

UNITED STATES BUREAU OF EDUCATION

BULLETIN, 1913, NO. 22

WHOLE NUMBER 532

BIBLIOGRAPHY OF
INDUSTRIAL, VOCATIONAL, AND
TRADE EDUCATION



WASHINGTON
GOVERNMENT PRINTING OFFICE
1913

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., March 29, 1913.

SIR: In this country and abroad there is a general and increasing interest in industrial education and in the various forms of vocation and trade schools. Teachers, school boards, civic organizations, manufacturers, trades-unions, city and State officials are working apart and together to formulate some practical program whereby this type of education may be given in the best and most economic way. In many foreign countries, and in several States and cities of this country, marked progress has been made. The literature on the subject has been so abundant and varied that there is need for an annotated list of the more important books, reports, articles, and periodicals that have appeared within the last few years. I therefore recommend for publication as a bulletin of this bureau the accompanying manuscript prepared by Henry R. Evans of the Editorial Division, assisted by members of the library staff.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

THE SECRETARY OF THE INTERIOR.

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CONTENTS.—1. Significance of the movement for industrial education. 2. Manual training and industrial education. 3. The demand—an analysis. 4. The demand of organized labor. 5. The demand of educators. 6. The demand of social workers. 7. The revision of educational ideals involved in the movement for industrial training. 8. A plan for immediate reorganization. 9. Examples of more fundamental reorganization. 10. Prevocational work in grades 6-8. 11. The intermediate or separate industrial school. 12. Vocational high schools. 13. The trade school. 14. Part-time co-operative schools. 15. The continuation school. 16. Vocational guidance. 17. State legislation. 18. Concerning agricultural education.
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87. **Lee, Joseph.** The boy who goes to work. *Educational review*, 38: 325-43, November 1909.
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88. **Lindsay, Samuel McCune.** New duties and opportunities for the public school. *Social education quarterly*, 1: 79-92, March 1907.
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89. **McAndrew, William.** Industrial education from a public school man's point of view. *Educational review*, 35: 109-28, February 1908.
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90. **McDaniel, C. H.** The Hammond plan. What one city is trying to do. *American school board journal*, 45: 13-14, December 1912.
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91. **McGahey, C. B.** The young American workman as seen by a shop superintendent. *Engineering magazine*, 35: 384-86, June 1908.
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92. **Massachusetts. Board of education.** Independent industrial schools. *In its Annual report*, January 1910. p. 137-53.
Schools by name. Conditions in 16 cities and towns.
93. **Matheson, K. G.** Some thoughts concerning the effect of technical education upon the prosperity of the South. *In Georgia educational association. Proceedings and addresses*, 1910. Macon, Georgia, Anderson printing co., 1910. p. 59-69.
"Our exhaustless resources can never be fully developed until the best technical, industrial, and agricultural education possible is put within the reach of every Southern boy and girl."
94. **Miles, H. E.** Work and citizenship. The Wisconsin experiment in industrial education. *Survey*, 29: 682-85, February 15, 1913.
"By the Wisconsin law the local industrial schools are in the control of a committee consisting of two employers, two employees, and the city superintendent. This union of the social forces most interested becomes a new social haven and is directly responsible for splendid results. It can not be said which is happiest and most devoted to the work, the employees, the parents, the employers, the school teachers, or the pupils."
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95. **Miller Leslie W.** The claims of industrial art, considered with reference to certain prevalent tendencies in education . . . Boston, School of printing, North-end union, 1908. 15 p. 12°.
Address before the Philobiblon club of Philadelphia, February 27, 1908.
96. **Münsterberg, Hugo.** Psychology and industrial efficiency. Boston and New York, Houghton Mifflin company, 1913. 321 p. 8°.
Shows the value of psychological tests. But notwithstanding the value of laboratory methods for determining industrial efficiency, the writer thinks that vocational guidance, if it shall ever be a closed and perfected system, will yet demand the supplementary services of the labor investigator the sanitary expert, etc. This book is well reviewed in the *Survey*, 20: 96-98, April 19, 1913.
97. **Munroe, James P.** New demands in education. New York, Doubleday, Page and co., 1912. 312 p. 8°.
Contains chapters on industrial education, vocational training, and manual training. Author does not consider it the function of the public school to impart strictly trade processes, but to develop good morals, good health, power of concentration, manual power, and command of the tools of communication. He advocates trade schools.
98. **Musselman, H. T.** The work of the College of industrial arts. *Texas school magazine*, 15: 7-9, December 1912.
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99. **Nearing, Scott.** Social adjustment. New York, The Macmillan company, 1911. xvi, 377 p. 12°.
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16 INDUSTRIAL, VOCATIONAL, AND TRADE EDUCATION.

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102. Orr, Fred J. Manual arts in rural schools. *In Southern educational association. Journal of proceedings and addresses, 1905.* p. 178-87.
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103. Owens, C. J. Secondary industrial education in Alabama. *In Alabama educational association. Official proceedings, 1909.* p. 138-46.
A course of study based on an elementary course of seven grades, p. 141-43.
104. Paddelford, Fred L. Short addresses on Industrial training, The American boy (Handle with care); Thanksgiving; Industry the golden pass key. Golden, Colorado [The Industrial school press, 1909] [72] p. 24°.
105. Page, Walter H. The unfulfilled ambition of the South. *In Conference for education in the South. Proceedings, 1904.* New York, Issued by the Comitée on publication, 1904. p. 98-110.
106. Person, Harlow Stafford. Industrial education; a system of training for men entering upon trade and commerce. Boston & New York, Houghton, Mifflin and company, 1907. 88°p. 8°. (Hart, Schaffner & Marx prize essays)
Deals with the training required by young men who would fit themselves for the higher positions in industry or commerce, and the need of providing such training in the United States. The need is now generally admitted. The author's opinion clearly is that while commercial training should be offered in high schools, collegiate courses, and professional departments, the ideal conditions can be found only in distinctly professional instruction, open solely to those who have already completed a liberal education. The question here raised is a large one, about which, as is well known, there is serious difference of opinion.
"It sets forth briefly the economic conditions which hold in the kingdom of Wurtemberg, the natural resources of the country, and the system of transportation. It then traces the development in this environment of the system of industrial schools and the service which they render in the upbuilding and maintenance of the State."
It also includes a brief description of other industrial and commercial schools of the kingdom, and an outline of the activities of the Wurtemberg central bureau for industry and commerce.
107. Pritchett, Henry S. The place of industrial and technical training in popular education. *Educational review*, 23: 281-303, March 1902.
Discusses the growth of the higher technical education; demand for industrial training in elementary education; opportunities offered in Boston; solution of the problem in Berlin.
108. Prosser, Charles A. Facilities for industrial education. *American school board journal*, 45: 11-12, 58, September 1912.
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110. Richards, Charles B. Industrial training; a report on conditions in New York State. Albany, State department of labor, 1909. 394 p. 8°. (New York. Bureau of labor statistics. 26th annual report for 1908, Part 1)
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CONTENTS.—General summary.—Conditions of entrance and advancement in individual industries.—Attitude of labor unions toward industrial and trade schools.—Comments by employers on industrial training.—Rules and agreements of labor unions in regard to apprentices and helpers.—Laws of New York State relating to child labor, compulsory education, apprenticeship, and industrial education.—Institutions offering courses in industrial training in New York State.

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Reviews legislation for the year 1910-11, and discusses recently developed tendencies.
113. Robinson, James Harvey. The significance of history in industrial education. *Educational bi-monthly*, 4: 376-89, June 1910.
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114. Robinson, Theodore W. The need of industrial education in our public schools. In National education association of the United States. *Journal of proceedings and addresses*, 1910. p. 369-73.
115. Rogers, Howard J. The relation of education to industrial and commercial development. *Educational review*, 23: 490-502.
Discusses national development in material progress; the struggle for commercial and industrial supremacy, etc. Our system of public education. Contrasts American with foreign conditions in regard to the working classes.
116. Routten, William W. Industrial education in our common schools. In Alabama educational association. *Proceedings*, 1911. p. 83-87.
117. Russell, James Earl. Discussion on how to fit industrial training into our course of study. In New York (State) University convocation, 1906. Albany, New York (State) Education department, 1906. p. 59-67 (Department bulletin no. 3)
118. ——— The point of view in industrial education. In New York state teachers' association. *Proceedings*, 1909. Albany, University of the state of New York, 1910. p. 8-19. (Education department. Bulletin no. 483, November 15, 1910)
119. ——— The school and industrial life. *Educational review*, 38: 433-50, December 1909.
A plea for industrial training. Regards it as "essential to the well-being of a democracy."
120. Schneider, Herman. Fundamental principles of industrial education. [New York, 1909] 307-16 p. 8°.
A paper to be presented at a special meeting of the American institute of electrical engineers, New York, April 10, 1909.
Subject to final revision for the Transactions.
121. Shadwell, Arthur. Industrial efficiency. A comparative study of industrial life in England, Germany and America. New ed. London, New York [etc.] Longmans, Green, and co., 1909. xx, 720 p. 8°.
Contains a critical analysis and comparison of the organization, ideals and methods of public elementary education in England, Germany, and the United States. Chapter xvii treats directly of technical education, describes schools for industrial and technical instruction, emphasis being laid especially on the schools of Germany and England, and the effect of these schools on the industrial problem. An illuminating book on many points. Gives a searching study of social conditions in the three countries.
122. [Symposium] Social education quarterly, June, 1907. 97 p. 8°.
Contains: 1. The place of industrial education in the common school system, by F. P. Fish. 2. Industrial education in a prairie state, by E. B. Andrews. 3. American industrial training as compared with European, by F. A. Vanderlip. 4. The problem of industrial education, by C. R. Richards. 5. The needs from the manufacturers' standpoint, by M. W. Alexander. 6. The importance of industrial education to the working man, by John Golden. 7. Bearings of industrial education upon social conditions, by R. A. Woods.

123. **Symposium: The place of industries in public education.** *In National education association of the United States. Journal of proceedings and addresses, 1908.* p. 155-77.

Articles by J. E. Russell, E. C. Elliott, J. F. McElroy, etc. Dr. Elliott gives an interesting presentation of the philosophy underlying public education. He says that until we possess "reliable data upon which to base a rational scheme of reorganization, the public schools cannot hope to become instruments for 'industrial determination'; neither will they cease to prevent the present positive misselection of individuals for their proper station of efficiency and happiness."

Mr. McElroy cites statistics of attendance in grammar schools of Albany, N. Y., to show a very rapid decrease in enrollment. Advocates industrial continuation schools.

124. **Turner, Kate E.** What shall I do after high school? *Ladies' home journal*, 29: 10, 76, April 1912.

Describes the various professional and industrial channels open for girls, and their requirements.

125. **United States. Bureau of education.** Industrial education in the United States. *In its Annual report of the Commissioner for the year 1910.* v. 1. Washington, Government printing office, 1910. p. 223-53.

General review. Statistics of schools in this country which offer training for specific vocations in the industries. For reviews of manual and industrial training in the United States see previous reports of the Bureau, from 1896 to 1909.

126. ——— **Bureau of labor.** 17th Annual report of the United States Commissioner of labor, 1902. Washington, Government printing office, 1902. 1333 p. 8°

An exhaustive compilation of material regarding trade and technical education in the United States. Describes institutions for industrial education in the United States. Chapter 2 deals with the attitude of employers, graduates and labor unions towards such institutions. A study is made of industrial education in Austria, Belgium, Canada, France, Germany, Greece, Britain, Hungary, Italy and Switzerland.

A synopsis of the report, prepared for the exhibit of the bureau at the Louisiana purchase exposition, is contained in Bulletin no. 54, of the U. S. Bureau of labor. Washington, September, 1904. p. 1369-1417. The text is copiously illustrated.

127. ——— **Industrial education.** *In its Annual report of the Commissioner of labor, 1910.* Washington, Government printing office, 1911, 822 p. 8°.

Bibliography: p. 519-39.

Comprehensive study of industrial education in all its phases. Discusses at length apprenticeship schools; vocational guidance; legislation regarding industrial education, etc. "The data for this report were gathered mainly by special agents of the Bureau of labor on a schedule of inquiries. The information was collected during the latter half of the year 1910 and relates to conditions at that time. . . . A very few schedules were secured by correspondence."

Chapter xviii contains voluminous statistics of Trades and subjects taught and time devoted to schoolroom work and to practice.

128. ——— **Conditions under which children leave school to go to work.** *In its Report on condition of women and child wage-earners in the United States.* Washington, Government printing office, 1910, v. 7. 309 p. 8°. (61st Cong., 2 sess. Senate. Document no. 645)

CONTENTS.—1. Reason for leaving school and going to work. 2. Circumstances possibly influential in causing children to leave school. 3. Industrial experience of children. 4. Legal conditions affecting the employment and school attendance of children. 5. Retardation, repeating, and elimination.

An intensive study of 622 children in seven different localities, taken from two northern and two southern states. Domestic, educational, industrial, legal, social and hygienic conditions discussed. Throws light on the difficulty experienced by boys in securing chances to learn trades.

129. [**Van Cleave, James Wallace**] Industrial education as an essential factor in our national prosperity. Washington, Printed for private distribution by Mrs. A. M. Wilcox [1908?] 8 p. 8°.

Speech delivered at the annual banquet of the National society for the promotion of industrial education, Chicago, January 23, 1908.

Advocates free industrial high schools, fully equipped, to be open night as well as day to the boys who have taken the manual training course in the primary schools. "Manifestly no apprenticeship system in the United States ever had or which it ever could invent would enable us to rise to the demands of the present and the approaching situation."

130. **Walker, Hugh.** Are "the brains behind the labour revolt" all wrong? *Hibbert journal*, 18: 348-65, January 1913.
Incidentally discusses industrial education as a remedial agency for many of the social ills. Explains how the state by a system of industrial training, prolonging the period of instruction to about 18 years, would solve the baffling problem of "blind-alley employments." Says: "The breeding of men who can not earn their own living is as costly as it is morally disastrous; and the present system, which, at the close of the school period, turns thousands of children on to the streets, there to make a precarious living for a few years, inevitably produces that result." Shows the wonderful results accomplished in Munich, Germany, by industrial education.
131. **White, Frank B.** Industrial education in the Philippine islands. *Vocational education*, 2: 265-77, March 1913.
To be continued. The Philippine Bureau of education has aimed "to turn the pupils directly and normally from the public schools into an industrial life which would enable them to more adequately meet their growing needs." Illustrated.
132. **Wild, Laura H.** Training for social efficiency: the relation of art, industry and education. *Education*, 32: 226-33, 343-53, 494-504, 624-35, December 1911; February, April and June 1912; 33: 91-99, 159-65, 208-22, October, November and December 1912.
A plea for efficiency, not based upon skill in producing "the largest output, in making the biggest and most brilliant showing, but as ability to do something which the world wants in a superior way."
133. **Winston, George T.** Industrial education and the new South. *In U. S. Bureau of education. Report of the Commissioner for the year 1901.* v. 1. p. 509-13.
An address delivered at the tenth annual meeting of the Southern education association, Richmond, Va., December 27-29, 1900.
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135. **Woodward, Calvin Milton.** The logic and method of industrial education. *In North Central association of colleges and secondary schools. Proceedings, 1910.* Chicago, Published by the Association, 1910. p. 3-23.

IV. INDUSTRIAL EDUCATION IN FOREIGN COUNTRIES.

GENERAL.

136. **Gibson, Carleton B.** Recent tendencies toward industrial education in Europe and America. *In Southern educational association. Journal of proceedings and addresses, 1908.* p. 157-66.
Also in *Southern educational review*, 6: 275-84, February-March 1909.
137. **Kreuzpointner, Paul.** The new standard of the present day industrial education in Europe. *American school board journal*, 43: 15-17, September 1911.
"We have as a new standard in the present system of industrial education in Europe, a growing power of the state over the organization of such schools, the extension of the compulsory feature of attendance at industrial schools, under eighteen years of age, and a vast increase of expenditures by the state and the municipalities over former years—for the education of the masses of industrial workers."
138. **Ware, Fabian.** Educational foundations of trade and industry. New York, D. Appleton & co., 1901. 293 p. 8°.
Treats of the situation in England, Germany, France and America. Gives an adequate presentation of American school conditions with reference to the effect of American ideals and form of school organization upon industrial affairs.
139. **Winalow, Charles H.** Report on the relations of European industrial schools to labor. Boston, Wright & Potter printing co., 1908. 22 p. 8°.
(Massachusetts. Commission on industrial education. Bulletin no. 10)

GREAT BRITAIN.

140. Great Britain. National conference on industrial training of women and girls, London, October 6, 1908. Report.

ENGLAND.

141. London: County council. Education committee. The apprenticeship question. Report . . . London, printed for the London county council, 1906. 45 p. F°. (London. County council. [Publication] no. 925)
Chairman, R. A. Bray.
142. ——— Technical education-board. Report of the special sub-committee on technical instruction for women. (Presented to the Technical education board, 7th December, 1903) [London] J. Truscott and son, 1903. 23 p. F°. Chairman, J. R. Macdonald.
143. ——— School board. Report (prepared under the direction of the late school board for London) with regard to industrial schools, 1870 to 1904. [London] Alexander & Shephard [1904] 56 p. plates. F°. London. County council.
144. Magnus, Philip. Industrial education in England. In Roberts. Education in the nineteenth century. New York, Macmillan, 1901. p. 140-70.

SCOTLAND.

145. Hatch, Henry D. Some observations on Scottish public educational provisions for promoting the life careers of pupils leaving school. Educational bi-monthly, 7: 203-21, February 1913. .
Shows the work of the juvenile branch of the Board of trade labour-exchange in the school board offices, Edinburgh.

CANADA.

146. Manitoba. Royal commission on technical education and industrial training. Report . . . August 26, 1910. Winnipeg, Manitoba, 1912. 78 p. illus. 8°. Many manufacturers, contractors, and skilled mechanics representing the various trades appeared before the Commission. "From whatever point of view the witnesses spoke, they were one in saying that the conditions to be met required the establishment of some well-considered scheme of vocational training based upon and accompanied by the essentials of a good general education." Contains a résumé of the aims and methods of industrial education in educational centers in the United States and Eastern Canada.
147. Ontario. Education department. Education for industrial purposes. A report by John Seath, superintendent of education for Ontario. Printed by order of the Legislative assembly of Ontario. Toronto, L. K. Cameron, 1911. 390 p. illus. 4°. Writer, in introduction, says that the present importance of the problem of industrial education is the result of three main causes: "1. The rivalry amongst the nations for commercial supremacy. 2. The imperfect provision for training skilled workmen. 3. The modern extension of the scope of education to include vocational as well as cultural training, administered and maintained wholly or largely at the public expense." Describes conditions in Ontario, England, Scotland, France, Switzerland, Germany and United States. See also National association of education officers. Education in relation to industry. A report on technical, trade, applied art, manual training, domestic, commercial, and public schools in Canada and the United States. By the following commission on behalf of the National association of education officers: W. P. Donald, J. B. Johnson, J. E. Piekles, Percival Sharp. Leeds, Glasgow and Belfast, E. J. Arnold & son [1912] ix, 187 p. 8°. This representative commission of English chief education officers visited Canada and the United States in the summer of 1911, to investigate the relationship existing between the educational institutions and the industrial and commercial occupations of the people. A stay of several days was made in turn in Quebec, Montreal, Ottawa, Toronto, Detroit, Buffalo, Philadelphia, New York, and Boston, and a short visit was paid by one of the members to Chicago and St. Louis.

NEW SOUTH WALES.

148. **New South Wales. Commission on primary, secondary, technical, and other branches of education.** Report of the commissioners on agricultural, commercial, industrial, and other forms of technical education . . . Sydney, William A. Gullick, government printer, 1905. 853 p. illus. F°.

A voluminous report, describing conditions in New South Wales, Europe and America.
 "The aim of this report is to disclose the state of trade, commercial, agricultural, technical and industrial education generally, both in its lower and higher forms, and the state of the relation of these to the development of a state university. . . . Throughout, the commissioners have attacked their task from what may be called the comparative standpoint."

GERMANY.

