York Institute of Photography*, 12 West Thirty-third Street. Personal-attendance vocational courses for men and women are offered in motion-picture, commercial, news photography, and studio portraiture. Individual instruction. Course, 20 to 40 weeks; tuition fee, complete, \$195. Home study courses are offered in motion-picture photography, professional still photography, and commercial finishing for amateurs. Tuition fee, \$50 to \$130.

New York.—*School for Printers' Apprentices of New York* (co-operative), 106 West Fourteenth Street, New York, N. Y. Financed by New York Typographical Union No. 6, and employers' group. School is open from September to June. Instruction 3 to 5 in afternoon, 6 to 8, evenings, five days a week. The school is for registered union apprentices, who begin school their second apprentice year once a week, 2 hours on employer's time and 2 hours on own time. Tuition fees are, second year, \$15 per year; third year, \$18; fourth year, \$22; and fifth year, \$50.

New York.—*New York Trade School*, First Avenue, Sixty-seventh and Sixty-eighth Streets. A day and evening school for young men 17 to 30 years of age. Endowment, \$750,000. Automobile mechanics course, 5 weekly 6-hour periods; complete, 6 weeks; electrical course, 5 weekly 6-hour periods; complete, 14 weeks. Evening courses, 3 weekly 2½-hour periods, 26 weeks per year: Auto mechanics, 1 year; bricklaying and carpentry, 2 years each; electrical work and plumbing, 4 years each; printing, 3 years; sheet-metal work, 5 years; steam fitting, 4 years; and sign painting, 4 years.

New York.—*Radio Institute of America*, 826 Broadway. Conducted by the Radio Corporation of America. The institute offers two distinct courses, the radio operating course and the dealers' and technicians' course. For admission to the operators' course applicants must be at least 17 years of age and have 1 year high-school education or equivalent. Length of course, according to the capabilities of the student and the kind of license he desires to obtain. Six months' instruction in the day session and 8 months' in the evening session are usually required to qualify a student for the first-class commercial license. Tuition fee, \$22.50 per month, or a special paid-up rate of \$115 for the six months' course. Evening session rates, \$17.50 per month, or a special paid-up rate of \$117.50 for the 8 months' course. The institute offers a dealers' and technicians' home-study course, 6 lessons. Cost of course, including all textbooks, \$30, payable with enrollment.

New York.—*The Stewart Automobile School*, 253 West Sixty-fourth Street. Short courses are offered day and evening in automobile mechanics, 3 months, 6 weekly 6-hour periods. Evening courses, 6 months, 4 weekly 3-hour periods. Driving, 10 private lessons of 1 hour each. Tuition fee, \$250.

New York.—*West Side Young Men's Christian Association*, 818 West Fifty-seventh Street. Trade and technical courses are offered in automechanics, building construction, bulletin printing, drafting, electricity, wiping lead joints, shop mathematics, motion-picture operating, plumbing, poster design, radio mechanics, show-card writing, sign painting, steam engineering, structural engineering and telegraphy. Length of courses ranges from 1 week to 49 weeks, and tuition fee from \$11.50 to \$200, depending on course. Summer courses are offered in some subjects.

New York.—*Clarence H. White School of Photography*, 480 West One hundred and forty-fourth Street. A day and evening school emphasizing the professional and art aspects of photography, for men and women over 16 years of age. Applicants should have a high-school education. Tuition fee, \$300 for the year of 30 weeks. Evening courses, 4 weekly 2½-hour periods, 30 weeks.

Rochester.—*Rochester Athenæum and Mechanics Institute*, Plymouth Avenue, South, at Spring Street. The institute occupies an entire block. Day and evening classes provide specialized courses adapted to the needs of men and women students. No elective subjects are offered in any course and no degrees are offered. The school of industrial arts is organized primarily to help men who have had some industrial experience. Intensive technical instruction is given in the special field covered by the various courses offered, supplemented by instruction in industrial organization and management.

All industrial arts courses, both cooperative and full time, are open to students over 18 years of age in good health who show satisfactory evidence of good character. Over three-fourths of the student body are high-school graduates, but men with less formal training frequently rank in the upper quarter of the class. There are several loan funds available for students. Tuition fee for any full course, including shop and laboratory fees, \$200 a year; for any cooperative course, \$135 a year. Evening school tuition varies from \$5 to \$20. The average cost of room and board is about \$10 a week. The following courses are offered: Industrial mechanical course, 2 years; industrial electrical course, 2 years; cooperative mechanical course, 3 years; cooperative electrical course, 3 years; cooperative industrial chemical course, 3 years. The school of applied art offers 3-year courses in architecture, craft, design, interior decoration, illustrating and advertising art, and teacher-training courses in art education.

Union Springs.—Union Springs Academy. A boarding school for boys and girls over 16 years of age, under the auspices of the Seventh-Day Adventists. Twelve grades of school work are offered. Previous education for entrance, 8 grades. Tuition fee, \$83.25; room and board, \$168.25. One hour's work about the institution each day is required. Instruction is given in agriculture, printing, wood-working, cooking, and sewing, five weekly 80-minute periods, 37 weeks one year; practical nursing, 19 weeks.

NORTH CAROLINA

Farm School.—Asheville Farm School. A private boarding school for White Mountain boys over 15 years of age. The course of study embraces the seventh to the eleventh grade. The school owns 686 acres of land and is supported by the Presbyterian Church. The student pays \$105 tuition fee for 36 weeks, which includes room, board, tuition, laundry, and books. Boys who can not raise this amount of tuition may enter for work during the summer months and earn their tuition for the following year. All students are required to work 18 hours a week on the farm or about the institution. Special training is given in general farming, horticulture, gardening, dairying, poultry raising, printing, carpentry, and shopwork.

Brevard.—Brevard Institute. A private boarding school for white boys and girls over 13 years of age who have passed the sixth grade, under the auspices of the Methodist Church. The school owns a farm of 105 acres. Tuition fee, room, board, and other fees, \$152 per year. Ten hours of work about the institution per week are required of each pupil. Instruction is given in agriculture and home

economics, 7 to 10 weekly 40-minute periods. Five 40-minute periods a week are offered in manual training 6 weeks of one year.

