

1930

Employee training by business institutions



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"EMPLOYEE TRAINING BY
BUSINESS INSTITUTIONS"

Submitted by Francis R. Morse as
partial requirement for the de-
gree of Master of Business Admin-
istration.

April 1, 1930

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Part I
INTRODUCTION

THE PRESENT SITUATION: Every industry has employees teaching others but in many cases the instruction is neither organized nor recognized as a school. Personnel problems are considered today to be very important ones confronting business and industry, as it is doubtful if progress in this field has kept abreast of that made in the machine and productive world. Furthermore, all industry, regardless of the extent to which automatic labor saving equipment is being utilized, is controlled by human beings. This means that training of personnel is and must continue to be a fundamental problem. It is receiving the attention of industrial, governmental, and educational workers as never before.

It is the purpose of this paper to set forth the extent to which a representative part of the business and industrial world is training its own employees; the reason why this function, seemingly one of our school system's objectives, has not been left in the hands of educators; the approximate prevalence of this phase of personnel work and the present trend.

Employees may receive their vocational training:

- A. At a public or private school
- B. On the job, devoting part or full time to a training program
- C. Under a cooperative plan of school system and employer, whereby part of the employee's time is spent in attending classes designed for the type of work in which he is engaged, the balance of his time being devoted to work and study on the job.

Roughly speaking, employees fall into one of three groups: workers, leaders or executives. The most extensive training program for workers is incorporated in the apprenticeship systems; training of leaders commonly comes under foremanship programs, receiving less attention corresponding to the smaller number affected. The training of executives is a branch of this larger field receiving considerable thought and time on the part of our higher vocational schools in cooperation with a limited number of large corporations.

This study aims primarily to cover the workers--the masses--although it is necessary to show the relation which exists between the different groups.

SIGNIFICANCE OF INVESTIGATION IN THE EMPLOYEE

TRAINING FIELD: Practically every executive connected with a personnel department is confronted by the problem of securing the best trained men for the firm he represents. The extent to which a firm is successful oftentimes depends on how the training of its employees compares with that of the employees of its competitors. Tead and Metcalf⁽¹⁾ list six major activities of a personnel department: employment, health and safety, education, research, service, adjustment and joint relations. Considering the fact that employment or hiring is incidental and that health and safety are in most states regulated by statutes, education is placed at the top of the list of functions of a voluntary nature. Something of the importance attached to this training may be seen from the fact that in a study⁽²⁾ of thirty-two companies maintaining apprentice courses and furnishing theoretical instruction without outside assistance, it was revealed that twenty-three employed full-time apprentice supervisors, while nine supervised the work by

(1) PERSONNEL ADMINISTRATION--Tead & Metcalf
Page 31

(2) APPRENTICESHIP--Chamber of Commerce of U. S.
Page 24

the part-time efforts of someone in the employ of the company.

Analysis shows that personnel training is an economic problem as well as business or educational one. Training affects, even controls, efficiency and this in turn affects prices. Prices regulate consumption of commodities and therefore have a bearing on distribution and production.

Educators, too, are anxious to know the place of the school in vocational training. Some of the leaders in this branch of education like Professor David Snedden of Teachers' College, New York City, feel that our vocational schools are mostly at fault because we try to mix cultural and vocational subjects but when these have been segregated and properly planned in conjunction with industry, they will function successfully and remove to some extent, the necessity for the business and industrial world to train its own workers. The following named courses offered by leading Eastern universities give some indication of the attention this problem commands with higher institutions of learning:

College of Business Administration of
Boston University (3)

1. Labor and Personnel Management
2. Factory Practice and Management Problems
3. Industrial Management
4. Psychology of Working Conditions

School of Commerce, Accounts and Finance of
New York University (4)

1. Labor Problems and Employment Management
2. Personnel Administration
3. Problems in Handling Men
4. Technique of Personnel Management

Teachers College of
Columbia University (5)

1. Educational Personnel Administration
2. Analysis of the Individual
3. Problems of Juvenile Employment
4. Administration of Vocational Education

One of the highest ranking forms of vocational institutions is supposed to be the ordinary private business school. Training typists, stenographers, clerks and other office workers is such that conditions can nearly be duplicated in the school and the graduates from such institutions are often considered to be the best-trained of all the vocational schools. Yet we find business men giving short courses to these young people in order to train them, not in the theory of business nor in the fundamentals of typewriting, shorthand, filing or

- (3) Catalogue of College of Business Administration of Boston University, 1929
- (4) Catalogue of School of Commerce, Accounts and Finance of New York University, 1929
- (5) Catalogue of Teachers College of Columbia University, 1929

bookkeeping but in the particular methods used by their own establishment.