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150. **Blondel, Georges.** L'éducation économique du peuple allemand. 2. ed. augm. Paris, L. Larose et L. Tenin, 1909. xxiv, 156 p. 12°

CONTENTS.—1. Evolution des idées en matière d'enseignement. 2. Les écoles industrielles. 3. Les écoles commerciales.—Les écoles de perfectionnement. 4. Les créations auxiliaires des écoles.

151. **Damm, Paul Friedrich.** Die technischen hochschulen Preussens. Berlin, E. S. Mittler und sohn, 1909. viii, 324 p. 4°.

152. **Great Britain. Foreign office.** Germany. Report on technical instruction in Germany: supplementary and miscellaneous. Presented to both houses of Parliament by command of His Majesty, March, 1905. London, Printed for H. M. Stationery office, by Harrison & sons, 1905. 78 p. 8°. (Parliament. Papers by command. Cd. 2237-11)

Report by Frederick Ross.

153. **Howard, Earl D.** The cause and extent of the recent industrial progress of Germany. Boston and New York, Houghton Mifflin co. [1907] xiii, 147 p. 8°. (Hart, Schaffner & Marx prize essays. 1)

Bibliography: p. [xi]-xiii.

In a chapter on industrial education stress is laid upon the intimate relation of school training to vocation. The character and extent of the general and industrial continuation schools are described.

Contains a résumé of industrial conditions in Germany before 1871; shows the remarkable progress made subsequent to that date. The relation of school training to the intended vocation is treated.

154. **Lexis, W. H. B. A.** vi. Technical high schools. vii. High schools for special subject. viii. Middle and lower professional schools. In his General view of the history and organization of public education in the German empire; tr. by G. J. Tanson. Berlin, A. Asher & co., 1904. p. 114-82.

155. ——— Das technische unterrichtswesen. Berlin, A. Asher & co., 1904. 3 parts. 8°. (Das unterrichtswesen im deutschen reich. Band 4)

CONTENTS.—1. teil. Die technischen hochschulen. 2. teil. Die hochschulen für besondere fachgebiete. 3. teil. Der mittlere und niedere fachunterricht.

156. **Maennel, Bruno.** The auxiliary schools of Germany. Six lectures . . . Trans. by Fletcher B. Dresslar. Washington, Government printing office, 1907. 159 p. 8°. (U. S. Bureau of education. Bulletin no. 3, 1907)

Bibliography: p. 125-31.

The original work is titled "Vom hilfeschulwesen: Sechs vorträge von Dr. B. Maennel, rektor. Druck und verlag von B. G. Teubner in Leipzig, 1903." 140 p. 8°. It forms the 78d volume of the series, "Aus natur und geisteswelt: Sammlung wissenschaftlich-gemeinverständlicher darstellungen." The work is dedicated to W. Rein, Ph. D., Litt. D., professor of pedagogy in the University of Jena.

157. **Massachusetts. Commission on industrial education.** Industrial continuation schools for gardeners' apprentices, Munich. Boston, Wright & Potter printing co., state printers, 1907. 6 p. 8°. (*Its Bulletin* no. 6)
 Gives history of the origin of the school, plan of organization, statistics, etc. The instruction covers the whole business of the gardener, including industrial arithmetic and bookkeeping, civics, botany, reading, and drawing.
158. ——— Industrial continuation schools for machinists' apprentices, Munich. Boston, Wright & Potter printing co., state printers, 1907. 12 p. 8°. (*Its Bulletin* no. 3)
 The instruction in physics and machinery, as well as in materials and shop work, is given by a skilled machinist, the remaining instruction is undertaken by teachers of the common and continuation schools.
159. ——— Industrial continuation schools for mechanics' apprentices, Munich. Boston, Wright & Potter printing co., state printers, 1907. 15 p. 8°. (*Its Bulletin* no. 4)
 Apprentices, who during their four years of required attendance on the school have not done well, may be required, upon the solicitation of their master or of the school, to attend all or part of the instruction in any one class.
160. **Meyer, Ernest C.** Germany's work in the field of trade teaching. *In* National society for the promotion of industrial education. Proceedings [1909]. New York, 1910. p. 156-63.
161. ——— Industrial education and industrial conditions in Germany. Washington, Government printing office, 1905. 323 p. 8°. (U. S. Department of commerce and labor. Bureau of statistics. Special consular reports. v. 33)
 Bibliography: p. 145-47.
 An elaborate and exhaustive study of the subject. The appendices contain descriptions of schools in France; Zittau, Germany; Japan and London.
162. **Monaghan, J. C.** Industrial education in Germany. *In* New York (State) University convocation, 1900. Albany, University of the state of New York, 1900. p. 187-208. (Regents bulletin, no. 51, October 1900)
 Discussion: p. 208-12.
163. **Roman, Frederick W.** Control of the industrial schools of Germany. *Elementary school teacher*, 13: 269-73, February 1913.
 Owing to the dual school organization in Prussia, there has been a conflict of interests between the clerical party and those interested in industrial education. The clericals want "a guaranty that one hour per week shall be given over to their hands for religious instruction. The other party claims that religious teaching has no place in a trade school. As it is now, only the districts or communes can make attendance compulsory. The result is that for the most part Prussia has only voluntary trade-school attendance."
 The author says that two public-school systems in the same city create jealousy. The interests of the people are divided; a feeling of class division in society exists, thus undermining democracy. Munich leads all German cities in its trade-school development, because it has a united school system. Describes conditions in the states of Wurtemberg and Baden, which were the first to develop industrial schools.
164. ——— Die deutschen gewerblichen und kaufmännischen fortbildungs- und fachschulen und die industriellen, kommerziellen schulen in den Vereinigten Staaten von Nord-Amerika. Ein vergleich. Leipzig, Duncker & Humboldt, 1910. x, 214 p. 8°.
 A comparison between German continuation schools and industrial schools in the United States.
165. **Snowden, Albert A.** The industrial improvement schools of Wurtemberg, together with a brief description of the other industrial schools of the kingdom . . . *Teachers college record*, 8: 1-79, November 1907.
 Contains: 1. The place of vocational training in the kingdom, p. 1-31. 2. The rise of vocational schools, p. 23-34. 3. The reorganization of the industrial improvement schools, p. 34-43. 4. The industrial school of Stuttgart, and the commercial schools, p. 43-57. 5. Other industrial schools, and the Central bureau for industry and commerce, p. 57-72.
 A résumé of the economic conditions in Wurtemberg, one of the smaller kingdoms of the German empire. Records the development of the system of industrial schools and what they have done in up-building the state.

166. **United States. Department of commerce and labor. Bureau of statistics.** Industrial education and industrial conditions in Germany. Washington, Government printing office, 1905. 323 p. illus. 8°. (Special consular reports. v. 33)
Industrial education: p. 5-147.
A comprehensive survey of the subject. Contains a study of the administration of industrial education. Describes the various schools, methods of instruction, curricula, and the attitude of the people and government toward industrial education in general. For discussion of continuation schools, see p. 145-47.

FRANCE.

167. **Astier, P. and Cuminal, T.** L'enseignement technique, industriel et commercial en France et à l'étranger. Paris, 1909.
168. **Le Blanc, René.** L'enseignement professionnel en France au début du xx^e siècle. Paris, E. Cornely et cie., 1905. 338 p. 12°.
169. ——— La réforme des écoles primaires supérieures. Paris, Librairie Larousse [1907] 216 p. illus. 8°.
"Enseignement technique primaire, agricole, industriel, commercial, maritime, ménager."
170. **Paquier, J. B.** L'enseignement professionnel en France; son histoire.— Ses différentes formes, ses résultats. Paris, A. Colin, 1909. 342 p. 12°.

BELGIUM.

171. **Belgium. Ministère de l'industrie et du travail.** Rapport général sur la situation de l'enseignement technique en Belgique . . . 1902-1910. Bruxelles, Office de publicité, J. Lebègue et cie. [etc] 1912. 2 v. 8°.
Volume I contains a résumé of industrial, commercial, and domestic education in Belgium, followed by elaborate presentations of each subject. Volume II gives statistical details regarding courses in commerce and languages; industrial arts schools; apprenticeship, etc.
172. ——— Rapport sur la situation de l'enseignement technique en Belgique, 1897-1901. Bruxelles, Lebègue et cie. [etc] 1903. 2 v. 8°.
173. **Carton de Wiart, Henry.** L'enseignement pour la vie et l'introduction d'un quatrième degré d'études dans l'instruction primaires. Conférence donnée à l'École supérieure commerciale et consulaire à Mons le 15 mai 1911. Bruxelles, Impr. "La Rapide," 1911. 22 p. 8°.

ITALY.

174. **United States. Commissioner of labor.** Trade and technical education in Italy. In his 17th annual report, 1902. Washington, 1902. p. 1169-1212.

RUSSIA.

175. **Baker, James.** [Technical education] in Russian Poland. In his Report on technical and commercial education in East Prussia, Poland, Galicia, Silesia, and Bohemia. London, Wyman and sons, 1900. p. 22-28.
176. **Great Britain. Board of education.** [Technical and industrial education in Russia] In its Education in Russia. London, Wyman and sons, 1909. p. 136-39, 200-204, 460-506. (Special reports on educational subjects. v. 23)

LATIN AMERICA.

177. **Brandon, Edgar Ewing.** Industrial education [in Latin America] In his Latin-American universities and special schools. Washington, Government printing office, 1912. p. 115-25. 8°. (U. S. Bureau of education. Bulletin no. 30, 1912)

V. ASSOCIATIONS, COMMITTEES, AND COMMISSIONS.

ASSOCIATIONS AND COMMITTEES.

178. **American academy of political and social science, Philadelphia.** Industrial education. Philadelphia, American academy of political and social science, 1909. iii, 224 p. 4°. (The annals of the American academy of political and social science. vol. XXXIII, no. 1)
- CONTENTS.—Relation of industrial education to national progress [by] B. T. Washington.—The work of the National society for the promotion of industrial education [by] C. D. Wright.—Vocational training and trade teaching in the public schools [by] J. P. Haney.—Elementary trade teaching [by] C. H. Morse.—The Secondary industrial school of Columbus, Georgia [by] C. B. Gibson.—Partial time trade schools [by] H. Schneidg.—Public evening schools of trades [by] C. F. Warner.—The short course trade school [by] J. E. G. Yalden.—The Milwaukee school of trades [by] C. F. Perry.—The Philadelphia trades school [by] W. C. Ash.—The Manila trade school [by] J. J. Eaton.—Technical education at the Polytechnic institute, Brooklyn [by] F. W. Atkinson.—The work of the Pennsylvania museum and school of industrial art [by] L. W. Miller.—The Berean school of Philadelphia and the industrial efficiency of the negro [by] M. Anderson.—The industrial training of women [by] Florence M. Marshall.—The relative value and cost of various trades in a girls' trade school [by] Mary S. Woodman.—The apprenticeship system of the General electric company at West Lynn, Massachusetts [by] M. W. Alexander.—The John Wanamaker commercial institute—a store school [by] J. Wanamaker.—Trade teaching in the boot and shoe industry [by] A. D. Dean.—The apprentice system on the New York central lines [by] C. W. Cross.—Apprenticeship system at the Baldwin locomotive works, Philadelphia [by] N. W. Sample.—Trade teaching under the auspices of the Typographical union [by] W. B. Prescott.—The position of labor unions regarding industrial education [by] J. Golden.—Book Department.
179. **American foundrymen's association. Committee on industrial education.** Report . . . Toronto convention, June 8-12, 1908 . . . [n. p.] 1908. 7 p. 8°.
- P. Kreuzpointner, chairman.
- Summarizes the conclusions of the Committee under eight heads. Says: ". . . Industrial education and trade training must not only consider the mechanical and technical necessities of the mechanic, but also the culture and moral aesthetic side of life of the man and citizen.
- "That manual training, as now conducted, is too exclusively devoted to the acquisition of manual dexterity, but if broadened and deepened and made more technical by the addition of suitable subjects, it can be made an excellent foundation for industrial education, and become a preparation for trade training." Recommends a system of specific trade schools, the burden of conducting them being equally divided between the community and the state."
180. ——— Report . . . Cincinnati convention, 1909. [n. p. 1909] 12 p. 8°.
- P. Kreuzpointner, chairman.
- Sums up opinions of other organizations. Discusses industrial education as a social force, etc.
181. ——— Report . . . 1911. [n. p. 1911] 11 p. 8°.
- P. Kreuzpointner, chairman.
- Discusses the value of continuation schools upon the Cincinnati and Boston plan. Declares that for the present at least such schools are preferable to the more expensive trade schools.
182. ——— Report . . . 1912. [n. p. 1912] 13 p. 8°.
- P. Kreuzpointner, chairman.
- Reports a growing demand "for shop apprenticeship schools, continuation schools, and for a system of state or nationally subsidized industrial schools, leaving to local effort the adjustment of these schools to local conditions." Discusses the Cincinnati continuation schools, etc.
183. **Brooklyn teachers' association.** Report of sub-committee on school incentives. In its Report of the President, 1908-9. Brooklyn, N. Y., 1909. p. 25-37.
- "The utmost development of the capabilities of every individual child means more in the aggregate to the national wealth than does the proper development of our material resources."
184. **Council of supervisors of manual arts.** Year-book, 1907. Seventh annual meeting, New York, 7-8, February 1908. 168 p. 8°.
- Contains: 1. Mabel B. Soper—Constructive work in town schools without special equipment. p. 13-19. 2. C. L. Boone—Centers of interest in handwork, p. 20-26. 3. C. A. Bennett—The relationship between drawing and the other manual arts, p. 27-31. 4. W. B. Anthony—The development of school handicraft, p. 32-42. 5. Walter Sargent—The relation of public schools to

- museums of fine arts, p. 49-50. 6. M. W. Murray—Woodworking for country schools, p. 51-56. 7. J. P. Haney—The adaptation of pattern to material, p. 57-76. 8. F. E. Mathewson—A shop problem in design, p. 77-80. 9. T. M. Dillaway—Creating ideals in furniture design, p. 81-87. 10. A. W. Garritt—Toy-making as a form of constructive work, p. 88-96. 11. Julia C. Cramina—Some phases of bookbinding in the elementary schools, p. 97-122. 12. Amy R. Whitler—The intermediate grades, p. 133-38.
185. **Eastern art and manual training teachers' association.** Proceedings. First annual convention, Boston, May 4-7, 1910. Second annual convention, Philadelphia, May 11-13, 1911. [Newark, N. J., Press of Baker printing co., 1912] 213 p. 8°.
186. **Eastern manual training association.** Proceedings, fifteenth annual convention, Washington, D. C., April 13-15, 1908. [Springfield, Mass., The F. A. Bassette company] 1908. 122 p. 8°.
Contains: 1. J. C. Park: Fundamental principles of manual training, p. 15-18. Discussion, p. 19-21. 2. W. J. De Catur: The content of the course of study for the grades and high school, p. 22-26. 3. G. E. Myers: Correlation based on social and individual needs, p. 26-31. Discussion, p. 32-34. 4. A. E. Dodd: Hand work training for the normal student, p. 42-48. 5. T. D. Sensor: The needs of rural schools, p. 55-61. 6. Mrs. Ada Williams: The social value of domestic science training, p. 77-80. 7. Sarah E. Bowers: Aims of domestic science in the elementary schools, p. 81-86.
187. **Indiana town and city superintendents' association.** Committee on manual, domestic and vocational training. Report. November meeting, 1908. [n. p., 1908.] 18 p. table. 12°.
Chairman, W. A. Jessup.
Bibliographies: p. 12, 17.
188. **National association of manufacturers of the United States of America.** Committee on industrial education. Report . . . Twelfth annual convention, New York City, May 20-22, 1907. Proceedings. p. 110-38.
Discusses the necessity for trade schools and the attitude of labor unions toward them. Describes some of the newer American technical schools.
189. ——— Report . . . Fourteenth annual meeting, New York, May 17-19, 1909. [n. p., 1909] 19 p. 8°. Caption title
Anthony Itiner, chairman.
States the attitude of the manufacturers toward the trade-unions. Quotes largely from other reports.
"Your committee has had correspondence with all the officers and managers of the principal industrial and trade schools throughout the country and they all agree with us that a much higher grade mechanic can be graduated from a trade school than can be produced through the apprenticeship system in the old way."
190. ——— Report . . . Sixteenth annual meeting, New York City, May 15-17, 1911. [n. p., 1911] 11 p. 8°. Caption title.
H. E. Miles, chairman.
The Association at this meeting passed a resolution favoring the establishment in every community of continuation schools for the benefit of children (14 to 18 years of age) engaged in the industries.
Attention was called by the committee to the fact that—"Almost all of the children who enter the industries enter at the age of 14. The working people of the country who wish their children to enter the industries take them out of school, knowing from experience that if they stay in school until 16 they will have passed the psychological time when industry beckons—will have acquired other tastes, and will never enter the industries. The American-born mechanic, then, is the boy who entered the shop at 14, grown up. Therefore, as good citizens and as employers, it is for us to give special consideration to the educational problem as it concerns children of 14 to 16."
191. ——— Industrial education, continuation and trade schools, apprenticeship, state and local control, pre-vocational courses in elementary schools. Report . . . Seventeenth annual convention, New York City, May 21, 1912. [n. p., 1912] 39 p. 8°. (No. 28) Cover title.
H. E. Miles, chairman.
Reiterates demand for continuation schools. Day classes for those in employment, and no loss of wages, these to be for children between 14 and 16 years of age. For those from 16 up, night work is permissible. "It is advisable that, as in Wisconsin, the development of industrial education be put into the hands of a special state board of industrial education."

192. **National child labor committee.** [Proceedings of the eighth annual conference held at Louisville, Ky., January 25-28, 1912] New York, National child labor committee, 1912. 223 p. 8°. (Child labor bulletin, vol. 1, no. 1)
 Contains: 1. E. O. Holland: Child labor and vocational work in the public schools, p. 16-23. 2. Helen T. Woolley: Child labor and vocational guidance, p. 24-37. 3. Alice P. Barrows: The dangers and possibilities of vocational guidance, p. 46-54. 4. W. H. Elson: Relation of industrial training to child labor, p. 55-65. 5. M. Edith Campbell: Economic value of education, p. 66-72. 6. R. K. Conant: The educational test for working children, p. 145-48.
193. **National education association of the United States. Department of manual training. Committee on the place of industries in public education.** Report . . . In its Journal of proceedings and addresses, 1910. Published by the Association, 1910. p. 652-59; 680-788.
 Jesse D. Burks, chairman.
 Contains: 1. Report of subcommittee on the place of industries in the elementary school, p. 690-710. 2. Report of subcommittee on intermediate industrial schools, p. 710-31. 3. Report of subcommittee on industrial and technical education in the secondary school, p. 731-66.
 A selected bibliography on industrial education, p. 766-73.
 Papers: p. 690-80; 774-83 (with discussion).
 Reprinted as separate. The Association, 1910. 123 p. 8°.
 Prof. F. T. Carleton, speaking of the industrial factor in social progress, says: "In the process of adjustment involved in passing from small-scale and unsystematic to large-scale and routinized industry, social and political institutions, including the public school system, must undergo fundamental modifications." He declares that a science of education must rest on "the basis of social and economic progress and demands. Until this basic truth is clearly recognized no science of education can be formulated."
194. **Department of manual training and art education.** Journal of proceedings and addresses, 1912. p. 897-1000.
 Contains: 1. C. B. Connelley: Citizenship in industrial education, p. 899-907. 2. W. T. Bawden: The relation of the elementary school to subsequent industrial education, p. 907-12. 3. C. A. McMurry: The significance of the industrial arts in the schools, p. 918-21. 4. F. M. Leavitt: Some sociological phases of the movement for industrial education, p. 921-26. 5. F. D. Crawshaw: Needed changes in manual arts, p. 932-42. 6. C. R. Dooley: The manufacturers' viewpoint of industrial education, p. 952-54. 7. J. A. Pratt: Modern apprenticeship training, p. 955-58.
195. **National council of education. Committee on industrial education in schools for rural communities.** Report . . . July 1905. Published by the Association, 1905. 97 p. 8°.
 L. D. Harvey, chairman.
 An argument for the establishment of industrial education as a distinct feature of work in schools adapted to the requirements of rural communities. Discusses two types of elementary schools, the one-teacher district school, and the consolidated district school having no high school work. Four types of secondary schools adapted to rural communities considered: the consolidated school presenting one or more years of high school work; the rural high school of the county, township, etc., character; the village high school with a large percentage of pupils from the country; the agricultural high school, industrial and academic. Courses of study outlined.
 Appendices contain studies of particular schools in Wisconsin and Minnesota. W. M. Hays contributes a paper, prepared by request of the committee, on "Industrial course in the consolidated rural school, the agricultural high school, and the agricultural college articulated into a unified scheme."
196. **Supplementary report . . . July 8, 1907.** In its Journal of proceedings and addresses, 1907. p. 409-54. illus.
 L. D. Harvey, chairman.
 A more extended discussion than the first report. Summarizes the purposes and values of industrial education for the children in rural communities, etc. Describes three typical schools in New York State, Illinois, and Missouri; scope and character of preparation of teachers of industrial subjects in the different kinds of schools investigated, and the conditions under which this preparation can be secured in this country.
197. **Preliminary report . . . to be discussed Monday morning, June 29, 1908.** [Chicago, Printed by the University of Chicago press, 1908] 64 p. 8°. Advance print from volume of Proceedings, Cleveland meeting.
 Contents.—Historical statement.—Waterford high school, Waterford, Pennsylvania [by] D. J. Crosby.—Cecil County agricultural school, Calvert, Maryland [by] D. J. Crosby.—The John Swansy consolidated country school in Magnolia township, Putnam County, Illinois [by] O. J. Kern.—The congressional district agricultural schools of Georgia [by] O. J. Kern.