Raleigh.—St. Augustine School. A private boarding and day school for negro boys and girls. The school owns a 110-acre farm and has an endowment of \$150,000 and an income of about \$37,000 a year from the Episcopal Church. Entrance requirements for boarding students, (completion of 6 grades. Tuition fee, including board, etc., \$17 a month. Each student is required to give 45 hours of work a month about the institution. A small amount of military training is given without guns. In the high school, training is given in agriculture, manual arts, cooking, and sewing, amounting to one unit for one year.

NORTH DAKOTA

Fargo.—Hanson Auto and Electrical School, 65 Third Street. Practical training is given in master garageman's course, electrical, battery, vulcanizing tire, aviation, ground and flying instructions, ranging from 10 hours to 3 months. Tuition fee for full course, \$125.

OHIO

Cincinnati.—The Cincinnati College of Embalming. A private day school for men and women over 18 years of age. High-school education required for entrance. Combined courses are given in anatomy, sanitary science, embalming, post-mortem plastic surgery, and allied subjects, seven and one-half 1-hour periods a day, 26 weeks. Tuition fee, \$299.

Cincinnati.—Colored Industrial School of Cincinnati. A private nonsectarian day school for colored boys and girls over 15 years of age who have passed the eighth grade. The school has an endowment of \$400,000. Tuition fee, \$5. Three-year day courses are given in dressmaking, millinery, cooking, housekeeping, tailoring, cleaning, automotive, carpentry, and cabinetmaking. Evening courses, 6 months, 3 periods a week; 3-year part-time courses, 2-hour periods, 3 times a week, 36 weeks per year.

Cincinnati.—Cincinnati Young Men's Christian Association Schools. Day and evening classes are open to men and women over 18 years of age. Previous education for entrance to trade bureau, eighth grade. A one-year day course in automotive mechanics, 30 weekly 1-hour periods, 48 weeks per year, is offered; also evening courses, 4 years, nine 1-hour periods weekly. Tuition fee, \$100 to \$200, yearly. Automotive and supplementary trades are offered, 4 periods a week for 34 weeks, 2 and 3 years.

Cincinnati.—Ohio Mechanics Institute, Canal and Walnut Streets. Founded in 1828. In general the day classes include 2-year intensive

courses in engineering and applied art, 4-year technical high-school courses, and 2-year trade courses, some of them cooperative. A few special courses are offered. In many of the studios and shops qualified students may enter at any time. Courses offered: Two-year intensive courses in mechanical engineering, industrial electrical engineering, and industrial art. Applicants should be 17 years of age, with 2 or more years of high-school preparation. Tuition fee per year, \$80. Two-year power-laundry cooperative course: Students work in a commercial plant for wages 4 weeks out of every 8. Applicants should be at least 18 years of age and have 3 or more years of high-school preparation. A certain amount of practical experience is desirable. Tuition fee per year of 9 months, \$300. Technical high-school courses: Admission by transfer of credits from other schools. Four-year courses preparatory to the following industries, including 2 hours of practical work each day: Architecture, electrical industries, industrial art, lithography, mechanical industries, printing, watch repairing. Tuition fee, \$80 per year.—Two-year special art and trade courses in lithographic design and art work, machine work, and pattern making. These courses are usually divided into 4 terms, 26 weeks long. Linotype operation, 4½ months, \$100. Two-year cooperative trade courses in lithographic art, pattern making, printing, machine-shop work, and woodwork. Tuition fee, \$60 per term of 26 weeks. The evening school offers 4-year preparatory courses for workers in electrical industries, mechanical industries, architectural draftsman, mechanical draftsman, and for civil engineering. Special courses are also offered in a great variety of vocational subjects.

Cleveland.—Central Institute, 2481 East Fifty-fifth Street. Four-year evening courses are offered in mechanical, architectural and structural drafting, 9 weekly 60-minute periods, 50 weeks per year. Tuition fee, \$81.

Cleveland.—The Cleveland Automobile School, 1815 East Twenty-fourth Street. The school offers 7 courses. The unlimited master course includes all the separate courses taught, and requires from 6 to 8 weeks, day, or 5 months, evenings, to complete. The cash price of the course is \$168. The same course without the driving practice is listed at \$141. Special courses in tire repair, \$40; oxy-acetylene welding, \$40.

Cleveland.—The Cleveland Young Men's Christian Association School of Technology, 2200 Prospect Avenue. In addition to the 4-year and 5-year courses for men, trade courses having varying entrance requirements are offered, also 1-year-unit vocational courses, one to three 120-minute periods weekly, 32 weeks per year. Tuition fee, \$175 per year. Courses are offered in auto mechanics, auto electricity, machine shop practice, and welding.

Cleveland.—*McSweeney Auto, Tractor, and Electrical School*, 1815 East Twenty-fourth Street. Day and evening courses in automobile mechanics, five days a week from 8.30 to 4.30. Evening courses two 8-hour periods a week. Tuition fee, \$140.

Wilberforce.—*Wilberforce University, Combined Normal and Industrial Department*. A State-aided boarding school for negro boys and girls over 14 years of age. Tuition fee, \$25 per quarter; room rent, \$20 per quarter; other fees, \$21. Four-year courses, 36 weeks per year, 2 weekly 115-minute periods are offered in sewing, millinery, cookery, printing, shoemaking, auto mechanics, carpentry, blacksmithing, electric wiring, plumbing; also general trades courses in each of the above subjects are offered 4 to 8 periods a week, 4 years.

Willoughby.—*Andrews Institute for Girls*, Mentor Avenue. A private boarding school for white girls 10 to 16 years entrance age who have completed the sixth grade. The school has an endowment of \$4,000,000, and a farm of 268 acres. Cost of room and board, \$3 a week; incidental fees, \$4 a year. Four-year courses are offered, 36 weeks per year in commercial, trade dressmaking, cooking, and home making, forty 40-minute periods weekly.

OKLAHOMA

Oklahoma City.—*City Barber College*. Individual instruction for young men and women. Opportunity is given to practice at once. Time required for a student to learn the trade, from six to eight weeks.

OREGON

Portland.—*Adcox Auto and Aviation School*, 374 Wasco Street. Classes are limited to 100 each. Short courses from 5 to 12 weeks are offered in auto, electric, and gas engine; tuition fee, \$70 to \$175, according to course. Combination courses from 2 to 6 months in length; tuition fee, \$235 to \$345.