If it is necessary for additional training in a type of school ranking as high as the business school does, how much more necessary is it to train workers and leaders in other branches of business and industry? Standardization in training is beginning to receive attention as has standardization of production in the past. We all know of the tremendous strides made in standardizing articles of manufacture in this country, resulting in great saving in time, money, and equipment. In the same way, there is now an endeavor to standardize vocational education so that it is possible for the business world to know that an employee who has graduated from a vocational school can perform certain definite accomplishments in the subjects studied and in the same way the graduate of a mechanical arts high school will have taken a standard course of study and each course of study will have covered certain definite amounts of theory and practice.

Vocational schools are very much interested in the employee training programs of business, because such programs tell those in charge of the schools what is demanded by business. There is no question but that a corporation is not spending time and money to train its young people except in the subjects it feels they must know in order to be more valuable to the firm for which they work. Large plants are more and more coming to realize that the ignorance of their employees is the company's loss. (6) In some cities we have a very well worked out cooperative plan of training between the School Board and the industrial organizations of the city. Probably two of the oldest among these are the cooperative systems at present maintained in York, Pennsylvania and Laurel, Nebraska. In the former example, (7) it is called the "High School Cooperative Industrial Department" and its work is described further on in this study.

The Federal Board for Vocational Training gives the following list of higher institutions and secondary schools which are working together to mutual advantage: (8)

- (6) FIELDS OF WORK FOR WOMEN--Lueck, Page 12
- (7) REPORT OF BOARD OF EDUCATION, York, Pa. 1920
- (8) APPRENTICE EDUCATION, Federal Board for Vocational Education, 1923 Page 7

Cooperative courses in higher institutions

University of Cincinnati, Cincinnati, Ohio
 Northeastern College, Boston, Mass.
 Georgia School of Technology, Atlanta, Ga.
 Municipal University of Akron, Akron, Ohio
 Massachusetts Institute of Technology, Cambridge, Mass.
 School of Engineering (electrical) Milwaukee, Wis.
 Drexel Institute, Philadelphia, Pa.
 Ohio Mechanics Institute, Cincinnati, Ohio
 Harvard Engineering of the Newark, New Jersey, Technical School
 Antioch College, Yellow Springs, Ohio

Cooperative courses in secondary institutions

Vocational school, Wilmington, Del.
 County board of education and Rossville School, Rossville, Ga.
 High school (pulp and paper course) Rumford, Me.
 The Industrial School of Beverly, Beverly, Mass.
 High schools, Boston, Mass.
 High school, Fitchburg, Mass.
 Southbridge Vocational School, Southbridge, Mass.
 Boys' High School, Paterson, N. J.
 The Haaren High School and the Newtown High School, New York
 High schools, Cincinnati, Ohio
 Stivers High School, Dayton, Ohio
 High school, Marion, Ohio
 Warren High School, Warren, Ohio
 Abington High School, Abington, Pa.
 High school, Chester, Pa.
 Industrial High School, Lock Haven, Pa.
 Ralston Industrial School, Pittsburgh, Pa.
 Williamsport High School, Williamsport, Pa.
 High school, York, Pa.
 Technical High School, Providence, R. I.
 Providence Trade School, Bridgham Street, Providence, R. I.
 The Textile Industrial Institute, Spartanburg, S. C.
 High school, Springfield, Vt.

In many cases, students plan to secure all of their vocational training on the job and it is necessary for the administrator of an academic school to know just what his young people can obtain after leaving his institution in the way of specialized training.

It would seem, then, that this problem is one of general interest. It is an extensive one and one which cannot be solved right away. We can hardly expect to get more from a survey of it than recognition of its importance or an indication of its present tendencies.