198. **National metal trades association.** Synopsis of proceedings of the twelfth annual convention, April 13-14, 1910, New York City. [n. p. 1910]—168 p. 8°. Contains: 1. W. B. Hunter: The Fitchburg plan of industrial education, p. 25-34. 2. Herman Schneider: Growth of co-operative system, p. 32-35. 3. F. B. Dyer: A plea for continuation schools, p. 36-41. 4. Report of Committee on industrial education, p. 42-45. 5. C. A. Bookwalter: Winona technical institute, p. 56-61. 6. J. H. Renshaw: Cincinnati's continuation school, p. 91-93. 7. D. S. Kimball: Industrial education, p. 161-64.
199. **National society for the promotion of industrial education.** Proceedings of first annual meeting, Chicago, January 23-25, 1908. Part 1. New York City, National society for the promotion of industrial education, 1908. 68 p. 8°. (Bulletin no. 5)
Contains: 1. C. W. Elliot—Industrial education as an essential factor in our national prosperity, p. 9-14. 2. J. W. Van Cleave—Industrial education from the standpoint of the manufacturer, p. 15-21. 3. H. S. Fritchett—The aims of the national society for the promotion of industrial education, p. 22-29. 4. C. D. Wright—The apprenticeship system as a means of promoting industrial efficiency, p. 30-33. 5. W. R. Warner—The apprenticeship system of to-day, p. 34-39. 6. W. B. Prescott—The value of a thorough apprenticeship to the wage earner, p. 40-50. 7. J. F. Deems—Trade instruction in large establishments, p. 51-55. 8. L. W. Miller—The necessity for apprenticeship, p. 56-60.
200. ——— Part 2. New York City, National society for the promotion of industrial education, 1908. 104 p. 8°. (Bulletin no. 6)
Contains: 1. C. F. Perry—The trade school as a part of the public-school system, p. 6-19. 2. M. P. Higgins—The type of the trade school to meet American needs, p. 20-23. 3. Graham Taylor—The effect of trade schools on the social interests of the people, p. 26-30. 4. Anna G. Spencer—The social value of industrial education for girls, p. 39-45. 5. C. W. Ames—Necessity for many kinds of trade schools, p. 46-48. 6. Luke Grant—The wage earner's attitude toward industrial education, p. 49-55. 7. E. G. Hirsch—The moral aspect of industrial education, p. 56-60. 8. L. D. Harvey and others—The true ideal of a public-school system that aims to benefit all, p. 61-75.
201. ——— Proceedings of second annual meeting, Atlanta, Ga., Nov. 19-21, 1908. New York, National society for the promotion of industrial education, 1909. 151 p. 8°. (Bulletin no. 9)
Contains: 1. T. C. Search—The founding of the school of industrial art in Philadelphia, p. 16-36. 2. E. E. Brown—Unifying influence of industrial art, p. 36-41. 3. C. D. Wright—Industrial education as an essential factor in our national prosperity, p. 42-49. 4. E. P. Bullard, Jr.—Industrial training through the apprenticeship system, p. 51-63. 5. M. W. Alexander—An effective apprenticeship program, p. 63-70. 6. J. M. Shrigley—Organization and management of trade schools, p. 78-90. 7. Florence M. Marshall—How to conduct a trade school for girls, p. 90-100. 8. C. R. Davis—The Federal government and industrial education, p. 101-12. 9. Press Huddleston—The wage earner's benefit from an effective system of industrial education, p. 112-15. 10. Anna C. Hodges—Woman's work in industrial education, p. 116-22. 11. T. M. Ballet—The importance of industrial education in the public schools, p. 135-42.
202. ——— Proceedings of the third annual meeting, Milwaukee, Wis., December, 1909. New York, National society for the promotion of industrial education, 1910. 204 p. 8°. (Its Bulletin no. 10)
203. ——— Proceedings of the fourth annual convention, Boston, Massachusetts. Part I. Trade education for girls. Part II. Apprenticeship and corporation schools. Part III. Part time and evening schools. Part IV. The social significance of industrial education. New York, National society for the promotion of industrial education, 1911. 91 p. 8°. (Its Bulletin no. 13, pt. 1-4)
Contains: (Part 1) 1. Susan M. Kingsbury: The needle trades, p. 1-4. 2. D. F. Edwards: The department stores, p. 6-12. 3. L. W. Prince: What the schools can do to train girls for work in department stores, p. 12-16. 4. E. M. Howes: What schools can do to train for needle work, p. 17-20. 5. H. R. Hildreth: How the Manhattan trade school for girls meets trade demands, p. 20-26. 6. W. A. Hawkins: What more should the schools do to meet the demands, p. 26-28. 7. F. M. Marshall and C. A. Prosser: What more can schools do to meet the new requirements, p. 40-45, 47-51.
(Part 2) 1. M. W. Alexander: Apprenticeship and corporation schools, p. 53-56. 2. Tracy Lyon: How the Westinghouse company trains its apprentices, p. 57-61. 3. F. W. Thomas: Educating apprentices on the Santa Fe, p. 61-69. 4. S. F. Hubbard: A co-operative apprenticeship school, p. 70-74. 5. G. C. Cotton: A half-time system of apprentice instruction, p. 76-81.
(Part 3) 1. W. B. Hunter: The Fitchburg plan, p. 83-108. 2. A. L. Safford: The Beverly industrial school, p. 108-22. 3. F. B. Dyer: Industrial education in Cincinnati, p. 123-23. 4. C. A. Prosser: Massachusetts independent evening industrial schools, p. 129-42.

(Part 4) 1. J. P. Munroe: The social meaning of industrial education, p. 181-83. 2. T. N. Carver: The economic significance of industrial education, p. 183-87. 3. E. B. Butler: Industrial education and the community, p. 188-96. 4. Howell Cheney: The school and the shop from an employer's point of view, p. 196-206. 5. C. H. Winslow: Labor's demands on industrial education, p. 208-13.

A notable address of this session was that of Howell Cheney, who discussed the cause of the lack of progress in children when first entering industrial life, which he attributed to the unrelaxed nature of the school work which has gone before. He desired to know whether low-grade industrial work might not be made educational. He called attention to the fact that every machine process is the development of a hand process. He remarked that if children possessed some knowledge of these processes and some appreciation of the possibilities of high-grade machine work, even toil in the factory might be made relatively desirable.

204. ——— Proceedings of the fifth annual meeting, Cincinnati, Ohio, November 2-4, 1911. New York, National society for the promotion of industrial education, 1912. 239 p. 8°. (*Its Bulletin* no. 15)

Contains: 1. How shall the obligation to provide industrial education be met. The obligation of the employer [by] H. E. Miles, p. 29-37; The obligation of the employee [by] Frank Duffy, p. 38-48. 2. J. P. Munroe: President's address, p. 49-56. 3. Herman Schneider: Co-operative plan of the University of Cincinnati, p. 59-67. 4. P. A. Johnston: Vocational plans in the high school, p. 68-79. 5. J. H. Renshaw: The Cincinnati continuation school for apprentices, p. 80-95. 6. J. L. Shearer: The Ohio mechanics' institute, p. 96-103. 7. A. L. Williston: Evening trade and industrial schools, p. 105-8. 8. C. F. Cary: Part-time schools, p. 119-22. Discussion, p. 122-25. 9. David Sneddin: Report of Committee on national legislation, p. 126-34. 10. C. A. Prosser: The training of the factory worker through industrial education, p. 137-55. 11. E. G. Cooley: The argument for industrial education from the success of Germany, p. 178-92. 12. J. P. Frey: A trade union view of industrial education, p. 183-97. Discussion, p. 197-200. 13. Should trade schools for youth above 16 years of age be provided at public expense [by] J. P. Munroe; [by] C. G. Pearce, p. 204-18; [by] G. M. Forbes, 219-26.

The article on The Cincinnati continuation school for apprentices, by J. H. Renshaw, is illustrated with half-tone cuts, showing pupils at work. He says: "The continuation school is distinctively a creation of Cincinnati and is a copy of no other school in the world. . . . It differs from the German plan in that it uses no machine equipment. The school is based upon the principle that the productive power of a youth in a shop does not depend solely upon the hours he works, but that his *attitude toward his work* and his *intelligence in his work* are the determining features. To this end the manufacturers' organizations, the labor organizations, and the school authorities decided two and a half years ago to shorten the hours of labor without decreasing the pay. The working week of the boys was shortened one-half day and their weekly pay was maintained. The half day of rest from work was to be spent in a schoolroom under educational and cultural influences."

205. ——— [Report of the meeting held at Philadelphia, Pa., December 5, 6, and 7, 1912] *Journal of education*, 76: 683-87, December 26, 1912.

See also Vocational education, 2: 318-33, March 1913. Ably reviewed by William T. Bawden under the title of "Recent progress in the movement for vocational education."

"The most important piece of work," says Mr. Bawden, "accomplished at this convention and perhaps the most important that has yet been accomplished in the movement as a whole, is the formulation of a statement of principles and policies that should underlie legislation for vocational education."

206. ——— A symposium on industrial education. Prepared by James P. Haney. New York City, National society for the promotion of industrial education, 1907. 8°. (*Its Bulletin* no. 3)

Opinions of employers and employees regarding industrial education. A questionnaire was sent to 300 manufacturers and representatives of organized labor. The replies received are highly interesting.

207. ——— Industrial training for women. Prepared by Florence M. Marshall. New York City, National society for the promotion of industrial education, 1907. 8°. (*Its Bulletin* no. 4)

Contents.—A study of the changed position of women in industry; Opportunities of women in industry; What trade training is accomplishing; Suggested schemes for industrial training.

208. ——— Education of workers in the shoe industry. Prepared by Arthur D. Dean. New York City, National society for the promotion of industrial education, 1908. (*Its Bulletin* no. 8)

209. ——— Industrial education . . . Communication from C. R. Richards, president of the National society for the promotion of industrial education, transmitting reports by a committee of the society on the subject, together with resolutions urging upon Congress an appropriation to enable the Department of education to develop schools for industrial training . . . [Washington, Government printing office, 1910] 8 p. 8°. ([United States] 61st Cong., 2d sess. Senate. Doc. 516)
210. ——— Legislation upon industrial education in the United States, prepared by Edward C. Elliott and C. A. Prosser. New York, National society for the promotion of industrial education, 1910. 76 p. 8°. (*Its Bulletin*, no. 12)
Out of print.
Part 1 gives the general legislation regarding industrial education in public elementary and secondary schools. Part 2 the terminology in legislation, trend of legislation, state commissions, etc. Part 3 is an analysis of the legislation for state industrial and trade educational systems. Part 4 an analysis of the legislation providing for manual training.
211. ——— Report of the Committee of ten on the relation of industrial training to the general system of education in the United States. New York City, National society for the promotion of industrial education [1910] 16 p. 8°. Includes Preliminary report of the Committee of ten, H. S. Pritchett, chairman, submitted at the second annual meeting of the Society, Nov. 19-21, 1908, and Final report, submitted at the third annual meeting, Dec. 2-4, 1909.
212. ——— A descriptive list of trade and industrial schools in the United States. Prepared by Edward H. Reizner. New York City, National society for the promotion of industrial education, August 1910. 128 p. 8°. (*Its Bulletin*, no. 11)
An effort "to bring together in brief form the main facts relating to the organization, administration, methods of instruction and courses of study of trade and industrial schools in the United States."
213. ——— Circular of information; constitution, state branches, officers and members. New York City, National society for the promotion of industrial education, 1908. 44 p. 8°. (*Its Bulletin*, no. 7)
214. ——— Proceedings of the organization meetings. [New York, C. S. Nathan, 1907] 44 p. 8°. (*Its Bulletin*, no. 1)
Out of print.
Contains addresses by N. M. Butler, A. Mosely, Jane Addams, F. A. Vanderlip, etc.
215. ——— New York State Branch. Proceedings of the second annual convention, held at Rochester, N. Y., November 19, 1909. Brooklyn, N. Y., Guide printing and publishing company, 1910. 98 p. 8°. Contains: 1. J. F. McElroy: President's address, p. 7-8. 2. B. R. Rhees: The national importance of industrial education, p. 9-17. 3. Mary S. Woolman: Industrial education for girls, p. 18-23. 4. E. G. Miner: Industrial education from the point of view of the manufacturer, p. 24-33. 5. P. M. Strayer: Industrial education from the point of view of the workman, p. 34-47. 6. Charles De Garmo: Industrial education in relation to race development, p. 48-57. 7. G. M. Forbes: The factory school of Rochester, p. 58-67. 8. A. D. Dean: Preparatory trade schools in other parts of New York State, p. 68-71. 9. C. W. Cross: The apprenticeship system of the New York Central lines, p. 72-86. 10. G. H. Vose: Industrial schools in Beverly, Mass., p. 91-98.
216. ——— The trade continuation schools of Munich. A lecture by Dr. Georg Kerschensteiner, Director of education, Munich, Bavaria, and the Translation of the curricula of selected schools as given in the official report for 1910. New York City, National society for the promotion of industrial education, 1911. 8°. (*Its Bulletin*, no. 14)
The author says: "The essential features of the compulsory trade continuation schools of Munich are thus summed up in these four points: (a) practical work is made the center of interest; (b) the active sympathy and co-operation of employers on the one hand, and of trade societies and guilds on the other, is enlisted on behalf of the schools; (c) the time of instruction is sufficient in amount and excellent in quality; (d) every opportunity that presents itself for training the citizen is utilized."
In addition to the above class of schools, there are in Munich 12 local continuation schools in which boys are enrolled "who are not yet apprentices, but who are engaged in casual and unskilled labor, or who can not be provided with a special continuation school because these numbers are the few."

217. **National society for the study of education.**¹ Sixth year-book. Part I. Vocational studies for college entrance. Chicago, University of Chicago press, 1907. 79 p. 8°.
Discusses the purpose of vocational studies; the educational values and relationship of the value developed in vocational studies to the standards appropriate for college admission.
218. ——— Eleventh year-book. Part I. Industrial education: Typical experiments described and interpreted. Part II. Agricultural education in secondary schools. Chicago, University of Chicago press [1912] 2 v. 124, 113 p. 8°.
Contains interesting papers on the vocational high school; the part-time co-operative plan of industrial education; vocational guidance; classification of plans for industrial training, etc.
Part I gives various types of vocational schools. Chapter I presents a classification of plans for industrial training, by Frank M. Leavitt. Each chapter of the year-book is by a different author and describes for the most part the given-type of school with which the author is connected. Comparison is made with other institutions of similar character, and conclusions drawn "as to the relation of the particular type of school to the solution of the industrial education problem."
219. **New York City. Committee on vocational schools and industrial training.** Report.
Chairman, Frederick R. Coudert.
220. **North Dakota educational association. Committee of seven.** On adjustment of educational work in North Dakota with reference to the needs of the times. Preliminary report. *In its Proceedings, 1908-1909.* p. 35-51.
Chairman, C. C. Schmidt.
Reprinted. The association [1908] 21 p.
Report. *In its Proceedings, 1909.* p. 43-105.
Discussion: p. 105-11.
221. **Society for the promotion of engineering education. Committee on industrial education.** Report . . . [n. p., 1908] p. 363-405. 8°
Reprinted from its Proceedings, 16.
Prepared by Arthur L. Williston, chairman.
222. ——— American industrial education; what shall it be? Preliminary report of a committee of the society. *In Proceedings of the New York meeting, July 2-3, 1900.* p. 1-71.
223. **Utah educational association. Committee on industrial education in public schools.** Report. *Utah educational review, 4:* 34-36, February 1911.
Chairman, John A. Widstoe.
224. **Western drawing and manual training association. Proceedings . . .** Chicago. Twelfth annual report, 1905. [Chicago, 1905] 206 p. 8°.
Contains constitution of the association. Name was originally Western drawing teachers' association, but changed at the above meeting. Papers by F. D. Cranshaw, C. S. Hammock, and others.
225. ——— Proceedings . . . Chicago. Thirteenth annual report, 1906. [Peoria, Ill., Press of J. W. Franks & sons, 1906] 117 p. 8°.
Contains report of Committee on handicrafts in the public schools, p. 69-87. Elizabeth E. Langley, chairman. Data based upon replies received from a questionnaire sent to public schools in various parts of the country. Report represent all the states except North Dakota, Arizona, Oklahoma, South Carolina, Mississippi, and Louisiana.
226. ——— Proceedings . . . Indianapolis [Ind.]. Fifteenth annual report, 1908. 104 p. 8°.
Contains: 1. C. A. Bennett—A cycle of development, p. 22-27. 2. W. O. Thompson—The place of manual arts in the school, p. 28-33. 3. W. L. Bryan—Moral education through art and manual training, p. 34. 4. Mary S. Snow—The place of domestic economy in the curriculum, p. 40-44. 5. Elizabeth Rinehart—The relation of domestic science to the future welfare of society, p. 45-49. 6. J. F. Barker—Manual training in high schools, p. 58-61. 7. E. G. Allen—The place of woodworking in the high school, p. 62-65. 8. F. L. Burnham—The need of the power to visualize in the manual arts, p. 66-72. 9. Report of committee on college entrance credits, p. 73-79.

¹ Originally the Herbart society; name changed to the National society for the scientific study of education, and finally to the present title.

227. ——— Proceedings . . . Saint Louis. Sixteenth annual report, 1909. [Bloomington, Ill., Pantagraph ptg. and sta. co., 1910] 208 p. 8°.
 Contains: 1. E. D. Day—The socio-economic value of domestic art in the education of future home makers, p. 87-92. 2. C. M. Gibbs—Preparation necessary for a teacher of domestic arts, p. 93-100. 3. K. F. Steiger—The place of the study of clothing in the life of a girl, p. 101-3. 4. C. M. Gibbs—Household arts in the grades, p. 105-8. 5. C. M. Woodward—History and influence of the manual training movement, p. 122-30. 6. C. F. Perry—Trade teaching in the public schools, p. 131-42. 7. Florence Ellis—The manual arts in the primary grades, p. 158-59.
228. ——— Proceedings . . . Minneapolis. Seventeenth annual report, 1910. [Oak Park, Ill., Oak leaves company, 1910] 239 p. 8°.
 Contains: 1. H. N. Winchell—Problems involved in the introduction of the industrial arts in the elementary schools, p. 36-42. 2. L. A. Bacon—Correlation of art and manual training in grade schools, p. 43-44. 3. H. Wood—The correlation of art and manual training in high schools, p. 45-51. 4. O. L. McMurry—Bookbinding in grade schools, p. 52-55. 5. W. Sargent—Fine and industrial art in public education, p. 56-62. 6. R. W. Selvidge—Industrial education from the viewpoint of organized labor, p. 63-74. 7. E. M. Church—Relative values of subjects in school courses of study, p. 76-80. 8. A. F. Payne—The correlation of metal work and design in the grammar and high school, p. 90-94. 9. D. Upton—Is manual training worth while?, p. 95-100. 10. Mary S. Snow—Correlation of household arts with other subjects of the curriculum, p. 107-10. 11. A. P. Norton—Domestic science in public schools in relation to the pure food law, p. 111-15. 12. C. A. Bennett—Some suggestive features of industrial education in Germany, p. 147-56.
229. Women's educational and industrial union, Boston, Mass. Thirty-third annual report . . . for the year 1910-1911. Boston, Mass., 1912. 76 p. 8°.