Portland.—*Oregon Institute of Technology, Y. M. C. A.* Engineering trade school, college of engineering, school of business administration, radio school, preparatory school, business school. Day and evening courses are offered in electrical, mechanical, civil engineering, mechanical drawing, architectural drawing, building construction, show-card writing, radiotelegraphy, auto mechanics, auto-electrical, storage battery, machine-shop training, tractors, and farm engines.

PENNSYLVANIA

Ambler.—*The School of Horticulture for Women*. A private school offering a 2-year diploma course in horticulture, including

floriculture, fruit growing, vegetable gardening, farm animals, etc. Entrance requirements, high-school graduation or passing of an examination. Candidates over 25 years of age with general knowledge may be given separate consideration. Tuition fee for the full year of 40 weeks, \$250; board and room for the year, \$500; additional fees, about \$75.

Downington.—Downington Industrial and Agricultural School. A private nonsectarian State-aided trade school for negro boys and girls 14 years of age and over, able to enter the sixth grade. Each student when applying must signify his choice of a trade. All students are required to perform 2 hours of work a day as part payment of their expenses, and to devote one-half of their time to vocational work. Monthly fees amount to \$17 for Pennsylvania students and \$22 a month for students outside the State. Annual fees of \$7 must be paid by all students. Two to four years' training, 35 weeks a year, 20 weekly 45-minute periods, is offered in auto mechanics, carpentry, and blacksmithing; acetylene welding, 2 periods per week; mechanical drafting, 2 to 4 periods a week.

Elizabethtown.—Thomas Ranken Patten Masonic Institution for Boys. A private boarding school for Pennsylvania boys 15 to 18 years of age who have finished the eighth grade. The school owns 116 acres of land and has an endowment of \$1,500,000. The school year is 46 weeks in length. In the day course mechanical drawing is offered, four 60-minute periods, 4 years. Evening courses, 3 years in free-hand drawing, 4 years in trade mechanics, two 60-minute periods per week. Special 4-year courses, 5 weekly 240-minute periods in machine shop, bricklaying, carpentering, and printing, are offered.

Freeland.—Mining and Mechanical Institute. A private day and night school for men of the anthracite coal region. Endowment, \$200,000. Day school enrollment, 120; night enrollment, 60. Grammar school education is required for entrance in day school. No restrictions for night school. Tuition fee for day school, \$5 a month; night, \$1.50 a month. Length of school year, 40 weeks. Manual training; Woodworking, 4 years, 8 weekly 45-minute periods; mechanical drafting, 2 years, 4 weekly 45-minute periods free-hand drawing, 1 year, two 45-minute periods weekly.

Glen Loch.—Farm School (Chester County). A private boarding school operated by the Episcopal Church for white orphan boys 10 to 14 years entrance age. The school owns 325 acres of land and has an endowment of \$150,000. The yearly contribution of the church to the school is about \$30,000. Enrollment, 100. Industrial courses are offered combined with academic work, 4 years, 18 hours weekly, 43 weeks per year, in carpentry, painting, machine-shop practice, and general farm work; horticulture, 14 weeks per year; plumbing

and electrical work, 4 years, 12 hours weekly, 21 weeks per year for plumbing, and 11 weeks for electrical work.

Lancaster.—Bowman Technical (Horological) School. A private day school offering courses in watchmaking, engraving, and jewelry work. Each trade is taught separately. Individual instruction. The length of course depends on previous mechanical experience and natural talent. Special courses for experienced men may require from a week or two to 6 months. Tuition fee, \$22 per month.

Lancaster.—Thaddeus Stevens Industrial School of Pennsylvania. Boys between 16 and 18 years of age may be admitted. Preference is given to orphans or half orphans. All applicants must have good health and be able to pass the entrance requirements. The school charges no tuition, board, nor other fees to regularly enrolled students. After the first year all necessary clothing and supplies are furnished. Vocational courses are given in bricklaying, carpentry, electrical work, machine-shop practice, pattern making, related and nonvocational subjects.

Philadelphia.—Berean Manual Training and Industrial School, 1926 South College Avenue. A State-aided nonsectarian day and evening school for negro boys and girls. No educational requirements for admission to trade school. Tuition fee, \$40 a year. Instruction is given in tailoring, upholstery, woodworking, plumbing, applied electricity, dressmaking, and millinery.

Philadelphia.—Girard College, Girard Avenue, west of Twentieth Street. Girard College, for the education of white orphan boys of Pennsylvania, is composed of 3 schools, a primary school, a grammar school of 3 years, and a high school of 5 years. Endowment, \$68,000,000, exclusive of plant, with campus of 40 acres. The boys are required to assist in the maintenance of the grounds and buildings. The present normal capacity of the college is 1,540 pupils. Entrance age, 6 to 10 years. To complete the full course requires 11 years. Military training is given all boys above 14 years of age. The college cares for the boy in every particular. In the mechanical school preparation is given for the following pursuits: Trade drawing, carpentry, pattern making, machine-shop practice, electrical construction, foundry, forge practice, printing, painting, and auto-mechanics. Instruction is given $2\frac{1}{2}$ years, two to four 60-minute periods a week. Prevocational, 3 years, four to eight 45-minute periods a week; trade, sixteen to twenty 45-minute periods weekly.

Philadelphia.—The Pennsylvania Museum and School of Industrial Art, Broad and Pine Streets. A day and evening school for men and women over 18 years of age. Courses of 1 to 4 years in length are offered. For diploma courses candidates should present high-school diploma or equivalent. The diploma of the school is awarded

to students of the 3-year regular textile day course and the 3-year regular chemistry, dyeing, and printing course. Men who have had mill or commercial experience and only a portion of the high-school course may be accepted as students. The School of Art offers day courses in industrial drawing, surface design and color, modeling and constructive design, interior decoration, illustration, course of training for curators, woodwork and carving, pottery, metal work, architectural drawing and design, 5 days a week, from 9 to 4. Tuition fee, \$100 per year. Evening school 1, 2, or 3 nights a week, 2-hour periods. Tuition fee, \$20 for 6 months. Partial courses may be taken by special arrangement.