METHODS FOLLOWED: In a report of this kind, the first problem is to find out what has been done. This is necessary, not only that no duplication of effort may exist, but that we may start with all the information available and carry it as far as conditions will permit. Considerable investigation has been made by the Federal Board of Vocational Education, the Chamber of Commerce of the United States, the National Department of Education, by certain professors in higher institutions of learning such as Dr.

Morris and Dr. Wright, by personnel workers in some of our large corporations and by the educational or training departments of certain organizations within specialized fields such as the National Metal Trades Association, the American Institute of Banking, the National Association of Retail Grocers, the Hotel Greeters Association, the Tanner's Council of America, the National Association of Real Estate Boards, Society for the Promotion of Engineering Education, the Institute of American Meat Packers and certain organizations interested in business in general such as the National Industrial Conference Board, the American Management Association, the Personnel Research Federation, and the Taylor Society.

The conditions existing at the present time in various representative types of business and industry are shown somewhat in detail in Part III. These were found in various ways. In some instances, very thorough reports are issued annually showing the progress made during the past year. In other cases, outlines in pamphlet or mimeographed form are issued concerning work they are doing. Letters and question-

naires have been sent to many hundred corporations and organizations in order that the information gained from those who responded might be a fairly representative cross-section of business and industrial life of the country. In a few cases, plants have been visited and information has been obtained first-hand from an inspection of the training groups and in conversations with the supervisors in charge.

Valuable information, from the point of view of the educational systems of a number of our more important industrial cities, has been obtained by the Department of Manufacture in a questionnaire which they addressed to the city Departments of Vocational Education. (9) Letters were sent to 42 representative cities with 30 answers received.

Those responding were as follows: Altoona, Pennsylvania; Atlanta, Georgia; Baltimore, Maryland; Birmingham, Alabama; Buffalo, New York; Cincinnati, Ohio; Chicago, Illinois; Cleveland, Ohio; Columbus, Ohio; Dayton, Ohio; Denver, Colorado; Detroit, Michigan; Erie, Pennsylvania; Grand Rapids, Michigan; Holyoke,

(9) APPRENTICESHIP--Chamber of Commerce of the U. S.
1927 Pages 46-47

Massachusetts; Indianapolis, Indiana; Kansas City, Missouri; Los Angeles, California; Lowell, Massachusetts; Milwaukee, Wisconsin; New York, New York; Newark, New Jersey; Philadelphia, Pennsylvania; Pittsburgh, Pennsylvania; Richmond, Virginia; Rochester, New York; Seattle, Washington; Springfield, Massachusetts; Wilmington, Delaware; Worcester, Massachusetts.

No replies were received from 12 city school systems as follows: Boston, Massachusetts; Bridgeport, Connecticut; Charleston, South Carolina; Fall River, Massachusetts; Johnstown, Pennsylvania; Memphis, Tennessee; Minneapolis, Minnesota; New Orleans, Louisiana; Oakland, California; Providence, Rhode Island; St. Louis, Missouri; St. Paul, Minnesota.

A list of the questions and answers received will be found in Part C of the Appendix.

One change which seems to be evident in a study of the training departments of various corporations is a desire to find out the real purpose which private industry should have in training its own workers. Authorities seem to agree that there may be three objectives in such training, namely, ability or skill, interest and enthusiasm, and institutional spirit.

Most personnel directors try to justify the courses which they are offering by showing conclusively that studies or training which will develop any one or combination of these objectives cannot be obtained in any other way. Another point which naturally interests private enterprise is the cost of such work. The public school system is supported by the taxes of the people and, according to present-day educators, is rightfully expected, through its vocational departments, to train young people for their life work.

The problem then arises, what courses should be offered and financed by the public school authorities and which ones are rightly the concern of the business and industrial world? The line of demarcation seems to be between those courses which are beneficial directly and exclusively in a given plant and those beneficial to the employee directly or indirectly in any plant. Some corporations have been so enthusiastic in their private training courses that they have offered to present any course for which 25 or more employees signed up, regardless of the bearing of the course on that particular industry.

From a study of the work of the leaders in this field, it would seem that this was carrying it too far and without justification, for while private enterprise may offer such courses more efficiently than the public school system, there is no promise of permanence of such a condition and no reasonable grounds on which to justify the work.