COMMISSIONS.

230. California. Commission on industrial education. A tentative industrial education bill. In Sierra educational news, 6: 26-30. October 1910.
231. Connecticut. Commission on trade schools. Appointed, 1903. Report . . . concerning trade schools. Hartford, Hartford press, 1907. 10 p. 8°.
232. Indiana. Commission on industrial and agricultural education. Report . . . December, 1912. Indianapolis, Wm. B. Burford, contractor for state printing and binding, 1912. 133 p. 8°.
 Will A. Yarling, chairman.
 Recommendations include 17 items concerning "the establishment of vocational schools, the machinery of administration, compulsory attendance, teacher training, and related points." Reviewed in Vocational education, 2: 251-55, January 1913.
 Appendices contain a digest of laws relating to industrial education, also drafts of bills proposed—vocational education in industries, agriculture and domestic science; apprenticeship; and certification of the compulsory attendance laws. Views of organized labor and manufactures given.
233. Maine. Committee on industrial education. Report of the Committee on industrial education, 1910. Augusta, Kennebec journal print, 1910. 72 p. fold. diagr. 8°.
 Contains report and recommendations of special committee created by the legislature of 1909. To be found also as chapter I in annual report of the state superintendent for 1910.
234. Maryland. Commission on industrial education. Report of the Commission to make inquiry and report to the legislature of Maryland respecting the subject of industrial education, 1908-1910. Baltimore, G. W. King printing co., state printers [1910] 121 p. illus. 8°.
 Discusses among other things the practicability of introducing industrial instruction, or extending it, in the schools of Maryland, city and rural, with forms of industrial education for colored children. Gives replies to circular letter addressed to citizens of Maryland and others.
235. Massachusetts. Commission on industrial and technical education. Report . . . 1906. Boston, Wright & Potter printing co., state printers, 1906. 196 p. 8°. ([General court] Senate no. 349).
 Carroll D. Wright, chairman.
 Reprinted by Columbia university, Teachers college. Educational reprints, no. 1.
 Outlines system of education. Gives the status of vocational education in Massachusetts. Presents report of the sub-committee on the Relation of children to the industries. Statistics gathered

- during the investigation. Industrial education in Europe. Submits for consideration of the legislature the draft of a bill providing for industrial and technical schools, with the recommendation that a second commission be appointed to extend the investigation of methods of industrial training and of local requirements, and advising and assisting in the introduction of industrial instruction by means of a system of independent schools. With some modifications the recommended legislation was adopted by the State. The new commission was appointed August 31, 1906.
236. ——— [First annual] report . . . March 1907. Boston, Wright & Potter printing co., state printers, 1907. 71 p. 8°. (Public document no. 76)
Paul H. Hanus, chairman.
Advocates co-operation with local authorities in the founding of schools or technical and industrial education. Shows that considerable progress had been accomplished in the matter of establishing in several cities of the state of the industrial schools contemplated by the law.
237. ——— Second annual report . . . January 1908. Boston, Wright & Potter printing co., state printers, 1908. 682 p. 8°. (Public document no. 76)
Paul H. Hanus, chairman.
A notable report. Evening industrial schools established by the commission in five cities. Requests for others under advisement. Nearly 1,000 pupils in attendance upon these schools. In reviewing the work accomplished during the year, the Commission says that "during the past year the interest in industrial education steadily increased among all classes and in all directions. Both employers and employed are meeting on the common ground of mutual interests." The report gives voluminous data on industrial education in foreign countries; the relations of European industrial schools to labor, etc. Describes special schools in the United States; and the attitude of the manufacturing interests in 20 Massachusetts cities towards industrial education. Fully illustrated.
238. ——— Third annual report . . . January 1909. Boston, Wright & Potter printing co., state printers, 1909. 186 p. 8°. (Public document no. 76)
Day industrial schools established in 2 cities and evening industrial in 11 cities of the state. By an act of the legislature, approved May 28, 1909, the commission on industrial education was abolished, likewise the existing state board of education. The powers and duties of each body were given to a new board of education, created in conformity with the provisions of the act.
239. ——— Industrial continuation schools for jewelers' and gold and silver workers' apprentices, Munich. Boston, Wright & Potter, 1907. 12 p. 8°. (Bulletin no. 1)
240. ——— Industrial continuation schools for male commercial employees, Munich. Boston, Wright & Potter, 1907. 12 p. 8°. (Bulletin no. 2)
241. ——— Industrial continuation schools for machinists' apprentices, Munich. Boston, Wright & Potter, 1907. 12 p. 8°. (Bulletin no. 3)
242. ——— Industrial continuation schools for mechanics' apprentices, Munich. Boston, Wright & Potter, 1907. 15 p. 8°. (Bulletin no. 4)
243. ——— Industrial continuation schools for machinists' apprentices, Munich. Boston, Wright & Potter, 1907. 11 p. 8°. (Bulletin no. 5)
244. ——— Industrial continuation schools for gardeners' apprentices, Munich. Boston, Wright & Potter, 1907. 6 p. 8°. (Bulletin no. 6)
245. ——— The agricultural school. Boston, Wright & Potter, 1907. 11 p. 8°. (Bulletin no. 7)
246. ——— Industrial education, under state auspices, in Massachusetts. Boston, Wright & Potter, 1908. 13 p. 8°. (Bulletin no. 8)
247. ——— Some representative American industrial and manual training schools. Boston, Wright & Potter, 1908. 87 p. illus. 8°. (Bulletin no. 9)
248. ——— Report on the relations of European industrial schools to labor. By Charles H. Winslow. Boston, Wright & Potter, 1908. 22 p. 8°. (Bulletin no. 10)
249. ——— Report on the advisability of establishing one or more technical schools or industrial colleges . . . Boston, Wright & Potter, 1908. 38 p. 8°. (Bulletin no. 11)

250. **Michigan. State commission on industrial and agricultural education.** Report. Lansing, Published by the Commission, 1910. 96 p. tables. 8°. Chairman, Walter H. French. Appendix C—Authorities: p. 92-95.
251. **Mosely educational commission.** Report. London, Co-operative printing society, 1904. 400 p. 8°. Contains reports of 26 English educators who were brought to the United States in 1903 by Sir Alfred Mosely to investigate American methods of education. A number of papers treat directly of technical and industrial education; the attitude of the employer of labor and trade-unions. Comparisons drawn between conditions in England and this country.
252. **New Jersey. Commission on industrial education.** Report . . . 1908. Trenton, N. J., MacCrellish & Quigley, state printers, 1909. 177 p. 8°. Data obtained through correspondence and personal interviews with employers and workers everywhere in the state. Results of investigations show that the apprenticeship system has been virtually abandoned as a means of instructing the young in the various trades. There is "a lack of skilled and efficient workman, and this will be largely increased unless a better means of vocational training is found." Schools have not been able to offer vocational instruction. Fully 65 percent of the pupils leave school between the ages of 14 and 17, and without any idea as to what trade or vocation they should pursue. They drift into occupations, rather than choose those most suited to their abilities, the result being an arrested progress. The trades have become so specialized that there is but little opportunity for a novice to go beyond the narrow limits of the work to which he is assigned, unless he has supplementary training. Commission reported that trade schools are undesirable at present, being too expensive a form of education. "The average person leaves school early in life to go to work, and the necessity of earning his daily bread prevents him from attending a day trade school." Only a small percentage of the manufacturers of New Jersey favor partial-time day industrial schools. Recommends the passage of an act creating a commission on industrial education, to consist of five citizens, at least three of whom shall be engaged in industrial occupations. Commission to make and enforce rules and regulations for the employment of teachers in the industrial schools which may be established. Recommends establishing industrial schools in communities by boards of education, school committees, or like bodies. Appendix contains an excellent résumé of industrial education and manual training in America; and a paper on the money value of industrial education, giving among other data graphic statistics showing the average weekly earnings of graduates of the Newark technical school, a state institution of secondary grade.
253. ——— Report . . . 1910. Trenton, N. J., MacCrellish & Quigley, state printers, 1910. 7 p. 8°.
254. **Ohio. State commissioner of common schools.** Industrial education. In his Annual report, 1909. Springfield, Ohio, Springfield publishing company, state printers, 1910. p. 11-21.
255. **Rhode Island. Commissioner of public schools.** Special report, relating to industrial education . . . March 28, 1911. Providence, E. L. Freeman co., 1911. 102 p. 8°. Commissioner, Walter E. Ranger. Bibliography: p. 97-102 (Supplement II)
256. **United States industrial commission.** Relations and conditions of capital and labor employed in the manufactories and general business. Report. v. 7. Washington, Government printing office, 1901. 8°. Contains considerable data regarding apprenticeship.
257. **Wisconsin. Commission upon the plans for the extension of industrial and agricultural training.** Advance sheets . . . Madison, Wis., Democrat printing company, state printer, 1911. vii, 135 p. 8°. C. P. Cary, chairman. This Commission, appointed by the Governor of Wisconsin in 1909, to investigate industrial and agricultural education and formulate plans upon which to base legislative action, submitted its report on January 10, 1911. Among other measures it recommended continuation schools, with compulsory attendance of children from 14 to 16 years of age already engaged in industry, supplemented by trade and evening schools. It advised the modernization and extension of outgrown apprentice laws and their adaptation to the requirements of proposed industrial schools.

VI. INDUSTRIAL EDUCATION AND TRADE-UNIONS.

258. **American federation of labor.** Industrial education. Consisting of an investigation and report by a competent special committee; reports of officers and committees; action of A. F. of L. convention; the attitude of organized labor and others toward the problem; a glossary of definitions, etc.; labor's bill for congressional enactment. 1st ed. Washington, American federation of labor, 1910. 69 p. 8°.
- A brief summary of the entire field of industrial education, with particular emphasis on the attitude of organized labor toward the problem, in foreign countries and in the United States. Describes apprenticeship schools, legislation, etc.
- Report warns against the exploitation of boys who desire to become skilled craftsmen.
- "A proper apprenticeship system which will guarantee to the youth the opportunity of learning his trade as a whole is very much desired."
- "One of the disadvantages of many apprenticeship systems is that establishments have become so large and with so many departments with their divisions and subdivisions and processes that the time of the boy is fully employed in mastering details of one department to the exclusion of all other departments. Public industrial schools or schools for trade training should never become so narrow in their scope as to prevent an all-round shop training."
259. ——— Industrial education. Report of Committee on industrial education; compiled and edited by Charles H. Winslow. Washington [Government printing office] 1912. 114 p. 8°. (62d Congress, 2d sess. Senate Document no. 936)
- Presents the authoritative, official statement of the attitude of the American federation of labor toward vocational education. Gives the conclusions and recommendations of the committee, based on a careful study of the situation. Various schools already established are described.
260. **Duffy, Frank.** Industrial education and the labor unions. New York, Teachers college, Columbia University [1912] 14 p. 8°. (Teachers college. Technical education bulletin no. 15. 3d series, no. 18)
- Address given at Teachers college, February 15, 1912. Voices the opposition of labor unions to the private trade schools. Tells about the unions giving industrial education to their members. Thinks industrial education should be a part of the public school system.
261. ——— Industrial education, and what labor unions are doing to promote it. Vocational education, 2: 28-35, September 1912.
- This article is by the General secretary of the United Brotherhood of Carpenters and Joiners. His extended knowledge and experience, as well as official position, enable Mr. Duffy to speak with authority on this question.
262. **Golden, John.** The educational need from the viewpoint of organized labor. Journal of education, 70: 91-92, July 22, 1909.
263. ——— Position of labor unions regarding industrial education. In American academy of political and social science. Annals, 33: 185-87, January 1909.
264. **Haney, James P.** A symposium on industrial education. [Asbury Park, N. J., Kinmonth press] 1907. 58 p. 8°. (National society for the promotion of industrial education. Bulletin no. 3)
- Presents in concise and personal form the opinions of employers and employees in regard to industrial education.
265. **Merrill, George Arthur.** Trade schools and trade unions. In National education association of the United States. Journal of proceedings and addresses, 1907. p. 1048-55.
- Reprinted in Western journal of education, 12: 501-509, October 1907.
266. **Prescott, William B.** Trade unions and industrial education. In National education association of the United States. Department of superintendence. Proceedings, 1910. p. 127-35.
- Also in School exchange, 1: 346-54, March 1910.
- Largely the work of the International Typographical Union; the correspondence course in printing.
267. **Roncovieri, Alfred.** The relations of organized labor and technical education. University of California chronicle, 12: 368-80, October 1910.

268. **Selvidge, Robert W.** Industrial education from the viewpoint of organized labor. *American school board journal*, 40: 6-7, 27, June 1910.
269. **United States. Bureau of labor.** Attitude of employers, graduates of trade and technical schools, and labor unions . . . toward trade and technical education. *In Report of the Commissioner of labor, 1902.* Washington, Government printing office, 1902.
Includes: United States, p. 367-424; Austria, p. 560-63; Belgium, p. 672-84; France, p. 853-68; Great Britain, p. 1129-52; Switzerland, p. 1303-05.
270. **Vanderlip, F. A.** Trade schools and labor unions. *In his Business and education.* p. 56-81.
Great emphasis is laid upon the need for continuation trade schools to train, not the captains of industry, but the rank and file of the American industrial army. The German schools of this sort are cited as good examples.

VII. ECONOMIC AND SOCIAL VALUES.

271. **Campbell, W. H.** The value of industrial training in the elementary schools. *Educational bi-monthly*, 3: 285-98, April 1909.
272. **Dillon, Charles.** The money value of training for the trades. *World's work*; 22: 14756-58, August 1911.
Writer calculates that "a boy taught under the apprenticeship system earns \$29,000 in a lifetime; a trade school boy earns \$40,000; a technical graduate earns \$65,900."
273. **Dodge, James M.** The money value of technical training. *American society of mechanical engineers*, 25: 40-48.
Comparison made of the earning capacity of men trained in the shop and those trained in school.
274. **Franklin, George A.** Do industrial courses promise substantial returns in efficiency? *In Minnesota educational association. Journal of proceedings and addresses, 1909.* [Minneapolis, Minn., Syndicate printing company] p. 63-66.
Discussion: p. 67-68.
Gives statistics of 62 schools.
275. **Golden, John.** Importance of industrial education to the workingman. *Social education quarterly*, 1: 191-95, June 1907.
276. **Hiatt, James S.** The child, the school, and the job. Philadelphia [1912] 12 p. 48°. (Public education association. Study no. 39) Cover title.
Reprinted from the City club bulletin, December 27, 1912.
A study of child wage earners between 14 and 16 years of age, as they apply to the city of Philadelphia. Study based on the school census of June, 1912. Presents a number of interesting statistical charts and tables.
The following conclusions are drawn: "1. That the problem of the working child is not an immigrant problem, since over 50 per cent of those reported as at work are of the second generation of American birth. 2. That this is not the problem of the boy alone, since over 49 per cent of the workers are girls. 3. That the vast majority of children who leave school at fourteen to enter industry go into those kinds of employment which offer a large initial wage for simple mechanical processes, but which hold out little or no opportunity for improvement and no competence at maturity. 4. That wages received are so low as to force a parasitic life. 5. That but slight advancement is offered the fifteen-year-old over the fourteen-year-old child worker."
277. **Hirsch, E. G.** Moral aspects of industrial education. *Educational review*, 35: 448-54, May 1908.
278. **Johnston, Charles Hughes.** Social significance of various movements for industrial education. *Educational review*, 37: 160-80, February 1909.
279. **Jordan, G. Gunby.** Material and moral benefits of industrial education. *In National society for the promotion of industrial education. Proceedings, second annual meeting.* New York City, National society for the promotion of industrial education, June 1909. p. 122-32. (*Its Bulletin* no. 9)

280. **Massachusetts. Commission on industrial and technical education.** What the value of the years from fourteen to sixteen might be to boys. *In its Report* . . . April 1906. p. 57-69. chart.
To girls: p. 70-84.
Summary: p. 85-93.
Wages, tables: p. 66-67, for boys; p. 82-84, for girls.
281. **Maxwell, G. E.** The civic value of industrial education for general development. *In Minnesota educational association. Journal of proceedings and addresses, 1908.* [St. Paul, Minn., Press of Syndicate printing company] p. 270-75.
282. **Munroe, James P.** The Educational bearings of manual training. *In Eastern manual training association. Proceedings, 1903.* p. 70-82.
Reprinted.
283. **Noyes, W.** The ethical values of the manual and domestic arts. *In Northern Illinois teachers' association. Proceedings, 1909.* p. 6-17.
Also in *Manual training magazine*, 11: 201-13, February 1910.
284. **Reynolds, J. H.** Higher technical instruction. *In Imperial education conference. Report, 1911.* London, Printed by Eyre and Spottiswood, 1911. p. 133-48.
Deals chiefly with the German technical high schools.
285. **Reynolds, John Hugh.** Relation of education to production. *Arkansas school journal*, 10: 10-14, February 1906.
A strong plea for Arkansas to furnish proper training for the development of her industrial resources by her own trained men.
Presidential address, Arkansas teachers' association.
Reprinted.
286. **Rhodes, Benjamin Rush.** The national importance of industrial education. [New York ? 1909] 11 p. 8°
Address, second annual convention, New York State branch National society for the promotion of industrial education.
287. **Rogers, Howard J.** Relation of education to commercial and industrial development. *Educational review*, 23: 490-502, May 1902.
The importance of good elementary education before specialization for vocation.
288. **Rollins, Frank.** Industrial education and culture. *Educational review*, 34: 494-503, December 1907.
Address before Schoolmasters' association of New York and vicinity, October 1907.
289. **Sigma.** The bearing of technical education on industrial progress. *Journal of education (London)* n. s. 30: 741-43, 816-18, November, December 1908.
290. **Stephens, George Asbury.** The new apprenticeship. *Journal of political economy*, 19: 17-35, January 1911.
Co-operative system between factories and schools.
Reprinted "Influence of trade education upon wages."
291. **Taylor, Graham Romeyne.** Industrial education and national prosperity. *Charities and The Commons*, 19: 1579-84, February 8, 1908.
Discusses the work of the first annual meeting of the National society for the promotion of industrial education.
292. **Webster, W. F.** Our present needs. *In Minnesota educational association. Journal of proceedings and addresses, 1909.* [Minneapolis, Minn., Press of Syndicate printing company] p. 30-38.
President's address. Reprinted.
293. **Wickliffe, Mary Frances.** Some results from manual and industrial training. *In Southern educational association. Journal of proceedings and addresses, 1906.* p. 186-97.
Students in textile schools, p. 188-94.

VIII. INDUSTRIES AND HEALTH.

294. Goldmark, Josephine. Fatigue and efficiency. Introduction by Frederic S. Lee . . . New York, Charities publication committee, 1912. xvii, 591 p. 8°. (Russell Sage foundation)
An epoch-making book. Analyzes fatigue, its nature and effects. Seeks to explain the phenomena of overwork in working people. Of value to educators, especially those engaged in preparing young people for industrial pursuits.
295. Noyes, William. Overwork, idleness or industrial education? *In* National child labor committee. Proceedings of second annual meeting. New York, 1906. p. 84-95.
"The alarming increase of neurotic diseases among school children, the crying need of facilities for play, and the social necessity for industrial education—all three facts point in the same direction, namely, that the school must assume the responsibility for a greater share of the child's time."
296. Terman, Lewis M. The relation of the manual arts to health. *Popular science monthly*, 78: 602-9, June 1911.
297. Winch, W. H. Some measurements of mental fatigue in adolescent pupils in evening schools. *Journal of educational psychology*, 1: 13-23, 83-100, January, February 1910. tables. statistics.
"Evening work is comparatively unprofitable, and a short time in class in the evening is sufficient, plus the labors of the day, to induce a very low condition of mental energy."