The Textile School offers a regular 3-year day course in textiles; tuition and other fees, \$315 a year. Two-year courses are offered in cotton, wool and worsted, silk, figured design, dyeing, and matching color. Summer courses are offered in the industrial art school.

Philadelphia.—Textile School. (Included in the Pennsylvania Museum and School of Industrial Art.)

Philadelphia.—Philadelphia College of Horology, 1844 West Somerset Street. A day and night school open all the year for men and women over 16 years. One year of high-school education is required for entrance. The school offers 1 to 3-year courses in watch-making and repairing, five 8-hour periods per week, 51 weeks per year; also 3 to 6 months' courses, 5 weekly 8-hour periods in clock repairing, engraving, jewelry manufacturing and repairing. Tuition fee, \$25 a month; cost of tools, etc., for 6 months' course, about \$50.

Philadelphia.—Spring Garden Institute, northeast corner of Broad and Spring Garden Streets. Evening courses for boys and girls over 16 years of age, 2-hour periods, 2 evenings weekly for a term of 6 months are offered in architectural and mechanical drawing, \$15 each course. Two-year course in machine shop practice, \$35; electricity, 3-year course, \$75; mathematics, 1 evening a week, \$10 per term of 6 months.

Philadelphia.—Tri-City Barber College, 232 North Ninth Street. A day and evening school offering instruction in barbering to white persons over 16 years of age. Tuition fee, \$45 to \$75.

Philadelphia.—Wanamaker Institute of Industries, Twenty-third and Walnut Streets. A private day and evening school for men and women. Endowment, \$200,000. Day courses, 5 days a week, 7 months to 2 years, are offered in architectural and mechanical drawing, garment cutting (men's), garment cutting (women's), engraving, telegraphy, watch and clock repairing. Tuition fees vary from \$51 to \$200, depending on course. Evening classes meet from 1 to 4 nights a week. Courses are offered in mechanical drawing, blueprint reading, engraving, watch and clock repairing, plan reading and estimating, and printing.

Pittsburgh.—*Pittsburgh School of Auto Engineering*, 405 Penn Avenue. Day and evening courses are offered. The day course is from 8 to 10 weeks in length but the student is privileged to remain until he has completed the course. Tuition fee, \$175 cash. Evening classes, 3-hour periods 2 evenings a week. An amount of time equivalent to the day course is allowed for the evening course. Subjects taught: The chassis, the gasoline engine, ignition, valve setting, timing, gears and wiring, assembly of parts, running models, electric systems, general repairing, tire and tube.

Pittsburgh.—*Westinghouse Electric and Manufacturing Co.*, East Pittsburgh. A general training school for employed men and women. The school maintains an engineering department, a junior engineering department, a women's department, and a foreign department. High-school training is necessary for entrance to the engineering department, and the course is planned on a 4-year basis, 3 nights a week, 2 hours a night; tuition fee, \$26 per term of 19 weeks; for the junior engineering course the tuition fee is \$22 per term; foreign department, \$2 per term. Courses taught in the women's department are sewing, millinery, and handicrafts. The school offers special courses on various engineering and commercial subjects for graduates of the engineering and commercial departments.

Scranton.—*Johnson School*, 3427 North Main Avenue. A private school of useful arts and trades for the boys and girls of Lackawanna County. The school owns a farm of 65 acres and has an endowment of \$1,500,000. Entrance requirement, completion of eighth grade. About half the day is devoted to handwork and the remainder to academic studies. All expenses are paid out of the endowment. Length of school year, 40 weeks. Three-year courses, forty 45-minute periods a week, are offered in household arts and science, machine-shop practice, carpentry, and cabinetmaking.

Williamson School.—*Williamson Free School of Mechanical Trades*. A free boarding school for deserving boys of Pennsylvania and New Jersey who intend to follow a livelihood in the trades learned. Size of campus, 70 acres; endowment, \$2,200,000. Scientific, agricultural, and trade courses are offered. Entrance age between 15 and 18 years; completion of the eighth grade required. After a preliminary trial all who prove satisfactory are bound as indentured apprentices to the trustees for a term of 3 years. During the pre-trade year the boys must care for the quarters and grounds. Military training is given. Length of school year, 40 weeks. Three and four year courses are offered, 44 weekly 55-minute periods, in bricklaying, carpentry, machine-shop practice, operating engineer, and wood-pattern making. Each apprentice learns but

one trade and his instruction in mechanical and freehand drawing tends in the general direction of his particular trade.

RHODE ISLAND

West Barrington.—St. Andrews Industrial School. A Protestant Episcopal boarding school for underprivileged boys. Endowment, \$800,000. The plant consists of 60 acres of land and 3 homes for boys, having a capacity of 62. Boys are admitted as young as 8 years and kept until the age of 16. Tuition fee, \$150 annually. Industrial work is provided by the farm, printing plant, carpentry shop, and laundry.

SOUTH CAROLINA

Aiken.—Schofield Normal and Industrial School. A nonsectarian boarding and day school for negro boys and girls. Enrollment, about 800. Besides the normal and high school an industrial department is maintained. All the boarding students are required to take a course in one of the industries. Four-year courses are offered in agriculture, carpentry, blacksmithing and wheelwrighting, auto mechanics, and harness making, and home economics for girls. Fee for tuition and board for girls, \$10 a month; boys, \$11 a month.

Denmark.—The Voorhees Normal and Industrial School. A day and boarding academic and trade school for negro boys and girls over 14 years of age and able to enter the fourth grade. The school owns 400 acres of land. The valuation of the property, including the endowment fund, is about \$225,000. The work school is intended for those who are not able to pay. In the department of mechanical industries, entrance age 16, 3 and 4 year courses are given in carpentry, brick masonry, plumbing, steamfitting, wheelwrighting, blacksmithing, printing, and some fundamentals of electric-line repair. Board, including tuition, \$14 a month; entrance fee, \$10. The work students attend school 1½ hours daily, 5 evenings a week.