SOURCES OF MATERIAL: Comparatively few books have been printed on the subject of employee training. Probably the outstanding one is Dr. John Morris's book entitled "Employee Training", ⁽¹⁰⁾ in which he describes the training courses offered by the following representative industrial houses:

1. Westinghouse Electric & Manufacturing Company
2. General Electric Co., Schenectady Plant
3. General Electric Co., West Lynn Plant
4. Western Electric Company
5. Goodyear Tire & Rubber Company
6. Ford Motor Company
7. Packard Motor Car Company
8. The Norton Company
9. Watervliet Arsenal
10. Winchester Repeating Arms Company
11. Mergenthaler Linotype Company
12. The Carnegie Steel Company
13. National Cash Register Company
14. R. Hoe & Company
15. Pratt & Whitney Company

(10) EMPLOYEE TRAINING--Morris--McGraw, Hill Co.

16. Browne & Sharpe Manufacturing Company
17. Yale & Towne Manufacturing Company
18. Westinghouse Air Brake Company
19. Weston Electric Instrument Company
20. De la Vergne Machine Company
21. Hyatt Roller Bearings Division, General Motors Corp.
22. Fore River Plant, Bethlehem Shipbuilding Corporation
23. United States Navy Yard of Brooklyn
24. Atchison, Topeka & Santa Fe Railroad System
25. American Locomotive Company
26. R. R. Donnelly & Sons Company
27. The Submarine Boat Corporation
28. Dennison Manufacturing Company
29. Gisholt Machine Company
30. J. & T. Cousins Company
31. The Sperry Gyroscope Company
32. The United Shoe Machinery Company
33. Habirshaw Electric Cable Company
34. Shephard Electric Crane Company

This book was published in 1921 and many changes have taken place even in the corporations mentioned in this study. A few have been described in the present work in an endeavor to find the trend of the times by noting the changes which have been made. A number of other books have been published which describe employee training in a somewhat limited way within a particular industry. In most cases, the methods employed have been so arranged that they would not be practical in other concerns with dissimilar local conditions.

Most of the periodicals, in their articles on this subject, have been unsatisfactory for the same reason--they have been too specific in the methods

employed. However, from a study of a great many of these individual cases, we are able to find similarities and thus estimate the type of work being done as a whole.

Probably more material, valuable in that it is complete and up-to-date, is available through governmental departments, especially the Chamber of Commerce of the United States, the Department of the Interior, Bureau of Education, and the Federal Board for Vocational Education. They seem to recognize the problem and are making extensive surveys to find out what is being done together with results obtained in order that they may pass the information along to those who have been less fortunate.

It will be noted from question V in the Department of Manufacture's questionnaire (11) that the greatest handicaps recognized by public school authorities in their apprentice training programs were

1. The lack of adequate practical training on production work, such as only industry

(11) APPRENTICESHIP, Chamber of Commerce of U. S. 1927, Page 46

can supply

2. The "Employer" attitude.

This would lead us to believe that there is still a lack of appreciation, on the part of educators and those in business, for the work which the other is doing. It would seem that when we come to a more definite understanding as to just what training can best be obtained in school and then what can best be obtained through private training programs, a great deal of this misunderstanding will be removed and both factions will be enabled to do more and better work.

Letters were sent to a number of educational systems to ascertain whether or not they cooperated with industry to the extent that they had in pamphlet or in mimeographed form an outline of the work they are doing. In most cases, the answer seemed to be that their work was still in a formative stage and had not advanced to the extent that they deemed it wise to have it in printed form. One noteworthy exception was the work being done
(12)
by the public schools of York, Pennsylvania.

(12) REPORT OF BOARD OF EDUCATION, York, Pennsylvania 1920

A cooperative industrial department was established in that city in 1911, which is a joint organization of the York School Board and the York Manufacturers' Association. They have worked out a plan whereby all high school boys within the city have an opportunity to learn a trade and at the same time to secure the usual high school education.