IX. LEGISLATION.

298. American federation of labor. Present industrial educational enactments. *In its* Industrial education. Washington, D. C., 1910. p. 49-55.
A review of state laws.
299. [California. Commission on industrial education] A tentative industrial education bill. *Sierra educational news*, 6: 26-30, October 1910.
Chairman, Col. Harris Weinstock.
300. Commercial club of Chicago and others. Tentative draft of proposed law for establishing a system of vocational schools for Illinois. Chicago, 1912. 10 p. 12°.
301. Cruikshank, Lewis M. Needed legislation in Pennsylvania for the promotion of manual industrial education; *Pennsylvania school journal*, 59: 141-45, September 1910.
302. [The Davis Bill for secondary education in agriculture, mechanic arts, and home economics] *Western journal of education*, 13: 321-25, June 1908.
Gives full text of the bill.
Introduced in House of Representatives early in 1908 by Hon. C. R. Davis, of Minnesota. The object of the bill was the raising of a per capita tax of 10 cents to establish and maintain industrial and agricultural high schools, one-half of the proceeds to be appropriated for industrial high schools in the cities and one-half for agricultural high schools in the rural districts.
303. Elliott, Edward C. Industrial education; summary of legislation concerning industrial education in public elementary and secondary schools. [Madison, Wis., American association for labor legislation] 1909. 16 p. 8°.
304. ——— Industrial education. Summary of legislation concerning industrial education in public elementary and secondary schools [in the United States] [New York, 1910] 16 p. tables. 8°. (American association for labor legislation. Legislative review, no. 2)
305. ——— and Prosser, C. A. Legislation upon industrial education in the United States; prepared for the American association of labor legislation and the National society for the promotion of industrial education . . . New York City, National society for the promotion of industrial education, 1910. 76 p. table. 8°. (National society for the promotion of industrial education. Bulletin no. 12.)

38 INDUSTRIAL, VOCATIONAL, AND TRADE EDUCATION.

306. Golden, John. State legislation for industrial education, and organized work-
ingmen. *In National society for the promotion of industrial education. Pro-
ceedings [1909] p. 133-38.
307. [Halliday, Samuel Dumont] History of the agricultural college land grant,
act of July 2, 1862 . . . Ithaca, N. Y., Ithaca democrat press, 1905. 63 p. 8°.
308. Massachusetts. Commission on industrial education. Industrial edu-
cation, under state auspices, in Massachusetts. Boston, Wright & Potter
printing co., 1908. 13 p. 8°. (*Its Bulletin* no. 8)
309. New York (State) Education department. Division of trades schools.
General industrial and trades schools. [Circular, October 1, 1908] 21 p. 8°.
Bibliography: p. 10-21.
Text of law providing for the establishment and maintenance of industrial and trade schools,
with notes on the law.
310. Recent legislation concerning vocational education. Vocational education
(Peoria) 1: 43-50, September 1911.
311. Simpkins, Rupert R. Legislation for the last three years on vocational edu-
cation. School review, 20: 407-16, June 1912.
Cites the valuable work of the six commissions provided for by legislative enactment within
the last three years.
312. United States. Bureau of Labor. Laws relating to industrial education.
In *its Twenty-fifth annual report of the Commissioner, 1910.* p. 501-18.
313. — Congress. Senate. A bill to provide for co-operation with the states
in promoting instruction in agriculture, the trades and industries, and home
economics in secondary schools; in preparing teachers for these vocational sub-
jects in state colleges of agriculture and the mechanic arts, in state normal
schools, and in other training schools for teachers supported and controlled
by the public; in maintaining extension departments of state colleges of agri-
culture and the mechanic arts; in maintaining branches of state experiment
stations; and to appropriate money and regulate its expenditure. [Washing-
ton, Government printing office, 1912] 28 p. 8°. (62d Congress, 2d session.
Senate 3. Calendar no. 348. [Report no. 405])
Introduced by Senator Page April 6, 1911; reported with amendments Feb. 23, 1912; text of origina
bill and reported amendments withdrawn, and substitute reported placed on calendar, June 14,
1912; ordered reprinted July 24, 1912.
A special committee of the National society for the promotion of industrial education, David
Snedden, chairman, appointed to consider the above bill, made an interesting report to the exec-
utive committee of the society. Discussing the uncertainty which prevails as to what constitutes
vocational education, the committee came to the conclusion that the Page bill should contain "a
series of definitions indicating the types of education contemplated and the standards applicable
to its administration," etc. They accordingly drafted, by way of suggestion, a measure which
incorporated the principles suggested by them.
The Page bill would appropriate \$2,000,000 annually to extension work; \$3,000,000 a year to aid
district agricultural schools; \$3,000,000 to introduce the teaching of agriculture, trades and domestic
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its half."

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XXI. NEGRO.

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556. Calhoun colored school, Calhoun, Ala. Nineteenth annual report of the principal . . . 1910-11. Boston, Geo. H. Ellis co., printers [etc.], 1911. 65 p. illus. 16°.
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562. **Straton, John Boach.** Will education solve the race problem? North American review, 170: 785-801, June 1900.
563. **Thrasher, Max Bennett.** Tuskegee, its story and its work. With an introduction by Booker T. Washington. Boston, Small, Maynard & co., 1901. xvi, 215 p. illus. 12°.
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565. ——— Successful training of the negro. World's work, 6: 3731-51; August 1903. illus. Tuskegee Institute.
566. ——— Working with the hands. New York, Doubleday, Page & co., 1904. xi, 246 p. 8°. Describes methods employed at the Tuskegee Institute to train skilled laborers. Emphasizes the value of industrial education for negroes.
567. ——— *ed.* Tuskegee and its people: their ideals and achievements. New York, D. Appleton & co., 1906. xiv, 354 p. 8°. Part I consists of papers by the directors of Tuskegee Institute, describing the work, etc. Part II is made up of autobiographies of graduates, who give interesting accounts of results accomplished in later life.

XXII. Y. M. C. A. WORK.

568. **Educational activities for boys . . .** New York, Young men's Christian association press, 1907. 52 p. illus. 12°. Reprinted from Association boys. Contains papers by different writers on vocational training, manual training, etc.
569. **Hodge, George B.** Association educational work for men and boys . . . New York & London, Association press [c1912] 256 p. 8°. Describes work of the Y. M. C. A. in the field of vocational education. Illustrated with 50 charts or graphs; also half-tones showing the various kinds of work in operation. Educational statistics compiled from Government and state reports; books and periodicals, etc.
570. **Towson, Charles B.** The industrial outreach of the Y. M. C. A. Survey, 29: 524-27, January 18, 1913. Shows progress made in vocational training. Work among the immigrants, etc. Reports 30,000 industrial workers in night classes. In 1912, 1,500,000 attended shop meetings. Extension work done.
571. **Young men's Christian associations. Educational department.** Apprentice schools . . . [New York, Young men's Christian association press, 1908?] [4] p. 12°. Reprint from Information and suggestions.

XXIII. VOCATIONAL EDUCATION.

572. **Adrian, H. A.** Equal opportunity for all children. Western journal of education, 13: 305-12, June 1908. A plea for each child's education to be fitted to his ability and bent of inclination.
573. **Allinson, Francis G.** The cultural and the vocational in the college curriculum. Education, 32: 284-92, January 1912. Emphasis laid upon the fact that culture does not necessarily exclude vocational training, while the latter may include culture.

574. Barrows, Alice Prentice. The dangers and possibilities of vocational guidance. *Child labor bulletin*, 1: 46-54, June 1912.

The writer says: "Is there any reason why we should not profit by the mistakes of England? Can not we prevent the state here from finding itself committed to the questionable duty of finding work for children who are not prepared for it?"

575. ——— Report of the vocational guidance survey. In *New York City. Department of education. 14th annual report, July 31, 1912. New York [1913] p. 385-97. (Appendix G.)*

The Vocational guidance survey was organized under the auspices of a joint committee of the Junior league and the Public education association. The work upon which this report is founded was started on September 18, 1911. The field investigation stopped on June 11, 1912. The final report is in preparation. The Vocational guidance survey has now become the Vocational education survey, a department of the Public education association.

The survey was organized to find answers, if possible, to the following questions: 1. Why do children leave school in large numbers as soon as they are fourteen? 2. What becomes of them? 3. Will vocational guidance aid them?

The investigation was based on an intensive study of a small group, supported by comparison with a larger group. The large group was made up of the 19,672 children who took employment certificates in Manhattan in 1911. The intensive work was done in Public schools 8, 95, 41, and 3 in District 9, and Public schools 76, 74, and 82 in District 13.

Three investigators interviewed children who applied for working papers from September, 1911, to June, 1912. The children were first interviewed in school; then the investigator visited their homes before they left school, and again at the end of two to five months to find out what had happened to them in their work. One thousand five hundred and fifty-seven visits were made to this group and 327 records secured. The total number of cases dealt with was 605. The total number of visits was 2,303. From these children and their families information was secured as to why they left school, the income of the family, the plans for work, and experience in work.

Economic pressure was found to be the least potent and the least frequent cause for children leaving school to go to work. Need for training in the trades is very important. Children should not be blindly guided into jobs. Miss Barrows thinks that there are no jobs for children under 16 that they ought to take.

576. Boston. Superintendent of public schools. *Boston public schools. Annual report of the superintendent. Boston, Printing department, 1910. 157 p. plates. 8°.* (School document no. 10, 1910)

Exhibiting especially situation with regard to vocational education and vocational direction.

577. Burks, J. D. Democracy in education. *Elementary school teacher*, 8: 130-42, November 1907.

An argument for the introduction of vocational training into the public schools. Shows that the loss of pupils in the upper elementary grades is due to the ill-adaptation of our educational organization. Concludes that adequate provision for vocational training, beginning at about the sixth year of school, would tend to prolong the school life and increase the vocational efficiency of the great mass of children.

Also in National education association of the United States. *Journal of addresses and proceedings, 1907. p. 787-96, with different title.*

578. Butler, Elizabeth Beardsley. Training in salesmanship. In *her Saleswomen in mercantile stores, Baltimore, 1909. New York, Charities publication committee, 1912. p. 159-73.*

Appendix B.—What the schools can do to train girls for work in department stores, by Mrs. Lucinda W. Prince, p. 187-93. Appendix C.—Salesmanship classes in the stores of Hale brothers, San Francisco, p. 200-3.

579. Butler, Nicholas Murray. Vocational preparation as a social problem. *Educational review*, 45: 289-97, March 1913.

Address before the educational committee of the Commercial club, of Chicago, Ill., December 14, 1912. Writer says: "To use existing industries, whether they be those of the farm, those of the shop, or those of the factory, as schools of apprenticeship, observation and training while the formal instruction goes on aside by aside for the one or two years' period provided—this is the essential point in the whole matter."

580. Chancellor, William B. The genuine democracy of the unique school system of Buffalo. *American school board journal*, 46: 9-14, 53-55, March 1913.

The city of Buffalo, N. Y., has 10,000 mechanics working in iron and in steel and 5,000 printers. A remarkable work is being accomplished by the public schools in vocational training, emphasis being put upon the particular trades in vogue in the city.

581. **City club of Chicago.** Report on vocational training in Chicago and in other cities. By a Sub-committee of the Committee on public education, 1910-11. Chicago, Published by the City club of Chicago, 1912. xiii, 315 p. 8°.

Committee consisted of G. H. Mead, E. A. Wreidt, and W. J. Bogan. Report in four sections. The first section contains the recommendations of the committee; the second presents considerable information about schools; the third gives facts concerning business colleges and commercial schools; the fourth discusses the results of tests made on boys who left school to go to work as soon as the law allowed, regardless of their advancement in the grades. Boys were examined with regard to their ability in simple arithmetic, civics, history, and English composition. Tests showed that the boys were very deficient in these studies.

The Committee recommends "a plan worked out in some detail, of a type of school in which half of the time in the seventh and eighth grades may be given to vocational work, while during the other half of the school time we are confident that as much can be accomplished in the academic studies as is accomplished to-day. We recommend for these vocational grades a school day of six hours instead of the present five hours and a rearrangement of the time given to different subjects.

"Our great contention is that vocational training be introduced into our school system as an essential part of its education—in no illiberal sense and with no intention of separating out a class of workmen's children who are to receive trade training at the expense of academic training."

In commenting on this report, the Elementary school teacher for January, 1913, says (p. 249): "The conclusions to which this committee comes are diametrically opposed to those which underlie the Massachusetts plan and to those which Mr. Cooley presents in his report to the Commercial club of Chicago. The position defended in the present report is, however, so typically American, so clearly feasible as a school program, and so simple to put into operation as contrasted with the plan of special and separate schools, that it is certainly worthy of careful consideration before any other course is adopted."

582. **Cooley, Edwin Grant.** The adjustment of the school system to the changed conditions of the twentieth century. In National education association of the United States. Journal of proceedings and addresses, 1909. p. 404-10.

Discussion: p. 410-15.

Also in Educational bi-monthly, 4: 1-11, October 1, 1909.

583. ——— The need for vocational schools. Educational review, 44: 433-50, December 1912.

A report to the Educational committee of the Commercial club of Chicago.

"It is," says the writer, "plainly impossible to provide in the present system of elementary and secondary schools the instruction recommended. Separate schools are necessary whose equipment, corps of teachers, and board of administration must be in the closest possible relation to the occupation."

584. ——— The problem of establishing vocational schools. School and home education, 32: 214-19, February 1913.

"If self-preservation through the training of the character of the future citizen is the justification for spending public money for schools, the state must enter the entire field of vocational education, and must provide for all—the artisan, the professional man, the farmer, and the merchant."

Writer says that such schools should be "separate, independent, compulsory day schools, supported by special taxes, carried on usually in special buildings." They should be administered by special boards of practical men and women, and taught by men trained in the vocations. There should be the closest possible co-operation between the school and the factory, etc.

585. **Crawshaw, F. D.** Manual arts: public school manual arts an agency for vocational education. Madison, Published by the board, 1912. 17 p. 8°. (Wisconsin. State board of industrial education. Bulletin no. 6)

Suggested possibilities for grammar grade adjustment. Specialisation in the high school, etc. Says: "Put the special work followed by the pupil in his senior year under the supervision of the leaders in the industry represented." But the executive heads in the school system must remain in general control.

586. **Croswell, J. G.** The one thing needful. Educational review, 37: 142-59, February 1909.

"If our schools create this vocational atmosphere even in the culture studies, great improvements must follow . . . Under no vocational ideal of school instruction could the absurd proposition maintain itself that every child, in every public school, must study every subject."

587. **Dakin, W. S.** Vocational education for men in service. *Vocational education*, 2: 89-109, November 1912.
"Summarizes the efforts which have been put forth by numerous corporations and other large employers of labor to supply deficiencies in public education."
588. **Davis, Jesse B.** Vocational and moral guidance through English composition. *English journal*, 1: 457-65, October 1912.
589. **Dean, Arthur D.** Functions of a state board of education in the establishment of forms of special education. *Pennsylvania school journal*, 59: 315-19, January 1911.
590. ——— Vocational education; a reprint from the annual report of the Education department, submitted January 1910. Albany, New York (State) Education department, 1910. 26 p. 8°.
591. ——— Vocational schools. Albany, N. Y., 1912. 29 p. 8°.
Technical education, domestic economy and agricultural education in the state of New York. Reprinted from New York (State) Education department. 8th annual report.
592. **Downer, Harry E.** The boy and his job. Davenport, Iowa. The Contemporary club, 1911. 32 p. 8°.
593. **Dutton, Samuel Train.** The relation of education to vocation. *Educational review*, 12: 335-47.
Treats of the narrow bounds of early school education; development of commercial prosperity; schools backward in recognizing the scientific trend of the times. Discusses the deficiency in manual training; trade schools, etc.
594. ——— and **Snedden, David (Samuel).** Administration of vocational education. *In their* The administration of public education in the United States. New York, The Macmillan company, 1908. p. 404-25.
References: p. 424-25.
595. **Eaton, J. Shirley.** Education for efficiency in railroad service. Washington, Government printing office, 1909. 159 p. 8°. (U. S. Bureau of education, Bulletin no. 10, 1909)
Discusses the apprenticeship system; vocational railroad schools; higher education for railroad careers, etc. Appendices contain statistics of railway apprenticeship; and the educational and welfare work on European railroads.
596. **Flexner, Mary.** A plea for vocational training. *Survey*, 22: 650-55, August 7, 1909.
Based on a study of 1,000 children who left school to work.
597. **Foos, Charles S.** [Report on Vocational training] *In* Reading, Pa. Board of school controllers. Minutes, 1909. p. 34-72.
Also in Reading, Pa. Board of education. Bi-ennial report, 1907-1909. Reading, Pa., Eagle book and job press, 1909. p. 514-50.
Answers to questionnaire from 100 cities: p. 525-50.
598. **Forbush, William Byron.** Vocational training and guidance. *In his* The coming generation. New York and London, D. Appleton and company, 1912. p. 136-50.
A brief but good review of the subject. Contains graphic statistics of the German system of industrial education. References: p. 150.
599. **Furney, Oakley.** Education with an aim to service. *Vocational review*, 2: 299-317, March 1913.
Describes work of the Albany (N. Y.) vocational schools. Illustrated.
600. **Gaylor, G. W.** Elimination and vocational training. *Psychological clinic*, 6: 69-73, May 15, 1912.
601. **Gillette, John Morris.** The sociological warrant for vocational education. *American journal of sociology*, 14: 219-32, September 1908.

602. ——— Vocational education. New York, Cincinnati [etc.] American book company [1910] vii, 303 p. 12°.
 Authors set out in summary form the development of vocational training and its many manifestations in modern and contemporary life and thought.
603. Goodwin, Edward J. The present status of public education. In New York (State) University convocation, 1908. Albany, University of the state of New York, 1909. p. 75-89. (Education department. Bulletin no. 443, March 15, 1909).
 Discussion: p. 89-99.
 "The differentiation . . . at the beginning of the seventh school year should be threefold. It should provide (1) shopwork, (2) suitable instruction in business subjects and (3) foreign language study."
604. Gorst, Harold E. An educational revolution. North American review, 189: 372-85, March 1909.
 Advocates vocational training.
605. Gustafson, Lewis. A new task for the public schools. Vocational education, 1: 145-58, January 1912.
 A statement of some of the fundamental principles which must control the development of vocational education.
606. Haney, James Parton. Vocational training and trade teaching in the public schools. Philadelphia, American academy of political and social science [1909] 23-32 p. 4°. (Publications of the American academy of political and social science, no. 570)
 Reprinted from the Annals of the American academy of political and social science for January, 1909.
 "While trade . . . teaching as such can not be advocated for the immature pupils of the elementary schools, preparatory vocational training must come to be seen as a necessary preliminary to the development of what may be termed the clientele of the trade school."
607. ——— Vocational work for the elementary schools. Educational review, 34: 335-46, November 1907.
 Considers the necessity of offering some form of vocational training in the elementary school; and recommends that for certain schools a modified form of the course of study be arranged to permit vocational training in the seventh and eighth years.
608. Hanus, Paul Henry. Vocational education. In New Jersey state teachers' association. Annual report and proceedings, 1907. p. 78-89.
 The need of industrial schools to supplement the public schools, offering a course of four years; with evening instruction for men and women already engaged in the trades.
609. James, Edmund James. Vocational training and its future. Vocational education (Peoria) 1: 1-9, September 1911.
 "Business men can do an immense amount to stimulate and help this development, greatly to the benefit not only of the young fellows who are going into business, but, above all, to the community."
610. Kane, Thomas Franklin. The maintenance of the college of liberal arts in a state university in competition with professional and technical colleges in the same institution. In National association of state universities. Transactions and proceedings, 1910. Hamilton, Ohio, Republican publishing company [1910] p. 120-39.
 Discussion: p. 139-54
611. Kerschensteiner, Georg. Three lectures on vocational training . . . Delivered in America under the auspices of the National society for the promotion of industrial education. Chicago, Published by the Commercial club of Chicago, 1911. 52 p. 8°.
 The fundamental principles of continuation schools, p. 1-16.
 The organization of the continuation school in Munich, p. 17-26.
 The technical day trade schools in Germany, p. 30-52.