St. Helena Island.—Penn Normal and Agricultural School, Frogmore. A day and boarding school for negro boys and girls. Enrollment, about 250. Farming is the most important part of the curriculum, but courses are also given in carpentry, blacksmithing and wheelwrighting, cobbling and harness making, basketry, electric-lighting plant, and Diesel engine. The shops serve the community in the making of native baskets, cobbling shoes, making harness, building homes, repairing furniture, making and repairing carts and wagons, shoeing horses and mules, and repairing automobiles.

Mount Pleasant.—Laing Industrial School. An academic and industrial school maintained largely by the Friends' Association for negro boys and girls. Endowment, \$33,244.86. Regular courses are

given the girls in sewing and cooking. The boys are given training in simple woodworking and cobbling.

Spartanburg.—*J. R. Queen Barber College*, 112 Magnolia Street. Six-week courses, 8 hours a day, are offered white students. Tuition fee, \$35.

TENNESSEE

Crossville.—*Cumberland Mountain School*. A boarding school maintained by the Methodist Church for the white boys and girls of the Cumberland plateau. The school owns a farm of 500 acres and has an endowment of \$62,000. Entrance age, 14; completion of sixth grade required. Board, \$15 a month; other small fees required. All students are required to work 2 hours a day on the farm or about the buildings. More is required of those who can not pay board. A 2-year course is given in farm mechanics, five 90-minute periods a week, for 36 weeks per year.

Fountain Head.—*Fountain Head Industrial School*. A boarding school for white boys and girls maintained by the Seventh-day Adventists. The school owns a farm of 160 acres. Cost of room, board, and other charges, \$26 per month. Required work about the farm, 12 hours a week. Students remain during the summer. Two year courses, 36 weeks per year are given, five 45-minute periods weekly in woodwork. Practically everything for a building is made.

Graysville.—*Graysville Academy*. A boarding school for white boys and girls over 12 years of age, maintained by the Seventh-day Adventists. Each student is required to work 10 hours a week about the farm or institution. Instruction is given for 2 years, 36 weeks a year, in woodwork, sewing, cooking, and agriculture, 5 weekly 45-minute periods.

McMinnville.—*Southern School of Photography*. The school opens the first Monday in April, continuing 36 weeks. Terms are arranged to meet all classes of students; instruction for one month or more. Students furnish their own materials, which vary in cost from \$8 to \$10 per month. The time required for an apt pupil to finish the regular course is from 6 to 9 months. Tuition, 1 month's course, \$50; 3 months', \$100; 6 months', \$150.

Morristown.—*Morristown Normal and Industrial College*. A boarding and day school for negro boys and girls, under the auspices of the Methodist Church. The farm consists of 300 acres. Enrollment, 350. Pupils of good character are admitted to any class for which they are qualified without reference to age, residence, or religious denomination. The school includes grades 1 to 12. Tuition fee per term for boarders, \$8; board and room, \$15 per month. Maintenance fee paid by all, \$7 per term. Completion of the eighth

grade or its equivalent is required for entrance to the industrial courses. Three-year courses are given in carpentry and woodworking, machine shop, including auto mechanics, and printing. Graduation from the twelfth grade entitles the student to teach in any grade within the State of Tennessee.

Nashville.—Watkins Institute Free School, Sixth Avenue and Church Street. A free day and night school for white boys and girls over 14 years of age. Endowment, \$1,000,000. Minimum entrance age to trade school, 16 years. No maximum age limit is imposed. Two-year courses are offered in mechanical drawing, shop mathematics, elements of electricity, and trade dressmaking.

Pleasant Hill.—Pleasant Hill Academy. A boarding and day school for white boys and girls over 15 years of age from the southern mountains, under the auspices of the Congregational Church, from which the school receives \$20,000 to \$25,000 annually. The school owns a farm of 175 acres, and receives State and county aid of \$3,000 a year. Enrollment, 225. Cost to the student for 9 months, \$165. All the work on the farm and about the institution is done by the students. Five hours of work a week is required of all students. Manual-training courses are offered, 5 weekly 90-minute periods, 36 weeks per year, 5 years. Weaving, ten 90-minute periods, 2 years; home economics, 10 weekly 90-minute periods per year. Teacher-training courses are also offered.

TEXAS

Dallas.—Moler System College (for barbers.) Branches also at Fort Worth and Houston.

San Antonio.—St. Philip's Normal and Industrial School. A private boarding school for negro boys and girls over 7 years of age, operated by the Episcopal Church. Financial aid is received from personal contributions, community chest, and General Board of Education for Negroes. Required work for students, gardening, laundry, cooking, and sewing. Tuition fee, \$15 a month. The school year is 36 weeks in length. Two years of instruction is given in domestic science, domestic art, and basketry. A 4-year course is given in dressmaking, 3 weekly 2-hour periods.

UTAH

Salt Lake City.—Moler Barber School, 114 Regent Street. Enrollment, 18. The school is open to men or women over 18 years of age, having completed the sixth grade. Tuition fee, \$100, 26 periods a week for 6 months.

VIRGINIA

Covington.—Boys' Home (Inc.), Allegheny County. A private boarding home for white boys, maintained by the Episcopal Church. The boys are legal wards of the home. Entrance age, 5 to 16 years. The school owns a farm of 1,168 acres, has an endowment of \$40,687, and an appropriation from the church of \$42,000, annually. Work on the farm is required of students. Charges, including tuition fee, \$200 from Virginia boys and \$300 per year from others. Instruction is given in printing, steam laundry, power plant, electric work, and laundry work.

Dike.—Blue Ridge Industrial School. A private boarding school for white mountain boys and girls. The school owns 800 acres of land, and is maintained by private subscriptions and appropriations from the Episcopal diocese of Virginia. Enrollment, 150. Students do the work about the institution. Charge for room and board, \$8 per month. Tuition fee \$30 covers 9 months' session. The school year is 36 weeks in length. Four-year courses are offered in agriculture and home economics, 5 weekly 80-minute periods. Handicraft, 5 weekly 40-minute periods. Summer courses are offered.