The courses offered at the high school have been worked out very carefully with the assistance of the members of the Manufacturers' Association so that the requirements of the business world are taken into consideration. For instance, in their English Department, they offer what is called "Industrial English" which includes in addition to the content we would naturally expect in a high school English course, training in the writing of shop reports, the use of magazine articles, government bulletins and other reference sources, oral English as needed for business gatherings, and similar work. In the History department, special attention is given to industrial phases with the result that the boys enter their life work with a better knowledge of the background of their work. Physics and Chemistry are also offered from the industrial point of

view. Such vocational subjects as mechanical drawing, cabinet making, pattern making, electrical training and machine training are included in the school curriculum.

The apprentices are located in 26 different plants and engaged in 12 branches of work. The last report available showed 207 high school students being affected by this plan. Copies of the agreements entered into by the manufacturing plant, the apprentice, the school, and the relative or guardian are given in Section B of the Appendix.

Most of the information used in this report comes from business itself and the response which busy employment managers and personnel directors gave to the letter which was sent them was surprising. The following list is a partial one of business enterprises covering various fields which sent an outline of the work they are doing. A detailed description has been given of but a few for each line of work so that the study may truly be a representative one. In many cases, so many concerns in the same field were doing such outstanding pieces of work with their employee training groups that

it was very difficult to tell which one to use, but in every case, emphasis has been placed on those firms who have had the most experience with this type of work and whose work seemed to be most adaptable to general conditions and most representative of that particular field.

Commonwealth Steel Co., Granite City, Illinois
 General Electric Co., Schenectady, New York
 General Electric Co., Lynn, Massachusetts
 Mandel Brothers, Chicago, Illinois
 New York Central Railroad, New York, New York
 Stokes & Smith Co., Philadelphia, Pennsylvania
 Falk Corp., Milwaukee, Wisconsin
 Warner & Swasey Co., Cleveland, Ohio
 U. S. Aluminum Co., New Kensington, Pennsylvania
 Baltimore and Ohio Railroad, Baltimore, Maryland
 Lord & Taylor, New York, New York
 Cincinnati Milling Machine Co., Cincinnati, Ohio
 American Locomotive Works, Schenectady, New York
 Ludlow Manufacturing Co., Ludlow, Massachusetts
 National Cash Register Co., Dayton, Ohio
 Brown & Sharpe Manufacturing Co., Providence,
 Rhode Island
 Greenfield Tap & Die Corp., Greenfield, Massachu-
 setts
 Stone & Webster, Boston, Massachusetts
 Ingersoll-Rand Company, New York, New York
 Fore River Shipbuilding Corp., Quincy, Massachu-
 setts
 National City Bank, New York, New York
 Southern Bell Telephone Co., Atlanta, Georgia
 R. R. Donnelley & Sons Co., Chicago, Illinois
 United Engineering & Foundry Co., Youngstown,
 Ohio
 Boston Elevated Railways, Boston, Massachusetts
 Yale & Towne Manufacturing Co., Stamford, Con-
 necticut
 David Lupton's Sons Co., Philadelphia, Pennsyl-
 vania

William Filene's Sons Co., Boston, Massachusetts
Bethlehem Steel Corporation, Bethlehem, Pennsylvania
Edison Electric Illuminating Co., Boston, Massachusetts
Pennsylvania Railroad Co., Philadelphia, Pennsylvania
Goodyear Tire & Rubber Co., Akron, Ohio
Reo Motor Co., Lansing, Michigan
R. H. Macey & Co. Inc., New York, New York
Delaware & Hudson Railroad, New York, New York
Southern Pacific Railroad, San Francisco, California
Union Pacific Railroad, Omaha, Nebraska
Western Electric Company, Chicago, Illinois
Boston & Maine Railroad, Boston, Massachusetts
Worthington Pump & Machinery Corp., New York, New York
Chesapeake & Ohio Railroad, Richmond, Virginia
American Telephone & Telegraph Company, New York, New York
Atcheson, Topeka & Santa Fe Railroad, Topeka, Kansas
Pennsylvania Railroad, Philadelphia, Pennsylvania

It may be well to give a few definitions so that common interpretation may be made in the cases described in the third section of this work. It is quite common for words to have different meanings in different sections of the country and often times misunderstandings occur on account of words having a special meaning and a general one. Only a few words which are used over and over again and which apply particularly to this field are given.