612. **King, Charles A.** Pre-vocational training. *Education*, 33: 105-8, October 1912.
Argues that a system of vocational instruction should include training of both sexes, and makes provision for students between 14 and 16 years of age.
613. **Lapp, John A.** The present tendencies in vocational education. *Journal of education*, 76: 683-84, December 26, 1912.
"The movement began in Massachusetts with separate schools under separate boards, both state and local. That has been changed to permit either a separate school or a school as an internal part of the regular school system. Wisconsin has adopted the separate school idea, and such a plan is proposed in Illinois; the states of New York, New Jersey, Ohio, and Maine make the work a part of the school system. Indiana follows the latter group."
614. **Leavitt, Frank M.** The relation of the present movement for vocational education to the teaching of the mechanic arts. *Elementary school teacher*, 12: 158-68, December 1911.
Shows the value of "pre-apprentice" or "pre-vocational" work in the schools.
615. ——— Vocational education in the Boston public schools. *Vocational education*, 1: 316-31, May 1912.
"A comprehensive and readable presentation of the remarkable provision made for vocational opportunities for all the children by a large city school system."
616. ——— Vocational purpose in the Manual training high school, Indianapolis, Indiana. *Vocational education*, 2: 36-52, September 1912.
"A discriminating discussion of the way in which one progressive community is attempting to secure the maximum of service from its high school."
617. **McElroy, James F.** The most urgent need of our educational system is an adequate provision for the vocational needs of children destined for industrial and domestic pursuits. In *National education association of the United States. Department of superintendence. Journal of proceedings and addresses, 1908.* p. 48-52.
618. **Mayer, Mary Josephine.** Vocational training in our public schools. *American review of reviews*, 45: 449-56, April 1912.
Argues that vocational training is not opposed to culture. Reviews the situation in this country.
619. **Miller, William T.** Vocation teaching. *Atlantic monthly*, 104: 644-47, November 1909.
620. **Monaghan, J. C.** Vocational training and the manufacturer. *American school board journal*, 39: 6-7, September 1909.
621. **Morrison, Henry C.** Vocational training and industrial education. *Educational review*, 36: 242-54, October 1908.
"So far as industrial education seeks to be a more efficient means of social betterment, so far will it be welcome; . . . so far as it involves a tendency to stratify American society, it must be held to be contrary to the spirit of our institutions."
622. **Moulton, Leonard B.** A course in salesmanship. *School review*, 20: 56-59, January 1912.
Methods pursued in the Boston high school of commerce.
623. **Mowry, Duane.** Vocational or cultural education—which? The Amherst idea. *Education*, 32: 373-76, February 1912.
Declares that specialization in education is one of the necessities in this work-a-day world, but we should not forget that mere specialization is not the whole of the educational field. Commends the Amherst idea.
624. **Münsterberg, Hugo.** Vocation and learning. *University City, St. Louis, Mo., The Peoples university [1912]* 289 p. 12°.
An analysis of the demands made by the various vocations, considering not merely the technical requirements, but especially the deeper inner demands of our occupations and professions. In addition to a presentation of general principles, the following vocations are individually analyzed: Engineer, farmer, business man, teacher, domestic worker, secretary, librarian, journalist, physician, lawyer and politician, architect.

625. **Mussey, H. R.** Education and pay of head and hand. *Educational review*, 42: 450-64, December 1911.

Advocates vocational training and guidance.

626. **New York (State) Education department.** Vocational schools. *In its Annual report, 1909*. Albany, N. Y., State education department, 1910. p. 517-41.

Reprinted.

Schools organized under the law of 1908, p. 535.

627. **Page, Carroll S.** Vocational education. Speech . . . delivered in the Senate of the United States, June 5, 1912, on Senate bill 3, to co-operate with the states in encouraging instruction in agriculture, the trades and industries, and home economics in secondary schools, etc. Washington, Government printing office, 1912. 134 p. 8°. ([U. S.] 62d Cong., 2d sess. Senate. Doc. 845)

Discusses provisions of the bill. Emphasizes the importance of vocational education. Says: "It is a question which will, in my judgment, settle in great measure the quality of our citizenship in the generation upon which we are now entering. It is a question which will profoundly affect the cost of our food supply as well as the amount which our workers may earn with which to meet that higher cost of living which is upon us. It is a question which involves appropriations from the National treasury aggregating nearly \$16,000,000 annually." . . . "I believe I voice the sentiment of hundreds upon hundreds of the more thoughtful educators and publicists of our land to-day, who give it as their opinion that the curriculum of the elementary or graded school is largely impracticable and does not fit for the great struggles of life that are before them the 92 per cent of our boys and girls who never pass beyond the eight grades."

The appendix contains indorsements of the Page bill from prominent educators, editors, and public men.

628. **Parsons, Frank.** Choosing a vocation. Boston, Houghton Mifflin co., 1909. 165 p. 8°.

Contains valuable suggestions for the teacher in upper grades and high schools.

629. **Prosser, Charles A.** Massachusetts state-aided vocational schools. *In Massachusetts. Board of education. 75th annual report . . . January 1912*. Boston, 1912. p. 48-65. (Public document no. 2)

The movement for vocational training has spread rapidly in Massachusetts since the first law giving state aid and encouragement to practical training was passed in 1906. Says the report: "In the year 1907-8, 6 schools gave, through day or evening classes, training in 4 occupations to about 1,400 persons. During the last school year there were 21 schools instructing almost 6,000 persons through day, part-time, and evening classes, fitting for more than 60 occupations within more than 15 distinct industries. It is probably safe to say that for the present school year, 1911-12, there will be a total registration of more than 7,000 pupils in not less than 40 state-aided vocational schools."

Give interesting statistical diagrams showing the growth of state-aided vocational schools; investment and expenditures of schools; and industries for which training is given, as follows: painting, stoneworking, textiles, agriculture, jewelry, bookbinding, printing, electrical working, high power machine work, millinery, dressmaking, household arts, motive power, metal working, and woodworking.

630. ——— Organization and administration of state-aided vocational schools. *In Massachusetts. Board of education. 75th annual report . . . January 1912*. Boston, 1912. p. 137-88. (Public document no. 2)

CONTENTS.—I. What is a state-aided vocational school. II. The establishment of state-aided vocational schools. III. The administration of vocational schools. IV. Courses of study and methods of instruction.

Appendices 1 and 2 contain data concerning legislation; Appendix 4, "Information regarding the approval of the qualifications of teachers in the state-aided vocational schools of Massachusetts," p. 183-88.

631. **Richmond, Sada Fouts.** The vocational school. *Progressive teacher*, 18: 35-38, April 1912.

An account of the first vocational public school started in the South, at Memphis, Tenn.

632. **Righter, Leonard and others.** Educational survey preparatory to organization of vocational education, by Leonard Righter . . . Social phases of industrial life and vocational guidance, by Robert J. Leonard. With an introduction by Frederick G. Bonser. New York city, Teachers college, Columbia university, 1913. 64 p. diags. 8°. (Teachers college record. vol. XIV, no. 1)
Bibliography: p. 43.
The author of the first paper describes the manner in which the survey, used for many purposes at the present time, may be adapted to educational purposes, especially to the adjustment of the school curriculum to meet the needs of the community. The second paper emphasizes the need for the development in the schools of a knowledge of industrial conditions and the importance of industries in the national life.
633. **Roberts, Arthur W.** The basis of an efficient education—Culture or vocation. School review, 15: 358-74, May 1907.
Argument against too early differentiation for vocational training.
634. **St. Louis, Mo. Board of education.** Vocation courses. In its Annual report, 1910. p. 116-32.
635. **Shields, Thomas Edward.** Survey of the field. [Vocational education] Catholic educational review, 5: 139-56, February 1913.
Discusses especially the report of Mr. Edwin G. Cooley, advocating a separate system of vocational schools. The author does not approve of adding a special tax to the heavy burden the people are now bearing in order that vocational schools may be built. He claims that "If industrial schools are to be erected and equipped, the financial burden of so doing should evidently be borne by the interests that would profit most by such a system of schools."
636. **Snedden, David S.** The combination of liberal and vocational education. Educational review, 37: 231-42, March 1909.
Presents three methods of combining vocational with liberal education, and analyzes same.
637. ——— Debatable issues in vocational education. Vocational education, 2: 1-12, September 1912.
Gives "a few of the problems of vocational education with reference to which there is now needed fuller analysis, discussion, and experimentation."
638. ——— The practical arts in liberal education. Educational review, 43: 378-86, April 1912.
States that "in practical arts teaching the place for drill, systematic approach, and approximation of journeyman's standards, is in the vocational school."
639. ——— The problem of vocational education. Boston, New York [etc.] Houghton Mifflin company [1910] vi, 86 p. 12°. (Riverside educational monographs, ed. by H. Suzzallo)
A concise but comprehensive survey of present conditions and prospects. Discusses definitions of a liberal education; the need of vocational education; state support, types, and pedagogical divisions of vocational education. Treats of the relation of vocational education to manual training, problem of women in industry, and a variety of related topics. Dr. Snedden is a recognized authority in this important educational field.
640. **Springfield, Mass. School board.** The vocational school. In its Report, 1909. p. 27-31.
641. **Tolman, William H.** Social engineering; a record of things done by American industrialists employing upwards of one and one-half million of people. With an introduction by Andrew Carnegie. New York & London, McGraw-Hill book company, 1909. viii, 384 p. 8°.
Discusses among other topics vocational education, p. 267-97. Shows what the various manufacturing companies have done to further the education of employees.
642. **United States. Congress. House. Committee on agriculture.** Vocational education. Hearings before the Committee on agriculture . . . on H. R. 23581. April 23-26, 1912. Washington, Government printing office, 1912. 152 p. 8°.
John Lamb, chairman.
Treats of technical education, domestic economy, and agricultural education.

64 INDUSTRIAL, VOCATIONAL, AND TRADE EDUCATION.

643. ———— **Senate. Committee on agriculture and forestry.** Vocational education: Hearings before the Committee on agriculture and forestry . . . April 12 and 13, 1910, on the bill (S. 4675) to co-operate with the states in encouraging instruction in agriculture, the trades, and industries . . . Washington, Government printing office, 1910. 82 p. 8°.
644. ———— **Committee on agriculture and forestry.** Vocational education. Report of the Committee . . . United States Senate . . . on Senate bill 3 . . . Washington, Government printing office, 1912. 75 p. 8°, [62d Cong., 2d sess. Senate. Rept. 405]
Calendar no. 348.
645. ———— **Committee on agriculture and forestry.** Vocational education. Report of the subcommittee . . . United States Senate, Sixty-second Congress, on Senate bill 3 . . . Washington, Government printing office, 1912. 71 p. 8°.
646. **Warriner, E. O.** Industrial and vocational training in the public schools. In Michigan. Superintendent of public instruction. Annual report, 1909-10. Lansing, Michigan, Wynkoop Hallenbeck Crawford co., state printers, 1910. p. 14-21.
Reprinted. 10 p. 8°. (Bulletin no. 2, 1909)
647. **Weaver, E. W.** The vocational adjustment of the children of the public schools. High school teachers association of New York City [1910] 12 p. 8°.
648. **Weeks, Ruth Mary.** The people's school. A study in vocational training. Boston, New York [etc.] Houghton Mifflin company [1912] 208 p. 12°. (Riverside educational monographs, ed. by H. Suzallo)
Bibliography: p. 195-202.
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649. **Woolley, Helen T.** Child labor and vocational guidance. Child labor bulletin, 1: 24-37. June 1912.
Gives some interesting schedules of the industrial history of children.

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650. **Boston, Mass. Business men's advisory committee.** Reports regarding the Boston school of commerce, 1909, 1910.
F. P. Fish, chairman.
Travelling scholarships to South America and Central America, Germany and Belgium.
651. **Bradford, Edgar Ewing.** Commercial education (in Latin America) In his Latin-American universities and special schools. Washington, Government printing office, 1913. p. 94-103. (U. S. Bureau of education. Bulletin no. 30, 1912)
652. **Brett, George P.** The need of commercial education. Independent, 72: 728-30, April 4, 1912.
The author says that "for the children of our cities, about 90 per cent of whom leave school at about the age of 14 and enter business, commercial education is vitally necessary."
653. **Fee, Mrs. B.** Business course for high schools of smaller cities. American school board journal, 45: 15, October, 1912.
654. **Great Britain. Foreign Office.** Germany. Report on commercial instruction in Germany . . . London, Printed for H. M. Stationery office, by Harrison and sons, 1904. 109 p. 8°. ([Parliamentary Papers by command] Cd. 2237. No. 619 miscellaneous ser. Diplomatic and consular reports)

655. **Herrick, Chesman A.** *Meaning and practice of commercial education.* New York & London, The Macmillan company, 1904. xv, 378 p. 12°.
 Select bibliography: p. 350-70.
 "The kind of education urged in this book, it is believed, will teach men the meaning of business and raise commerce above narrow commercialism. Commerce we must have. Two main sources of the book are the announcements and reports of schools and expressions from business men and students of education."
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 Discusses materials for a scheme of commercial education for Great Britain, also suggested curricula for all grades of educational institutions. Contains chapter on commercial education on the Continent, and the position in the United States in 1901.
658. **James, Edmund J.** *Commercial education.* *In* Education in the United States. A series of monographs, ed. by Nicholas Murray Butler. New York [etc.] American book company, 1910. p. 655-703.
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659. **Michigan political science association.** *Convention of educators and business men.* Ann Arbor, Mich., February 5-7, 1903. Ann Arbor, 1903. vii, 229 p. 8°. (Publications of the Michigan political science association. v. 5, no. 2, June 1903)
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662. **Thompson, F. V.** *The commercial high school and the business community.* School review, 18: 1-11, January 1910.
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664. **University of the state of New York.** *Commercial education in high schools.* Albany, University of the state of New York, 1903. 127 p. 8°. (College department . . . Bulletin 23)

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666. **Arnold, Sarah Louise.** The Sargent industrial school; a successful experiment in industrial training. Survey, 24: 32-39, April 2, 1910.
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667. **Congrès international d'enseignement ménager.** 1st Fribourg, 1908
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669. **Frank, Louis.** L'éducation domestique des jeunes filles; ou, La formation des mères. Paris, Larousse [1904] xxiv, 547 p. illus. 8°.
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670. **Fuller, Alice M.** Housekeeping and household arts . . . Manila, Bureau of printing, 1911. 178 p. illus. 8°.
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Describes domestic science equipment in a German school. Well illustrated by photographs.
674. **Influence of industrial arts and sciences upon rural and city home life.** In National education association of the United States. Journal of proceedings and addresses, 1909. p. 636-43.
Congress.—(A) From the standpoint of domestic science [by] Mrs. Ellen H. Richards.—(B) From the standpoint of economic interests [by] A. Salisbury.
675. **Kenne, Helen.** Equipment for teaching domestic science. Boston, Whitcomb & Barrows, 1911. v, 96 p. illus. 8°.
Estimates, descriptions, and suggestive lists given for complete equipment for instruction in domestic science.
676. **Moll-Weiss, Augusta.** Les écoles ménagères à l'étranger et en France . . . Paris, A. Rousseau, 1906. xxvi, 344 p. illus. 8°.

677. **Münsterberg, Hugo.** The college and the household sciences. Good-house-keeping, 56: 40-48, January 1913.
Advocates household courses in colleges and universities, and shows the insistent demand for such instruction.
678. **Ravenhill, Alice, ed.** Household administration, its place in the higher education of women . . . New York, H. Holt and company, 1911. x, 324 p. illus. 8°.
Contains papers by noted writers on the subject of domestic science. Introduction, by Catherine Schiff, is a brief historical sketch of woman's position in the family.

XXIV. VOCATIONAL EDUCATION IN FOREIGN COUNTRIES.

679. **Brunot, H. P.** Technical education in France. In U. S. Department of commerce and labor. Daily consular reports, no. 2178, February 8, 1905. Washington, Government printing office, 1905. 8 p. 8°.
Reviews the vocational and trade schools of France. Gives curricula, sources of income, administrative methods, types of teachers, etc.
680. **Bustico, Guido.** L'educazione vocazionale e la scuola. Desenzano, F. Legati e c., 1909. 16 p. 8°.
681. **Consumers' league of Connecticut.** A glance at some European and American vocational schools for children from twelve to sixteen years of age. Hartford, the Consumers' league, 1911. 64 p. front., pl. 8°.
682. **Cooley, Edwin G.** Vocational education in Europe. Report to the Chicago commercial club. Chicago, R. R. Donnelley & sons co., 1912. 347 p. illus. 8°.
"This report undertakes to describe some of the typical vocational schools observed by the author during his year in Europe. The major part of the report is devoted to the educational institutions of Germany. Some special institutions in Austria and Switzerland are described on account of their relations to the general problem of vocational education."
683. **Hylla, E.** Die verwickelichung der arbeitschulideen in elementarunterricht. Pädagogische warte, 20: 13-18, January 1, 1913.
Urges that teachers consider carefully the vocational school idea as a special field of opportunity in the elementary schools.
684. **Manny, Frank A.** A German contribution to education for vocation and citizenship. School review, 16: 154-61, March 1908.
685. **Mittenzweh, L.** Die berufswahl. Leipzig, Dürr, 1910. xv, 217 p. 8°.
686. **Nebel, Eugene.** The schools of Switzerland. Educational foundations, 23: 93-101, 150-84, 297-300, October, November 1911, January 1912.
Contains a brief account of the Swiss societies for promoting commercial education.
687. **Rathmann, C. G.** Vocational training in Germany. Educational foundations, 23: 155-70, 228-39, November, December 1911.
A discussion of the continuation schools of Germany—commercial, agricultural, etc.
688. **United States. Bureau of education.** The Prussian system of vocational schools from 1884 to 1909. In Report of the Commissioner for the year 1910. Washington, Government printing office, 1910. v. 1. p. 301-43.
A résumé of the third report of the Royal Prussian state industrial office, 1909* (Verwaltungsbericht des Königlich Preussischen Landesgewerbeamts. Berlin, Carl Heymanns, 1910. 486 p. tables).
Gives an historical review, followed by detailed accounts, statistical and textual, of the various classes of schools which constitute the system considered.
689. **Ware, Fabian.** Educational foundations of trade and industry. New York, D. Appleton & co., 1901. 8°.
Describes vocational systems of Germany and France. Shows how these countries have encouraged the educational foundations for trade and industry.