Hampton.—Hampton Normal and Agricultural Institute. An endowed private school for colored people, under the control of 17 trustees. The principal is the head of the institution. Faculty, 130 members. The school plant includes 990 acres of land and 139 buildings. Endowment, \$8,189,692. The school receives no State or county funds. The institute offers courses in trade work, high-school subjects, and some courses of a college level. Total enrollment, 2,300. Minimum entrance requirement, 15 years of age and completion of eighth grade. Most of the work incidental to the upkeep of the plant is done by the students. The price of tuition is \$100 per year. Living expenses for the school year of 36 weeks, exclusive of clothing, amount to from \$200 to \$225. Scholarships are available. Military training is in charge of a commandant. The trade school offers technical and practical training in 12-unit trade courses. A 4-year course is offered in each of the following trades: Automobile body building and wheelwrighting, automobile mechanics, blacksmithing, bricklaying and plastering, cabinetmaking, carpentry, machine work, painting, printing, steam fitting and plumbing, tailoring, and upholstering. Some evening work is offered and the school has made provision for students who work part of the time to receive instruction at the various times they are not employed. In addition to other college courses college work is offered in agriculture, home economics, trades, and industries.

Ivondale.—Northern Neck Industrial Academy. A boarding school for negro boys and girls. The school owns 100 acres of land

and is maintained largely from gifts of the Northern Neck Baptist Association. Minimum entrance age, 14 years. Length of school year, 36 weeks. Four-year courses are given in basketry and weaving, one weekly 45-minute period.

Lawrenceville.—St. Paul Normal and Industrial School. A private day and boarding school for negro boys and girls over 14 years of age, maintained by the Episcopal Church and private donations. The school owns a farm of 1,600 acres, has an endowment of \$105,000, and receives both State and county aid. Completion of sixth grade is required for entrance as a boarder. Expenses to student, about \$200 a year. From the seventh grade up the following trades are taught one-half day a week throughout the year of 36 weeks, 3 years: Bricklaying, plastering, cabinetmaking, harness and shoe making, machine-shop practice, painting, wheelwrighting, printing, and tailoring. The girls are taught dressmaking, plain sewing, millinery, and laundering. Trade students are required to attend evening school 2 hours each night and to remain at school 2 summers, the first and third.

Rock Castle.—St. Emma Industrial and Agricultural Institute, a Roman Catholic trade school for negro boys of the South, 41 miles west of Richmond. The school owns 1,700 acres of land. Students of all religious denominations are admitted. Applicants must be at least 15 years of age, sound of health and of good moral character, and should have completed the elementary grades. Admission fee, \$10. The only additional expense to the student is \$24 per year. As a condition of admission, the institute requires that the first year at the institute shall be spent in the agricultural department. Students are then offered the opportunity to select a trade. The trades taught are automechanics, wheelwrighting, carriage and wagon building, painting and finishing, upholstering and carriage trimming, harnessmaking, horseshoeing, blacksmithing, cement and concrete work, plastering, masonry and bricklaying, house and sign painting, tailoring, shoemaking, cooking and baking. Students are offered opportunities of learning to fire and care for steam boilers, to operate steam and gasoline engines, pumps, acetylene, electric and gasoline lighting machines, filter and ice-plants, and laundry machinery. The tailoring department is a regular custom tailoring shop patronized by the public, and makes the military and civilian uniforms worn by the students. The students are all enrolled in the cadet corps, the companies of which form a battalion. Military discipline is maintained.

WASHINGTON

Seattle.—United Young Men's Christian Association Schools of Seattle. Fourth Avenue at Madison Street. Day courses are offered for men in automechanics, 6 weekly 60-minute periods, 20 weeks;

radio, 24 weeks; electricity, 4 periods weekly, 82 weeks. Evening courses in radio, two 60-minute periods, weekly; automechanics, two 60-minute periods, weekly. Tuition fee, according to course.

Spokane.—Moler Barber School, 405 Front Avenue. Six-months course in barbering is offered. Tuition fee, \$100.

WISCONSIN

Milwaukee.—*School of Engineering of Milwaukee*, 163 Wells Street. A day and evening-school for men in session all the year. High-school education is required for entrance to civil and electrical engineering courses. No special education required for other courses. Tuition fees, \$195, 3 months; \$295, 6 months; and \$395, 12 months. Day courses are offered 5 days a week, 45-minute periods, for 3 months in automotive electricity, armature winding, wiring and testing, radio and electrical refrigeration. Practical electricity, 6 months; commercial electrical engineer, 1 to 2 years; electrical engineering, 3 years. Evening courses in practical electricity, electrical refrigeration, and radio. Special home study courses in automotive electricity and practical electricity are offered.

PART II

Corporation Schools

Ambridge Plant School, American Bridge Co., Ambridge, Pa. A school for the employees of the company. Enrollment, 347. Courses are offered in structural drafting, covering mathematics, mechanics and drawing, and their application in design and construction; junior and senior courses in bridge engineering, shop courses, and courses for technical graduates. Special subjects such as metallurgy and electricity are offered.

American Locomotive Co., Schenectady, N. Y. This company offers 4-year courses in drafting, pattern making, tool making, and for machinists, and a 3-year course in electric repairs. For a limited few who show talent for leadership a 2-year course is given in shop and drawing room.

Boston and Albany Railroad, Boston, Mass.. Four-year apprentice courses are offered to men 16 to 21 years of age who enter the employment of the company. Wages are paid during period of instruction.

Brown & Sharp Manufacturing Co., Providence, R. I. Apprentice courses for machinist, drafting, pattern making, moulding, core making, and blacksmithing.

Burroughs Adding Machine Co., Detroit, Mich. A 4-year course is given. The scientific part of the course is developed in the Cass Technical High School. The apprentices attend classes one-half day a week during their entire course. Men are also trained for field service, 8 months' course.

Chicago Central Station Institute, 72 West Adams street, Chicago. A private school open to all employees of the Commonwealth Edison Co., Public Service Co., Middle West Utilities Co., and Federal Electric Co. Courses are offered for every group of employees in need of general and specialized training. The institute also conducts courses at Evanston and Oak Park, including a college graduate course in practical electricity and utility business.

Cleveland Twist Drill Co., Cleveland, Ohio. A 4-year course is offered for the production of skilled machinists and toolmakers. Theoretical training 1 day a week. Courses of training for foremen, assistant foremen and operatives, 1 night a week during the 6 winter months are given; also a course of training for technical college graduates to develop them into executives or technicians.

Collins & Aikman Co., Philadelphia, Pa. (Makers of plush.) A regular night school for employees is conducted free of charge. Courses are given in dressmaking, English, arithmetic, fabric analysis, and loom fixing.