Business is used in the general sense as applying to the whole field of remunerative endeavor rather than to the field more particularly covered by the term commerce.

The term apprentice shall mean any minor, 16 years of age or over, who shall enter into any contract of service, express or implied, whereby he is to receive from or through his employer, in consideration for his services in whole or in part, instruction in any trade, craft, or business. (Section 2377, Statutes of Wisconsin)

Personnel administration is the direction and coordination of the human relations of any organization with a view to getting the maximum necessary production with a minimum of effort and friction,

and with proper regard for the genuine well-being of the workers. (Tead and Metcalf in PERSONNEL ADMINISTRATION)

Continuation School indicates a part-time school operated and controlled by the public educational system.

Part II

HISTORY

We find that the idea of employer training employees has existed from very early times. Educational systems of such a type were in the early days wholly in the form of apprenticeship. This was controlled by the early trade organizations, which during the Middle Ages were known as Guilds.

During Europe's early history, we find there were but few towns, most of the population of the northern European countries living on huge estates controlled by the wealthy lords or officials of the church. Town life began to spring up about the year 1000, being transmitted from the more southern countries where it had existed for some time.

The Hanseatic League, composed of about 75 German towns and supervised by the merchants of the town of Lubeck, was outstanding as one of the earliest merchant associations, and many rules and regulations were imposed by them upon their members for the training of beginners.

Although most of these Leagues were formed primarily for protection against robbers of the sea and undue extortion on the part of the feudal lords, they had smaller organizations which were

formed to protect their particular interests as members of a trade. While a young man was being taught his trade, it was customary for him to live in the home of his employer and he was obliged to perform domestic duties as well as those pertaining to his trade. This term of indenture generally extended from three to ten years. During that period of time he received no pay and was bound to loyally serve his master, in return receiving the opportunity to learn his trade, secure his food, clothing and shelter.

There was usually some restriction on the part of the Guilds as to the number of young men which could be so bound, with the result that all of them were well-trained, for the employer worked at the same bench with his helpers, and in those days each artisan performed all phases of his trade, so that the helpers had an opportunity to learn the trade from its every angle. During this early period, the restrictions were many and well carried out, with the result that the members of the various Guilds were masters and semi-skilled workmen were hard to find. The Guilds lost considerable of their force

during the latter part of the seventeenth century and the early part of the eighteenth, so that as new towns sprang up the quality of the skilled workmen became constantly lower. Many crafts broke away from the Guild system altogether and in some instances received partial support of the court system in regulation of their trade. About this time, too, middle-men made their appearance so that the rural districts were now able to manufacture without concern of a market for their wares.

This continued until conditions became deplorable, during the early part of the nineteenth century, when considerable labor-saving machinery had been invented. The relationship of master and apprentice was being changed to one of capital and labor. Trade instruction was instruction in name only. Wages were not enough to cover living expenses and huge numbers of children, some of whom were less than fourteen years of age, were to be found in the mills with not only no chance for advancement, but with inadequate attention to their health and welfare while thus employed. These conditions were not remedied in Europe until early in

the twentieth century, when the population of the countries realized that the welfare of those employed in mills affected the welfare of the country at large more than they had thought, and they demanded legislation which is revolutionizing the training which is being secured by young people while actively engaged as wage-earners, as well as caring for their safety and health.

America has been somewhat more fortunate, in that, while early apprenticeship systems with all their bad features were transmitted bodily from Europe, early legislation was provided whereby all children who were bound out were required to be taught the three R's. Then, too, there was not the demand for unskilled labor in this country as had existed in Europe, because of the large number of indentured servants, convicts, and slaves who were imported solely for the labor they could perform. However, there was an apprenticeship system in practically every branch of the skilled trades, with a concentration in the northern states.

A few factories were erected during the early part of the 19th century, but they were not extended

generally until immediately after the Civil War.