XXV. VOCATIONAL GUIDANCE.

690. **Bader, Paul.** Die aufgabe der schule bei der berufswahl und stellenvermittlung der jugendlichen. Archiv für pädagogik, 1: 129-38, December 1912.
Describes current attempts at vocational guidance in connection with German schools.
691. **Bloomfield, Meyer.** Vocational guidance. In National education association of the United States. Journal of proceedings and addresses, 1912. p. 431-36.
Shows what has been accomplished in Boston. Reviews the situation throughout the country. Emphasizes the fact that thousands of children drop out of school, through no economic pressure, to go to work as soon as the law permits. See also Survey, 30:183-88, May 3, 1913.
692. ——— Vocational guidance of youth. Boston, New York [etc.] Houghton, Mifflin company [1911] 124 p. 12°. (Riverside educational monographs, ed. by H. Suzzallo).
"While making no pretense towards a comprehensive analysis or final definition of ways and means, it will perform an invaluable office in drawing attention to the great need of work in this field, in clearing up misconceptions, in guarding against dangerous pitfalls, and in pointing the way towards practical possibilities."—Survey, 26: 464, June 24, 1911.
693. **Boston, Mass.** Committee on vocational direction. Report. In Boston public schools. Annual report of the superintendent, July 1910. p. 147-51. (Appendix G)
Chairman, George A. Tyner.
See also Annual report of the superintendent, December 1911.
694. **Brooks, Stratton Duluth.** Vocational guidance. School review, 19: 42-50, January 1911.
The work of the Boston vocation bureau and Public schools vocation direction committee, the High school of commerce, and Trade school for girls.
695. **Davis, Jesse B.** Vocational guidance. A function of the public school and its application to the commercial department. In Journal of the Michigan schoolmasters' club. 46th meeting, held in Ann Arbor, March 29-April 1, 1911. Ann Arbor, Mich., Published by the club [1911] p. 119-28.
Author made a study of 631 boys in the high school of Grand Rapids, Mich. Gives outlines of a course of study and discusses the function of the vocation bureau. He says: "The commercial course should be the largest department in the modern high school."
696. ——— Vocational guidance in the high school and its application to the church and Sunday school. Religious education, 7: 110-18, April 1912.
A system of vocational guidance in use in the Central high school of Grand Rapids, Mich.
697. **Diggs, Annie L. Bedrock.** Education and employment, the foundation of the Republic. Detroit, Mich., Social center publishing co. [1912] x, 70 p. 8°. Based on the proposition that a bureau of employment should be established in connection with each and every educational institution throughout the country.
698. **High school teachers' association of New York City.** Year-book, v. 5, 1910-1911. 142 p. 8°. Contains papers on vocational guidance in the high schools of New York, p. 17-28; final report of the subcommittee on a preparatory course for boys entering commercial life, p. 85-106.
699. ——— Choosing a career; a circular of information for boys. New York, Students' aid committee [1909] 22 p. 8°.
700. ——— Choosing a career; a circular of information for girls. New York, Students' aid committee [1909] 28 p. 8°.
701. ——— Students' aid committee. Directing young people in the choice of a vocation. [Brooklyn, N. Y.] Printed for the Students' aid committee [1910] 16 p. 8°.
702. **Hutchinson, T. Herbert.** Vocational guidance. Association seminar, 20: 427-52, June 1912; 21: 9-27, 46-60, October, November 1912; 21: 84-101, December 1912; 123-47, January 1913.
Bibliography: p. 146-47.
Gives evidence of the necessity of training for efficiency, and points out the need and importance of vocational guidance.
See also book with the history of vocational guidance.

703. Keeling, Frederic. The labor exchange in relation to boy and girl labour. London, P. S. King & son, 1910. 76 p. 12°. Bibliography: p. 73-76.
704. Knox, George Platt. How should the school system contribute to an intelligent choice of vocation on the part of the pupil? In National education association of the United States. Journal of proceedings and addresses, 1912. p. 417-25.
 Urges the value of preparation. This preparation should both precede and follow the choice of vocation.
705. Lewis, E. E. Studies in vocational guidance. School and home education, 32: 135-38, 212-14, 247-51, December 1912; February, March 1913.
 A study of the employment found by 4,386 children who left the schools of St. Louis and took employment certificates.
706. Lord, Everett W. Vocational direction, or the boy and his job. In National child labor committee. Proceedings of 6th annual conference, Boston, January 13-16, 1910. New York, 1910. p. 73-85.
 "Boys find themselves in their vocations as the result of custom, heredity, propinquity, or accident far oftener than through deliberate and conscious choice." Advocates vocational guidance.
707. McKeever, William A. Assisting the boy in the choice of a vocation. Manhattan, Kans.; 1909. 15 p. 8°. Reprinted from the Industrialist, v. 35, no. 41, June 26, 1909.
708. National conference on vocational guidance. First. Boston, November 15-16, 1910.
 Under auspices of the Boston chamber of commerce and the Vocation bureau of Boston. Forty-five cities sent delegates. Manufacturers, workmen, business men, social workers, and educators participated in the discussions.
 The activities of vocational guidance, as outlined at this conference, are as follows: First, giving information about vocations in general and about opportunities for work in the immediate vicinity, and also concerning opportunities for receiving vocational instruction. The second group relates to children, when it is necessary to make the transition from school to work, and advising as to the importance of wise choice between temporary employment, however remunerative, and positions which offer opportunity for advancement. The third group relates to the guidance and sympathetic counseling of the young worker subsequent to his entry into his new duties. A fourth group looks to the establishment of vocation bureaus for the collection of information about opportunities for boys and girls in the trades and stores, as well as the provision for vocational training, and the classification of this information in forms available for ready reference.
 The opinion was expressed that ultimately this function should be taken over by the public schools.
 See Survey, 25: 319-20, November 26, 1910 (Bloomfield, Meyer) also School review, 19: 57-62, January 1911 (Leavitt, F. M.)
709. ———. Second. New York, October 23-26, 1912.
 Topics discussed: Placement; Follow-up; Study of occupations; Scholarships; Vocational analysis; Opportunities for vocational training; Methods of vocational direction; and Relation of vocational guidance to the employer.
 Reviewed at length by W. T. Bawden, in Vocational education, 2: 209-17, January 1913. On the subject of "finding jobs for boys and girls," the sentiment of the majority of those participating in the discussion was "in favor of making every effort to retain children under 16 in school, in order to train them for more skilled occupations."
 The following definite questions regarding vocational training in the schools were raised by the conference:
 "Shall industrial training aim to fit children for particular trades, or shall it educate them in elementary processes and underlying principles?
 "Shall it begin early in the child's school life, or at the age of fourteen when so many now break away from the prescribed curriculum?
 "Shall it be grafted on the present elementary courses, or be taught in separate institutions?
 "Can industry be prevented from compelling the schools to give just enough training to meet industry's immediate needs, and no more?
 "Is it advisable to raise the compulsory school age two years, or with the curriculum in its present state is this simply prescribing a larger dose of something already seen to be inadequate and unsuitable?"

"On the other hand, will raising the age limit, by throwing back upon the schools thousands of boys and girls who now go to work as soon as they can, force the schools to a quicker adjustment of education to needs?"

It was declared to be fundamentally wrong "that any untrained child, without knowledge of industrial processes or skill in the use of tools, whose aims are vague and aptitudes unknown, should be allowed to work. It is an aggravation of this wrong to allow such a child to take a job which will not supplement previous education, or open the way to skill and independence. Yet children are going into just such work to-day. Therefore, we are but tolerating an intolerable situation which we accept school and industry on this basis and try to put each individual into the best job available for him. Our task is twofold. We must reconstruct our system of education so that it will fit youth for the work which it will have to do; we must also study the processes and needs of industry so thoroughly that every child shall have the maximum of information on which to base his choice of work. Then, perhaps, we must go even farther and reorganize industry in such a way that it will hold positive cultural values for those who devote to it their full energies of mind and body."

An excellent résumé of the conference is contained in Survey, 29: 225-23, November 23, 1912. One of the subjects under discussion was "Why children leave school." Attempts have been made to ascertain why so many children leave school as soon as the law permits. The Survey commenting upon this says:

"A recent inquiry of the Federal Government conducted in six cities proceeded upon the basis that any family which had a per capita income of less than \$1.50 a week would need outside assistance to keep its children in school. It was found that in 25 per cent of the 524 families studied the income was below this amount, and it was therefore concluded that 25 per cent of the children in this group left school because of 'economic pressure' within the home. Findings of the Vocational guidance survey of New York (now called the Vocational education survey and a part of the Public education association) which corroborated this study were made public for the first time at the conference."

710. Prosser, C. A. Practical arts and vocational guidance. Manual training magazine, 14: 209-21, February 1913.

An interesting presentation of the subject of vocational guidance. Shows the importance of the elementary school period. Discusses the problems that confront the teacher. If training in the practical arts is to assist boys "to find themselves in order that at 14 they may make an intelligent choice of their work for the future, it must be varied."

711. Providence, B. I. School committee. Vocational talks. In its Report, 1909-1910. p. 59-64.

Subjects of talks given the pupils not going on into high school from 8th grade, in Providence. p. 61-62.

712. United States. Bureau of labor. Vocational guidance. In its Twenty-fifth annual report, 1910. p. 410-97.

Contains history of the movement. Work in New York City and Boston. Statistics of principal opportunities for industrial education in Boston, etc., compiled by the educational department of the Women's municipal league, April 1910. Gives forms, blanks, and records used.

713. White, Frank M. Business men in the making. Outlook, 98: 989-97, August 28, 1911. illus.

Student aid and vocational advice.

VOCATION BUREAUS.

714. Allen, Frederick J. The Vocation bureau and the Boston school system. National municipal review, 2: 108-10, January 1913.

715. [Buffalo, N. Y. Vocation bureau] American school board journal, 42: 20, May 1911.

716. Gordon, M. M. Ogilvie. Juvenile employment bureaus. Contemporary review, 99: 723-32, June 1911.

Describes Edinburgh, Scotland, system.

717. [London schools] Employment bureaus . . . In Brooklyn teachers' association, Report, 1908-1909. p. 35-37.

718. Manhattan trade school for girls (New York City) Placement bureau. Teachers college record, 10: 291-95, September 1909.

Organized, October 1908.

719. [Rochester, Minn., "Job" bureau] American school board journal, 42: 43, June 1911.

720. Saginaw (Mich.) high school. Employment bureau. Moderator topics, 31: 548, March 18, 1911.
721. Somerville, Mass. School committee. Committee on vocational guidance. *In its Annual report, 1910.* p. 23.
722. [Stephenson, George B.] Scholars' employment bureau in Liverpool. *In North Carolina association of city public school superintendents and principals. Proceedings and addresses, 1911.* Raleigh, Edwards & Broughton printing co., 1911. p. 93.
723. United States. Bureau of education. Juvenile labor bureaus and vocational guidance in Great Britain. *In its Bulletin no. 11, 1912.* Washington, 1912. p. 17.
Shows what is being done in Birmingham, London, and Edinburgh. "In London, where poverty exists in its greatest extent and complications, the public school is rapidly becoming the chief center of the movement for social and industrial reform."
724. Vocation office for girls, Boston. Vocations for Boston girls . . . Boston, The Girls trade educational league [c. 1912] 1 v. 8°. (Bulletin no. 4)
Contains references.

XXVI. TRADES TRAINING.

725. Alexander, Magnus W. The training of men—a necessary part of a modern factory system. [New York, 1910] p. [33]-49. 8°. Reprint from the *Journal of the American society of mechanical engineers* [January 1910].
726. Apprenticeship and skilled employment association. Trades for London boys and how to enter them. London, New York, Longmans, Green and co., 1908. 170 p. 8°. A very detailed consideration of the advantages of different trades and of the schools which offer courses preparing pupils for these trades.
727. Aah, William C. Solving of the skilled mechanic problem by the public trade school. *Pennsylvania school journal*, 59: 549-53, May 1911. Investigation of industrial and trades education in 60 cities.
728. Bolen, George L. Getting a living. New York, Macmillan, 1903. 769 p. 8°. Discusses (Chapter XI) the function of shop schools, manual training, and trade schools. Attitude of organized labor toward trade schools.
729. Bruere, Henry. An investigation of trade and industrial schools. Chicago, The International harvester co., 1904. 50 p. (Out of print) Part I of report deals with industrial trade schools of the South, and Part II with Northern industrial and trade schools and technical institutes. Schools of technology not included. The article on factory education is reprinted in *The Commons* [now *The Survey*] 9: 235-38, June 1904.
730. Citizens' trade school convention. Proceedings and addresses given at Indianapolis, June 10-12, 1907. [Indianapolis, Winona technical institute] 53 p. 8°. Addresses by Frank Gunsaulus, J. A. Emery, P. M. Kling, Walter H. Page, J. W. Van Cleave, Anthony Ittner, Arthur D. Dean.
731. Dean, Arthur D. Principles and methods to be pursued in organizing trade schools. *In Massachusetts. Bureau of labor. Bulletin no. 43, September 1906.* p. 313-22.
732. ——— Trade schools—Private initiative creates public enterprise. *In Citizens' trade school convention. Proceedings and addresses, 1907.* [Indianapolis, Winona technical institute] p. 44-53.
733. Dooley, William H. Practical education for industrial workers. *Educational review*, 38: 261-72, October 1909.
734. Draper, Andrew Sloan. The adaptation of the schools to industry and efficiency; address . . . before the National education association, Cleveland, Ohio, June 29, 1908. Albany, N. Y. [1908] 19 p. 8°. Proposes a plan for factory and trades schools, and shows the relationship of these schools to the public school system.

735. ——— From manual training to technical and trades schools. *Educational review*, 35: 401-11, April 1908.
The writer contends that "the rational equilibrium between the exclusively intellectual and the decidedly industrial interests of the country must be restored and can hardly be restored without" the trades and technical schools.
736. ——— Our children, our schools, and our industries; commissioner's special theme, annual report 1908. —Albany, N. Y. [1907] 48 p. 8°.
Also in New York state teachers' association. Proceedings, 1907. Albany, University of the state of New York, 1908. p. 32-78. (Education department. Bulletin no. 424. May 1908)
737. Freeman, Sarah J. The educational value of bookbinding. *Kindergarten-primary magazine*, 20: 156-58, 210-11, 243-45, January-March 1908.
738. Fullan, M. Thomas. Advantages of the trade school over the apprenticeship system. In *Southern educational association. Journal of proceedings and addresses*, 1908. p. 541-50.
739. Hanua, Paul H. Public trade schools. A stenographic report of a commencement address delivered May 1909. (Winona technical institute. Bulletin, August 1910)
740. Ittner, Anthony. The history of trade schools. In *Citizens' trade school convention. Proceedings and addresses*, 1907. [Indianapolis, Winona technical institute] p. 37-44.
741. James, Edmund James. Public trade schools and technical high schools. In *National association of state universities. Transactions and proceedings*, 1908. Bangor, Maine, Bangor co-operative printing co. p. 309-19.
742. Kimmins, C. W. Trade schools in London. *Elementary school teacher*, 10: 209-19, January 1910.
743. Lovejoy, Owen B. Will trade training solve the child-labor problem? *North American review*, 191: 773-84, June 1910.
744. MacNary, Egbert E. Printing in a manual training shop. *Manual training magazine* 10: 41-49 October 1908.
745. Monaghan, James C. From the standpoint of economic and manufacturing interests, should special trade schools be established? In *National education association of the United States. Journal of proceedings and addresses*, 1909. p. 606-16.
Author says that manufacturers should organize and appoint experts to study the methods that have made Germany, Japan, and other countries so successful. Industrial and industrial-art education must take the place of the system of apprenticeship which has gone or is fast going. "The governments—state and national—show more or less interest. It remains only, for the manufacturers to co-operate."
746. Moving pictures as an aid to teaching trades. *Scientific American supplement*, 87, 76, January 30, 1909.
747. Murray, Michael W. The study of printing. *Manual training magazine*, 9: 329-34, April 1908.
748. Pearse, Carroll G. The city trade school—an important instrumentality for improving the vocational need of the city child. In *National education association of the United States. Journal of proceedings and addresses*, 1912. p. 411-16.
Commends the American type of trade school. Shows the money value of the training in a good trade school.
749. Perry, Charles W. The public trade school. In *North central association of colleges and secondary schools. Proceedings*, 1909. Chicago, Published by the Association, 1909. p. 89-100.
"The influence of the trade school should be used in bridging the fatal gap between fourteen and sixteen years of age."

750. ———. Trade teaching in the public schools. *In Western drawing and manual training association. Proceedings, 1909.* [Normal, Ill., ° 1909] p. 131-42.
Discussion: p. 143-47.
751. Probat, A. F. The school print shop and its possibilities. *Elementary school teacher*, 8: 265-70, January 1908.
752. Richards, Charles Russell. Private trade schools for boys. *Charities and The commons*, 19: 828-39, October 5, 1907.
Professor Richards divides these schools into two classes—the short-course trade school and the long-course trade school. The problem presented is the economic one of support. Describes six of the most prominent short-course trade schools of the country: their means of support, admission requirements, and results obtained by their students.
753. Sayward, William Henry. The relation of the trade school to the trade; an address . . . delivered at the graduating exercises of the North-end union plumbing school, Boston, May 15, 1908. Boston, Printed at the School of printing, North-end union, 1908. 14 p. 12°.
754. Scheer, Meyer. Industrial work. *Philippine education*, 6: 22-23, November 1909.
755. Selden, Frank Henry. Attitude of pupils in shop work. *American school board journal*, 39: 5, December 1909.
756. United States. Department of commerce and labor. Bureau of labor. Conditions of entrance to the principal trades. Washington, Government printing office, 1906. 100 p. 8°. (Bulletin no. 67, November 1906)
A study of the changes in organization and processes of modern industry. Position of the helper system in highly specialized machine industries. Treats of the decadence of the apprenticeship system.
757. Vanderlip, Frank Arthur. The urgent need of trade schools . . . [Indianapolis, Printed at Winona technical institute, 1906] 15 p. 12°.
758. Wahlstrom, Leonard W. A school print shop. *Manual training magazine*, 10: 134-47, December 1908. illus.
759. Warner, Charles F. Education for the trades in America. What can the technical high schools do for it? *In National education association of the United States. Journal of proceedings and addresses, 1901.* p. 665-73.
Discussion: p. 673-82.

XXVII. CO-OPERATIVE, APPRENTICE, AND HALF-TIME COURSES.

CO-OPERATIVE COURSE.

760. Carman, George Noble. Co-operation of school and shop in promoting industrial efficiency. *School review*, 18: 108-14, February 1910.
761. Fitchburg, Mass. School committee. Industrial training. *In its Annual report, 1908.* p. 19-28.
A co-operative industrial course introduced into the high school. A distinctively new and untried feature of high school work. The basis of the plan is the alternating of shop work and school work. The course is of four years' duration. The first year is spent wholly in school, and during the other three years the boys alternate weekly between school and shop.
See also Annual report 1909. p. 35-45.
762. Fulwider, L. A. A co-operative school and shop course. *In Illinois state teachers' association. Journal of proceedings, 1909.* Springfield, Ill., Illinois state journal, state printers, 1910. p. 179-87.
Course of study: p. 183-84.
763. Hunter, W. B. The Fitchburg plan. *In National society for the promotion of industrial education. - Fourth annual convention. Proceedings.* New York City, Society for the promotion of industrial education, January 1911. p. 93-108. (*Its Bulletin* no. 13, pt. III)

764. **Pittsburg University.** Co-operative plan of engineering instruction. *In its Annual catalogue, 1910.* p. 123-25.
"The money consideration received for this practical work will be ordinarily sufficient to meet the tuition expenses for [the student's] entire course at the University."
765. **Schneider, Herman.** Co-operative system of technical education. *Engineering magazine, 34: 354, November 1907.*
Details plan of co-operation existing between the University of Cincinnati and the manufacturers of the city. Students obtain shop practice in the different local industrial plants.
766. ——— Growth of co-operative system. *In National metal trades association. Synopsis of proceedings of 12th annual convention, 1910.* p. 32-35.
Describes the St. Louis plan of co-operation with factories.

APPRENTICESHIP.

767. **Albertson, Ralph.** The decay of apprenticeship and corporation schools. *Charities and The commons, 19: 814-20, October 5, 1907.*
Shows how the modern specialization of industry has brought about a disintegration of the trades.
"Along-with this disintegration and the loss of the old system of apprenticeship training, other great industrial changes have taken place calling for skill of other kinds—for skilled foremen, superintendents, and workers in the skilled sections of the factories that have supplanted the old tradesman, and also for skill in the new arts and trades created by recent science and invention." Advocates industrial education in schools rather than in factories. Article illustrated with graphic statistics.
768. **Alexander, Magnus W.** The apprenticeship system of the General electric company at West Lynn, Massachusetts. *American academy of political and social science. Annals, 33: 141-50, January 1909.*
Describes the origin, the progress and effect of the Lynn system.
In order to get the best results this company organized "a special department—training rooms—devoted entirely to the preliminary practical training of the apprentices. It appointed a superintendent of apprentices . . . and placed him in direct charge of the training rooms. Furthermore, it made an arrangement whereby such instructive commercial work could be transferred from the factory into the training rooms from time to time as the development of the apprentices might require." Finally, classrooms were established in the factory in which the boys might obtain mental training in the related sciences, etc.
The author declares the apprenticeship system of the General electric company to be perhaps the best exemplification of the efficacy of this principle. Similar systems have since been organized by other manufacturing establishments, and the same scheme has been adopted by trade schools founded in recent years.
769. ——— The factory as a continuation school. *In New York state teachers' association. Proceedings, 1909.* Albany, University of the state of New York, 1910. p. 281-92 (Education department. Bulletin no. 483, November 15, 1910)
The educational work of the General electric company, Lynn, Mass.
770. ——— Industrial training from the standpoint of the manufacturer. *In American institute of instruction. Proceedings [1906] Boston, 1906.* p. 373-88.
The education given by the apprenticeship system of the General electric company, West Lynn, Mass., and the needs in the public schools.
771. **Bray, Reginald Arthur.** Boy labour and apprenticeship. London, Constable & co., ltd., 1911. xi, 248 p. 12°.
List of authorities: p. 241-44.
Deploras the conditions in England.
"The object of this volume is altogether practical—to show what reforms are necessary to prevent the growth of the evil by laying the foundation of a new and true apprenticeship system."
772. **Cooley, Edwin G.** Pre-apprenticeship schools of London. *Vocational education, 1: 174-83, January 1912.*
Describes the day, evening, and part-time vocational schools of London.
773. **Cross, C. W.** Practical results from a modern apprenticeship system. *Railway club of Pittsburgh. Official proceedings. September 25, 1908.* v. 7, no. 8, p. 281-86.
Bibliography: p. 286-88.