Commonwealth School, Granite City, Ill. For all members of the Commonwealth Steel Co. Through a cooperative arrangement with the Community High School of Granite City the opportunity is open to the apprentices and other employees of the Commonwealth Co. who have completed the eighth grade, to complete a 4-year high-school course, all the subjects being taught at the Commonwealth School. An official diploma is given by the Community High School of Granite City.

Consolidated Gas Co. of New York, 130 East Fifteenth Street, New York City. Various training classes are conducted in connection with the different departments of the company and its affiliated companies.

Davey Institute of Tree Surgery. The Davey Tree Expert Co., Kent, Ohio. The enrollment is limited to a selected list of men who enter the company. Complete course consists of 3 terms of 15 weeks each. Each term runs from the first of December to the middle of March.

General Electric Co., Schenectady, N. Y. Six apprentice training courses are offered: Machinists, draftsman, molder, pattern maker, blacksmith, and cabinet maker. All of these courses require 4 years to complete with the exception of a 3-year course for drafting and machinist apprentices who are high-school graduates. Applicants

must be at least 16 years of age. Apprentices are compensated at an hourly rate depending upon the course.

General Motors Institute of Technology, Flint, Mich. (Formerly with Flint Institute of Technology.) Courses are offered in auto-mechanics, automotive electricity, automotive construction and maintenance; seven 4-year engineering courses; twelve 2-year and 1-year trade courses; courses in accounting, foremanship and management. The industrial training department offers a large number of single-term courses covering almost every phase of the automobile industry.

Greenfield Tap & Die Corporation, Greenfield, Mass. Three-year courses are offered in which boys are trained to become toolmakers.

R. Hoe & Co.; 504 Grand Street, New York, N. Y. (Printing press and machine saw manufacturers.) Apprentice courses are given for machinists, wood pattern, and electrical work.

Ingersoll Milling Co., Rockford, Ill. This company offers 3 courses for apprentices, 1 in drafting, 1 in pattern making, and 1 in machine-shop practice.

Lakeside Press, training department, Chicago, Ill. Apprentice courses are given for boys over 16 years of age. The students are required to spend 5 hours weekly in the school continuing their academic work. Preapprentice courses are also offered for boys from 14 to 16 years old.

Mergenthaler Co. School, 29 Ryerson Street, Brooklyn, N. Y. Agencies are maintained with similar schools at Chicago, New Orleans, San Francisco, and Toronto, Canada. A regular student must be either a purchaser or user of the linotype or a bona fide employee of a purchaser or user. The course is designed for 6 weeks. About one-third of the course is devoted to instruction on mechanism and two-thirds to keyboard instruction and practice operation.

Midvale Co., Philadelphia, Pa. Four-year courses are offered for machinists, electricians, iron molders, pattern makers; 3-year courses for carpenters, tinsmiths, pipe fitters, ironworkers, sheet-metal workers, bricklayers.

Morgan & Wright, Detroit, Mich. (rubber works). Four-year apprentice courses for machinists are given in combination with school work at Cass Technical High School. Minimum entrance age, 16 years.

New York Edison Co. Schools, 55 Duane Street, New York, N. Y. The school is conducted by the Association of Employers of the New York Edison Co. Five laboratory practice courses are offered, 2 elementary and 3 more advanced: Mechanics and heat, elementary principles of electricity, direct-current machines, elements of alternating currents, and alternating-current machines. These courses

are designed to teach the fundamentals of physics and applied electricity by the laboratory method.

Norton Co., Worcester, Mass. Three courses are offered in apprentice training from 3 to 4 years in length. The completion of each course qualifies the apprentice for the rating of journeyman machinist.

Pratt & Whitney Co., Hartford, Conn. Three-year courses are offered for machinists, molders, core makers, and pattern makers. Applicants must be at least 16 years of age.

Reo Motor Car Co., Lansing, Mich. The number of apprentices is limited to 200. Courses $2\frac{1}{2}$ to $3\frac{1}{2}$ years in length are offered for developing machinists. Men up to 25 years of age may start learning the trade.

Santa Fe Railway Apprentice School. Santa Fe Railway in 9 States. For males, entrance age 16 to 20 years. The apprentices are paid while learning and work all the year in the shops, 6 days a week, 8 hours a day. Two evenings a week 2-hour periods are spent in the schoolroom. Foremen training 1 year 2-hour periods 6 days a week. (Main office, Chicago, Ill.)

Scovill Manufacturing Co., Waterbury, Conn. Four-year courses are given for toolmaker, 2,700 hours, and for machinist, 2,700 hours. Class work covers not to exceed 1 hour per day for 5 days a week, and includes instruction in mathematics, English, drawing, hygiene, physics, electricity, metallurgy, civics, and economics, and this is coordinated with the practical training at machine and bench.

Southern Pacific Co. Railroad shop apprentice school, Ogden, Utah. The school is open all the year for white men over 16 years of age. Four-year day courses, two 2-hour periods weekly, 48 weeks a year are given. All applicants must speak, read, and write the English language.

St. Johnsbury Vocational School, of the E. & T. Fairbanks Scale Co., St. Johnsbury, Vt. Mechanical drawing, wood-pattern and metal pattern making, engineering, and print-shop work are among the subjects offered. Related subjects given in cooperation with public schools.

Western Electric Co., Hawthorne Station, Chicago, Ill. The applicant must be between 16 and 19 years of age and have had at least a 2-year high-school education. The course covers a period of 4 years of at least 2,400 hours each. Four hours a week classroom instruction is given, 2 hours of mechanical drawing and 2 hours of mathematics. Apprentices are paid a wage varying with the length of their apprenticeship. In addition to the apprentice course a course for college graduates is offered extending over a period of 1 year.

Western Union Telegraph Co., 195 Broadway, New York, N. Y. Graduates of certain universities and technical schools who are em-

ployed each year by the engineering and traffic departments of the company are given courses of training from 6 months' to 2 years' duration.