Census reports show that 90% of the working population of the country was engaged in farming in 1800, while only 33% was thus engaged in 1910. Thus it is seen that the great concentration of our population in industrial life has been effected during the past 50 or 75 years. Organized labor has had an important effect upon these training systems. Undoubtedly, they were first prescribed by craft unions; in fact apprenticeship seemed to increase rather proportionately to the increase of trade unions, considerable progress having been made since the formation of the American Federation of Labor in 1886. Later, tendencies were for the local, state and federal governments to restrict these training programs with today a decided tendency toward co-operation of public-private school systems and industry.

With all the improvements and radical changes which have been made, it is still easily seen that many of the undesirable features of the present system have descended directly from the old European custom and they are so deep-rooted today that

change can be brought about only through education over a considerable period of time.

The unusual conditions of the labor world arising from the last war have caused considerable evolution in this branch of industrial activities. Intensive training programs had to be devised, and while schools cooperated to some extent, their methods were far too slow, equipment was inadequate, and their capacity too limited to satisfy the needs of the time. High wages and the response to the demand made by the country caused many thousands to enter the trades who would otherwise never have seriously considered it and these were prepared for industry in most cases under private training programs.

The type of instruction during the war period, however, was specialized. The employee was trained for some specific duty and the criterion of the system was the quantity of goods produced rather than the efficiency of training given to the employees. As a result of the hectic conditions existing at that time, many faults were to be found at the close of the period, among which may be cited the waste of time consumed by employees in running errands,

sweeping floors and in performing similar work while presumably learning a trade, and the get-rich-quick ideas of many employers in expecting first-class work from those in training. There was naturally a reaction in the attitude of the employee which is now being removed by an ever-increasing amount of supervision on the part of cooperative schools, state and federal governments. With the advent of the vocational school, too, industry must show that it can offer distinct advantages in order to attract young men to its field.

Outstanding among the states, practically all of which have some legislation on the status of employee training, is the state of Wisconsin which has a special organization for supervising this type of work. The agreement between the apprentice and the employer has to be sanctioned by the state through its proper officials and a constant check is made to see that both parties are living up to their agreement. A diploma is given by the state to the employee who completes his course of training.

The following pages show what is being done by leading corporations in their training programs today.

Part III

SURVEY OF EMPLOYEE TRAINING OF
REPRESENTATIVE CORPORATIONS AND ORGANIZATIONS

WILLIAM FILENE'S SONS COMPANY
Boston, Massachusetts

One of the outstanding department stores in the development of an educational department is (10) the William Filene's Sons Company of Boston. They have formulated a system of training and education which is similar in many respects to the courses offered in an ordinary college of business administration. A dual purpose is stated for these courses, namely to instruct the employees in the requirements of the business and to inform them about the opportunities which exist for advancement and to prepare them for them.

The courses offered at Filene's may be divided into two general classes: first, those courses which the employees are required to take in order to hold their present positions and second, those courses which they must take voluntarily if they expect to excel in their present positions and qualify for promotion. A cooperative plan is in force whereby employees may take not only the courses offered at the local store but also those given under supervision of R. H. White Company, the Merchants' Insti-

(10) EDUCATIONAL ACTIVITIES WM. FILENE'S SONS CO.---
Wm. Filene's Sons Co. September, 1929

tute of the Retail Trade Board and the Prince School for Store Service. A number of university extension courses are also offered to Filene employees.

A school calendar has been formulated listing the dates for entrance examinations, make-up examinations, registration for both day and evening divisions, holidays and the dates of the final tests. Credits are given for all courses completed and are taken into consideration when promotion, transfer or bonus recommendations are made. These credits form part of the employment record of each employee. One point is allowed for each hour of class attendance in courses where final examinations must be passed and at half that rate for others. An allowance is also made for university extension and correspondence study.

For the 1929-1930 program, a faculty of approximately 150 teachers has been listed. The following symbols have been used in the Filene catalogue to designate the various courses offered:

I. Courses of information about the store, its organization and policies.

s. Subjects taught primarily for selling departments.

T. Textiles, lace and leather course.

C. Color Design.

G. Activities of occupational groups.

SS. Salesmanagement course.

M. Merchandise courses.

A. Advertising courses.

F.C.A. Offered by Educational Committee of F.C.A.

R.T.B. Offered by Merchants' Institute of Retail Trade Board.