774. **Dooley, C. E.** Solving of the skilled mechanic problem by schools furnished by manufacturers. *Pennsylvania school journal*, 59: 553-57, May 1911.
Describes the educational system of the Westinghouse electrical and manufacturing company, for its employees. During the four years' apprenticeship the training costs the boy nothing, and he receives in wages nearly \$1,600.00.
775. **Dunlop, O. Jocelyn.** English apprenticeship and child labour . . . with a supplementary section on the modern problem of juvenile labour . . . London, T. Fisher Unwin, 1912. 390 p. 8°.
Bibliography: p. 355-63.
The history of apprenticeship is traced from medieval until modern times. Contains chapters on technical training in 1550; national system of industrial training and the difficulties of its administration; the dissolution of the apprenticeship system; cost of technical education; the development of the twentieth century problems of child labor, &c.
776. **London. County council. Education committee.** The apprenticeship question. Report of the section of the Education committee . . . London, Printed for the London county council, by Jas. Truscott and son, ltd. [1906] 45 p. F°.
R. A. Bray, chairman.
Discusses situation in England, Germany, France, and the United States. Advocates the part time system and evening continuation schools as a substitute for apprenticeships.
777. **Massachusetts. Bureau of statistics of labor.** The apprenticeship system. Part I, Annual report for 1906. Boston, 1906. 86 p. 8°.
Replies to questionnaire sent to employers and officers of trade unions in Massachusetts regarding status of apprenticeship, its regulation, condition, restriction of numbers, and value for training workmen.
778. **Scott, J. F.** Apprenticeship under the English guild system. *Elementary school teacher*, 13: 180-88, December 1912.
Describes apprenticeship during the Middle Ages and the period of the Renaissance.
779. **Stratton, G. F.** Rising industrial problems: the new apprenticeship. *Engineering magazine*, 34: 401-13, December 1907.
Indicates that the attitude of trade unions is hostile to attempts to recruit industrial workers through trade schools, but that they prefer and encourage shop training.
780. **Tirrell, Winthrop.** Summer apprenticeship in the Boston high school of commerce. *School review*, 19: 34-41, January 1911.
The scheme devised by the Boston business men's advisory committee.
781. **Warner, W. R.** The apprenticeship question of to-day. *Iron age*, 81: 1786-87, June 4, 1908.
782. **Wright, Carroll D.** The apprenticeship system in its relation to industrial education. Washington, Government printing office, 1908. 116 p. 8°.
(U. S. Bureau of education. Bulletin no. 6, 1908)
List of references: p. 87-92.
Describes certain ways in which the desired combination of schooling and apprenticeship may be effected, as exhibited by experience in a few of our leading industries.

HALF-TIME COURSE.

783. [Freeport (Ill.) half-time factory co-operative work for high schools] *American educational review*, 30: 620-21, August 1909.
784. **Higgins, Milton R.** Plan of a "half-time" school. *American society of mechanical engineers*, 21: 646-78.
One of the first papers to indicate a feasible plan whereby boys could attend school part of a day and work in a factory the remainder of the working day.
785. **Kelley, Mrs. Florence.** Part-time schools. *Child labor bulletin*, 1: 106-12, June 1912.
"We can not give to young girls and boys eight hours of stupefying work and then save them for an intelligent citizenship by adding evening school work to that. It can not conceivably be sufficiently recreational."

786. **Schneider, Herman.** Partial time trade schools. *In* American academy of political and social science. *Annals*, 33: 50-55, January 1909.
 Recommends a broad plan of co-operation between the public schools and the industries.
787. **Stockbridge, E. P.** Half time at school and half time at work. *World's work*, 21: 14265-75, April 1911.
 Describes the co-operative education plan of the University of Cincinnati, which is working with the industrial plants, the libraries, the schools, and other agencies.

XXVIII. CONTINUATION SCHOOLS.

788. **Bookwalter, Alfred G.** Continuation work—education for the industrial worker. *Charities and The commons*, 19: 856-61, October 5, 1907.
 Discusses the various types of continuation schools—correspondence; Y. M. C. A.; private, etc. See also Boston public schools. Circular of information relating to evening and continuation schools. Boston, 1912. p. 87-85.
789. **Chicago. Board of education.** Continuation schools. *In its Report*, 1909. p. 86-90.
 "The superintendent reports that in his opinion the work of the continuation schools will not be successful unless the merchants, the manufacturers, and the workmen of the city lend their assistance. Schools of this kind must be thoroughly practical." p. 87.
790. **Cincinnati. [Board of education]** Continuation schools. *In its Annual report*, 1909. p. 65-68; 1910. p. 70-74. table.
791. **Cooley, Edwin G.** The continuation school. *American school board journal* 45: 11-59, August 1912.
 Shows the need of a new type of school in our educational system—the vocational continuation school.
792. **Dutton, Samuel Train and Snedden, David (Samuel)** Administration of evening and continuation schools. *In their* The administration of public education in the United States. New York, The Macmillan company, 1908. p. 480-91.
 References: p. 491.
793. **Hanus, Paul Henry.** Industrial continuation schools for boys and girls from fourteen to sixteen years of age. *In* New York state teachers' association. Proceedings, 1906. p. 31-34.
 Schools in Switzerland, Germany, and France. Cites the grave need for similar schools in the United States.
794. **Jones, Arthur J.** The continuation school in the United States. Washington, Government printing office, 1907. 157 p. 8°. (U. S. Bureau of education. Bulletin no. 1, 1907)
 Bibliography: p. 145-49.
 Advocates the need of such schools by statistics showing the rapid decline of school attendance after the age of industrial worth is reached. It indicates briefly how much more extensive and efficient German and English schools of this type are than our own. The work of many typical American schools is described, and finally the place and purpose of the continuation school in our system of education are defined.
795. **Kerschensteiner, Georg.** The fundamental principles of continuation schools. *In his* Three lectures on vocational training . . . Published by the Commercial club of Chicago, 1911. p. 1-16.
 Also in *School review*, 19: 162-77, March 1911.
796. **Leavitt, Frank M.** The continuation school: Cincinnati's examples. *Vocational education*, 2: 218-34, January 1913.
 A comprehensive review of the work accomplished in Cincinnati, Ohio. Author says these schools "furnish the best illustrations of this type of educational effort to be found in the country." The schools can be grouped, for purpose of study, as "evening schools," "voluntary continuation schools" and "compulsory continuation schools."

797. **Massachusetts. Commission on industrial education.** Industrial continuation schools for male commercial employees, Munich. Boston, Wright & Potter printing co., state printers, 1907. 12 p. 8°. (*Its Bulletin* no. 2)

The subjects of instruction include arithmetic, exchange, bookkeeping and accounts current, commercial correspondence and reading, commercial geography and the study of goods, life and citizenship, stenography, and penmanship. Under the head of goods, "the individual raw products and the manufactured articles are considered as regards their source, manufacture and qualities."

798. **Reber, Louis E.** Industrial and continuation schools, their foundation, organization, and adjustment to the life of the community. Madison, Published by the board, 1912. 18 p. 8°. (Wisconsin. State board of education. Bulletin no. 5)

Reviews work accomplished in other cities—Chicago, Cincinnati, and Cleveland, etc.—and emphasizes the need of industrial education.

The writer says: "In Wisconsin, as elsewhere in this country, the greatest present need is for the continuation school. . . . Wisely vocationalized public schools and well-organized continuation schools will do much toward dignifying all occupations, and thus will create contented and happy classes where discontent now frequently exists."

XXIX. CONTINUATION SCHOOLS IN FOREIGN COUNTRIES.

GREAT BRITAIN.

799. **Balfour, Graham.** Continuation schools. In *Imperial education conference. Report, 1911.* London, Printed by Eyre and Spottiswoode, 1911. p. 183-95. Discussion, p. 195-201.

800. **Cooley, Edwin G.** The Scottish system of continuation schools. *Vocational education*, 1: 225-42, March 1912.

Shows the thoroughness with which the Scotch have undertaken the work of vocational education.

801. **Great Britain. Board of education.** Report of the Consultative Committee on attendance, compulsory or otherwise, at continuation schools. London, Eyre and Spottiswoode, 1909. 2 v. 672 p. F°.

Chairman, Arthur H. D. Achland.

I. Report and appendices. II. Summaries of evidence.

Compulsory continuation schools, p. 133-86.

802. **London. County council. Education committee.** Report on eight years of technical education and continuation schools (mostly evening work) in two parts. Presented to the education committee on the 11th December, 1912. London, James Truscott and sons, Ltd. [1912]. 120 p. F°.

Two-thirds of the children of London who leave the elementary schools enter unskilled occupations. Report says that the great weakness of the evening schools is the instability of attendance. Mr. Bray, in his memorandum on the subject, declares that nothing but compulsion will successfully cope with the 40,000 ineffective.

803. **Sadler, Michael Ernest, ed.** Continuation schools in England and elsewhere; their place in the educational system of an industrial and commercial state. Manchester, University press, 1907. xxvi, 779 p. tab. (fold.) (Publications of the University of Manchester. Educational series, no. 1)

An important volume, in which are collected careful and competent accounts of the history and present status in Great Britain, of the various agencies for "further education," with 8 brief chapters on such schools in the chief European countries and the United States. The contributions of 18 different authors have been carefully edited by Professor Sadler (himself a considerable contributor), and the result is a veritable encyclopedia of information hitherto widely scattered or quite nonexistent.

GERMANY.

804. **Barger, Florence E.** Continuation school work in the Grand Duchy of Baden and in Canton Zurich. London, Wyman & sons [1908?] 35 p. 8°. ([Great Britain] Board of education. Educational pamphlets, no. 6)

805. Gerner, B. Die fortbildungs und fachschulen in den grösseren örten Deutschlands . . . Leipzig, A. Hahn, 1904. 458 p. 8°.
806. Great Britain. Board of education. Consultative committee. Report on attendance, compulsory or otherwise, at continuation schools. Presented to Parliament by command of His Majesty. London, Printed for H. M. Stationery office, by Eyre and Spottiswoode, ltd., 1909. 2 v. 8°. ([Parliament. Papers by command] Cd. 4757-4758)
 Contents.—1. Report and appendix. (Adopted by the committee, May 7th, 1909)—2. Summaries of evidence.
 See also Great Britain. Board of education. Compulsory continuation schools in Germany. London, 1910. 75 p. 8°. (Educational pamphlets, no. 18)
807. Hanus, Paul Henry. The technical continuation schools of Munich. Boston, School of printing, North-end union, 1906. 14 p. 16°.
808. Lautner, John E. Industrial continuation schools of Munich. Western journal of education (Ypsilanti) 3: 385-401, November 1910.
809. Lembke, Fr. Der ländliche fortbildungs-schulunterricht, präparationen und aufgaben. Im anschluss an den "Lehrplan für ländliche fortbildungsschulen in Preussen" . . . Leipzig, Quelle & Meyer, 1909. 105 p. 8°.
810. Roberts, Elmer. The passing of the unskilled in Germany. Scribner's magazine, 51: 199-204, February 1912.
 A review of the status of continuation trade and commercial schools of Germany. According to the author "the processes at work tend to convert the whole population into the users of tools and machinery."
811. Roman, Frederick W. Die deutschen gewerblichen und kaufmännischen fortbildungs- und fachschulen und die industriellen und kommerziellen schulen in den Vereinigten Staaten von Nord-Amerika . . . Leipzig, Duncker & Humboldt, 1910. 214 p. 8°.
812. Sterckx, H. Das deutsche fortbildungsschulwesen, nach seiner geschichtlichen entwicklung und in seiner gegenwertigen gestalt. Leipzig, G. J. Göschen, 1908. 176 p. 16°. (Sammlung Göschen [392])
 Literatur: p. 5-6.
813. United States. Bureau of education. Consular reports on continuation schools in Prussia. Washington, Government printing office, 1913. 30 p. 8°. (Its Bulletin no. 9, 1913)
 Contains interesting data on vocational training in Magdeburg; part-time schools for industrial workers in Prussia; the city continuation and trade school of Brunswick; continuation schools of Barmen; and part-time shoe schools in Breslau. Reports made by United States consuls.

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814. Pellison, Maurice. Les œuvres auxiliaires et complémentaires de l'école en France. Paris, Imprimerie nationale, 1903. 161 p.
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815. Turman, Max. L'éducation populaire; les œuvres complémentaires de l'école . . . 3d rev et augm . . . Paris, V. Lecoffre, J. Sabalda & cie, 1907. 426 p. 12°.
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XXX. COLLEGE ENTRANCE REQUIREMENTS AND VOCATIONAL TRAINING.

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821. De Laguna, Theodore. Vocational studies for college entrance requirements. In National society for the scientific study of education. Sixth year-book. Chicago, University of Chicago press, 1907. pt. I: 36-49.
822. Herrick, Cheesman A. Vocational subjects for college entrance requirements. In National society for the scientific study of education. Sixth year-book. Chicago, University of Chicago press, 1907. pt. I: 7-15.
823. Vickroy, W. R. Manual training as an entrance requirement. Southern educational review, 3: 828-34, March 1906.

XXXI. MANUAL TRAINING.

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"References to publications containing statistical data on instruction in the manual and fine arts": p. 121.
825. Bennett, Charles A. Outline of a high school course in metal-working. Manual training magazine, 9: 335-39, April 1908.
826. ———. Visiting manual training schools in Europe. I, II, III, IV, V. Manual training magazine, 11: 1-26, 109-34, 214-36, 345-65, 440-55; October, December 1909, February, April, June 1910.
1. London. 2. Oxford and Birmingham. 3. Leicester and Sheffield. 4. Manchester and Leeds. 5. Glasgow and Edinburgh.
827. Berry, Thomas W. The pedagogy of educational handicraft. London, Glasgow [etc.] Blackie & son limited, 1909. 100 p. 12°. Bibliography: p. 97-100.
"Makes reference to originality, but gives in a small compass the utterances of eminent educationists on the subject and other practical information not easily accessible. Thus we have an estimate of the cost of materials and fittings for a workshop, examination questions for teacher's diploma, and a bibliography."—Journal of education (London) April 1910, p. 254.
828. Bhabha, H. J. Special report on manual training in schools of general education. Bangalore, Government press, 1909. 145 p. illus. 8°.
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Suggestions for teaching woodwork, with emphasis on the need that manual training teachers be as well equipped on the pedagogical side as teachers of other subjects.

830. **Bonnell, Clarence.** The first week at the beginning of the school year in the high school woodworking shop. *Manual training magazine*, 13: 401-23, June 1912.

Suggests to those of limited experience some practical expedients, which, used in a shop where space and light and the instructor's time are all limited, have proved to be helpful.

831. **Boone, Cheahire Lowton.** A course of study in manual training—VII, VIII. *Manual training magazine*, 11: 46-58, 410-17, October 1909, June 1910.

832. ——— Pottery craft in schools. I. Equipment; II. Building processes; III. Design. *School arts book*, 9: 118-26, 329-40, 925-34, October, December 1909, May 1910.

833. **Boston.** Report of the Mechanic arts high school . . . Boston, Municipal printing office, 1901. 53 p. illus. plates. 8°.

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834. **Burnham, Frederic L.** Supervision and the teaching of the manual arts in the high school. [Boston, Wright & Potter printing company, 1909] 30 p. 8°.

Reprinted from the 72d report of the Massachusetts board of education.

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838. **Crawshaw, Fred D.** What can the high schools do better to help the industries? *Manual training magazine*, 13: 193-204, February 1912.

This article deals with "the high-school boy in the training he may get in the high school manual arts department to give him either the cultural values which have been accredited to manual training or the vocational values which it is believed the public high school manual arts should have."

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840. **Dean, Arthur D.** Relation of manual training in the public schools to industrial education and efficiency. *Craftsman*, 14: 74-81.

Essay awarded the first prize in the "Craftsman" competition on this subject.

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842. **Draper, Andrew Slean.** From manual training to technical and trades schools. *Educational review*, 35: 401-11, April 1908.

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843. **Fitch, Sr Joshua G.** Hand work and head work. In *his Educational aims*. p. 145-76.

Psychological basis, educational influence and limitations to the value of manual training. Gives accounts of some celebrated technical schools.

844. **Gilbert, Charles B.** The motor activities in expression. *Educational foundations*, 20: 7-23, September 1908.

A suggestion that manual training and physical culture be recast along the lines of the expression of thought and feeling.

845. **Great Britain. Board of education.** Manual instruction in public elementary schools. London, Printed for H. M. Stationery off., by Eyre & Spottiswoode, 1910. iv, 34 p. 8°.
846. ———. Manual instruction in secondary schools. London, Printed for H. M. Stationery off., by Wyman and sons, limited, 1908. 2 p. F°. (*Its Circular 547*)
Originally issued as Circular 603 in July, 1905, and revised in June, 1908.
Signed: W. N. Bruce.
847. **Harvey, Lorenzo Dow.** Report of the Commissioner appointed by the Legislature in 1901 . . . to investigate . . . courses of instruction in manual training and domestic economy, adapted to graded schools; and to recommend a plan for the organization of a training school for the preparation of teachers of these subjects . . . Madison, Democrat printing co., 1902. 45 p. 12°.
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849. **Hein, Leon F. A.** The cost of materials for manual training in the elementary grades. Manual training magazine, 14: 129-37, December 1912.
A questionnaire was sent to 41 supervisors in 15 states and the District of Columbia. Writer tabulates the results obtained.
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Author says that "the manual training high school of the future must be a vocational school, pure and simple, as all high schools are now and probably will be in the future. The immediate educational problem of the manual training school is the determination of its particular vocational function."
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856. **Markus, Henry F.** A scheme for grading in manual training. Manual training magazine, 13: 450-51, June 1912.
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857. Moore, Harris W. Manual training toys for the boy's workshop. Peoria, Ill., The manual arts press [1912] 111 p. illus. 8°. "Dedicated to the boy who likes to tinker 'round."
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XXXII. PERIODICALS.

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879. Die Arbeitsschule. Edited by Dr. Alwin Pabst. Leipzig, Germany. Published by Messrs. Quelle & Meyer, 14 Krenzstrasse, Leipzig, Germany. (Monthly)
880. Educational handwork. Edited by George F. Johnson, Liverpool, England. Official organ of the Educational handwork association. Published by Messrs. Percy Lund Humphries & co. Ltd., Bradford, England. (Monthly)
881. Manual training. Edited by John Arrowmith, Halifax, N. S. Official organ National association of manual training teachers. Published at Byron House, 85 Fleet street, London, e. c., England. (Monthly)
882. Manual training magazine. Edited by Charles A. Bennett. Published by The manual arts press, Peoria, Ill. (Bimonthly)
883. Revistade educacion. Published by the Sociedad general de publicaciones, Diputacion, 211, Barcelona, Spain.
884. Schoolcraft. Edited by W. A. Milford, "Bryghte Holme," Berea, Johannesburg, South Africa. Published by Messrs. J. C. Juta & co., P. O. box 1010, Johannesburg, South Africa.
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