Westinghouse Electric and Manufacturing Co., East Pittsburgh, Pa. Applicants should be between 16 and 19 years of age. Courses are offered for machinist, pattern maker, toolmaker, electrician, printer, and industrial-apprentice course for office boys, messengers, tool handlers, etc. Each apprentice spends a minimum of 4 hours a week in class work. Shop hours total 48 a week. The Westinghouse Night School offers an opportunity for employees to obtain a knowledge of the fundamentals of engineering.

PART III

Correspondence Schools and Schools Offering Home-study Courses

American School, Fifty-eighth Street and Drexel Avenue, Chicago, Ill. This school offers a variety of courses in the theory of construction and the technical phases of the building and machine trades; a number of courses in the field of mechanical, electrical, architectural, chemical, and civil engineering, and a few specific lines of manufacturing and agriculture. Courses are also offered in business, law, show-card writing, and commercial art.

Associated Building Employers School, 13 McConnell Street NW., Grand Rapids, Mich. A complete building course is offered; price, \$100.

Joseph C. Branch Institute of Engineering, 3917 Grand Boulevard, Chicago, Ill. Complete correspondence courses are offered in the English, Spanish, and Portuguese languages. A small residence school is maintained in Chicago for the enrollment of students from Latin countries. Correspondence courses in 12 lessons in electrical engineering, \$50; automotive engineering, \$70; mechanical engineering, \$125; civil engineering, \$200; electrical therapeutics, \$150.

Chicago Technical College, 118-132 East Twenty-sixth Street, Chicago, Ill. Home-study courses are available in the same subjects taught in the college.

L. L. Cooke School of Electricity, 2150 Lawrence Avenue, Chicago, Ill. Courses are offered in theoretical and practical electricity, radio, automotive electricity, and kindred subjects. A laboratory of industrial electrical machinery is maintained on which students are given practical instruction in addition to home training if they so desire. Job sheets are used for practical work.

Hohenschuh Carpenter College of Embalming, 720 Sixth Avenue, Des Moines, Iowa. Extension-service course is offered; price, \$55.

Yale & Towne Manufacturing Co., Stamford, Conn. The apprenticeship school offers 4-year courses in toolmaking, diemaking machinist, power and plant drafting, electrical construction, time-lock expert. The courses are divided into eight, 1,200 hours each.

International Correspondence Schools, Scranton, Pa. This school offers a variety of courses in the theory of construction and the technical phases of the building and machine trades, and a number of courses in the field of mechanical, architectural, chemical, and civil engineering; also courses in business, law, show-card writing, and commercial art; academic subjects and a few specific lines of manufacturing and architecture.

¹*Lewis Hotel Training School, Inc.*, Twenty-third Street and Washington Circle, Washington, D. C. Courses—50 lessons—are offered in hotel and tea-room management.

National Radio Institute, Sixteenth and U Streets NW., Washington, D. C. Course in radio by correspondence exclusively, \$97.50; extra charge for code, \$25.

¹*New York Institute of Photography*, 12 West Thirty-third Street, New York, N. Y. Home-study courses are offered in motion-picture photography, professional still photography, and commercial finishing for amateurs. Tuition fee, \$50 to \$130.

Northwestern School of Taxidermy, 205 Sunderland Building, Omaha, Nebr. Only one course in taxidermy is offered, which requires 3 months to complete. Price, \$20.

¹*Radio Institute of America*, 325 Broadway, New York, N. Y. In addition to resident courses this school offers a home-study course, 6 lessons, for dealers and technicians. Price of course, \$30, including all textbooks.

¹*Siebel Institute of Technology*, 958-964 Montana Street, Chicago, Ill. Home-study courses are given in baking technology, 28 lessons; refrigeration engineering and carbonated beverages, 20 lessons each, \$95 cash each course; milling technology, \$75.

¹*Washington School of Art (Inc.)*, 1115 Fifteenth Street NW., Washington, D. C. Home-study courses are offered in cartooning, show-card writing, and commercial art.

¹*Winter's School of Jewelry Engraving*, 90 South Oak Park Avenue, Oak Park, Ill. Home-study courses covering 1 year are offered in designing and engraving.

¹ Resident courses listed in Part I.

PART IV

Private and Endowed Collegiate Schools of Technology

- Armour Institute of Technology, Chicago, Ill.
- ² Billings Polytechnic Institute, Billings, Mont.
- ² Bradley Polytechnic Institute, Peoria, Ill.
- Carnegie Institute of Technology, Pittsburgh, Pa.
- Case School of Applied Science, Cleveland, Ohio.
- ² Chicago Technical College, 118 East Twenty-sixth Street, Chicago, Ill.
- ² The Cincinnati School of Technology, Y. M. C. A., Cincinnati, Ohio.
- ² Cleveland School of Technology, Y. M. C. A., Cleveland, Ohio.
- Cooper Union, Eighth Street at Fourth Avenue, New York, N. Y.
- ² Detroit Institute of Technology, Y. M. C. A., Detroit, Mich.
- Drexel Institute, Thirty-second and Chestnut Street, Philadelphia, Pa.
- Hillyer Institute, Y. M. C. A., Hartford, Conn.
- James Millikin University, Decatur, Ill.
- Lewis Institute, Chicago, Ill.
- Lincoln Institute, Y. M. C. A., 316 Huntington Avenue, Boston, Mass.
- ² Maryland Institute for the Promotion of Mechanic Arts, Baltimore, Md.
- Massachusetts Institute of Technology, Cambridge, Mass.
- ² Ohio Mechanics Institute, Cincinnati, Ohio.
- ² Oregon Institute of Technology, Y. M. C. A., Portland, Oreg.
- ² Pennsylvania Museum and School of Industrial Art, Broad and Pine Streets, Philadelphia, Pa.
- Polytechnic Institute of Brooklyn, Brooklyn, N. Y.
- ² Pratt Institute, Brooklyn, N. Y.
- Reneselaer Polytechnic Institute, Troy, N. Y.
- ² Rochester Athenæum and Mechanics Institute, Rochester, N. Y.
- Rose Polytechnic Institute, Terre Haute, Ind.
- Stevens Institute of Technology, Hoboken, N. J.
- Webb Institute of Naval Architecture, Sedgwick and Webb Avenues, New York, N. Y.
- ² Wentworth Institute, Boston, Mass.
- Worcester Polytechnic Institute, Worcester, Mass.

² Listed in Part I of this bulletin.