In the I group, most of the courses being required ones, we find the following subjects:

Initiation
Store Directory
General Training Course
General Training Group
Policies Course
Teaching Methods

The selling courses have been so arranged that the sales force may study their own particular problems without spending too much time in the general field of salesmanship.

We find the following listed in this year's catalogue:

Selling System for the Main and Men's Stores
 Selling System for the Worcester Store
 Selling System for the Basement
 Selling System for the Worcester Basement
 Cashier Training, Main Store and Men's Store
 Better Service Meetings
 Salesmanship for New Salespeople
 Salesmanship for Salespeople at the Prince School
 for Store Service
 Sales Promotion
 Department Training in Salesmanship and Service
 Problems
 Department Training in Merchandise Information for
 all Salespeople
 Merchandise Information for New Salespeople
 Manufacturing Processes
 Trips to Manufacturers and Outside Events
 Supervised Mill and Factory Trips
 Special Department Courses
 Gift Shop Interior Decorating Course
 Gift Shop Course in Appreciation of Design
 Infants' and Children's Departments Course
 in Child Psychology
 Infants' Shoe Course
 Course for Outside Sales Managers
 Classes given in the Beauty Shop
 Course for the Neckwear Department
 Course in Suitability
 Ensemble Selling Meetings
 Style Show
 Style Meetings for Salespeople
 Meetings for Personal Service Representatives
 Meetings for Short Hour Salespeople in the Main
 Store
 Salesmanship Playlets
 Error Meetings

In the department store work it is very necessary
 that every worker shall not only recognize different
 colors but shall know the laws of each. A number of
 courses which show the importance of color are offered:

Color and Design or Advanced Salesmanship
 Clothes Analysis
 Clothes Analysis Meetings with Buyers and Assistants, Main Store
 Color and Design
 Course on Couturiers (Designers and Dressmakers)
 Analysis of Seasonal Colors and Materials
 Special Department Selling Meetings
 Display Course
 History of Costume
 Color Course for Executives

Textile Courses offered this year are:

Elementary Textiles
 Textile Course for Executives, Main and Men's Store
 Textile Course for Executives, Basement
 Department Textile and Lace Meetings
 Course in Leather

There are also a number of miscellaneous courses which do not come naturally in one group. Among these might be listed:

Group Meetings
 Section Supervisors Training Group
 Prince School for Store Service Section Supervisors Group
 Head of Stock Training Group
 Buyers' Arithmetic
 Merchandise Resource Group I
 Merchandise Resource Group II
 Merchandise Resource Group III
 Merchandise System Tutoring Classes
 Advertising Training Group
 Principles of Advertising

The firm catalogue also lists a number of courses which are given by the Retail Trade Board and include such courses as:

Fashion in House Furnishings
 Fashions in Textiles
 Good Taste in Clothes
 Business Arithmetic
 Business Courses at Fisher Business College

University extension courses are generally those which pertain indirectly to the vocation of the employees and cannot be offered so well by their own personnel. Some of those being offered this year are:

Business and Professional Speaking
 Appreciation of Contemporary Art
 International Affairs
 Current Events
 Economics
 Business Law
 Interpretation of Accounts

There are a few courses being given under the auspices of the Filene Cooperative Association which are not designed directly for their vocational value but are intended to make better employees out of the store workers by teaching them to get more out of life. Some of these subjects are quite foreign to store work, including such ones as:

The Principles of Investment
 Needlecraft
 Music Appreciation
 Appreciation of the Opera
 Applied Harmony
 Recreational Activities
 Arts and Craft
 Cookery

The above clearly shows that the Filene management feels that it can teach its own employees better than any outside agency except in fields in which the training is necessarily of a general nature. The courses offered have grown constantly in number and are being improved every year. There is a decided increase in the amount of attention and work being done along training lines. What is true of this large department store is also true in many of the others of the country and the work here being done may be considered indicative of the work being done in the department store field, except that the example quoted is probably that of a leader in the field.

LORD & TAYLOR

New York, N. Y.

(11)

The Lord and Taylor Company is another example of a modern department store which has made considerable progress in the field of training its own employees. This Company has a very broad outlook on their work, as can be seen from the definition of education which the president of the corporation, Samuel Reyburn, recently gave in a convention speech. "Broadly speaking, the whole of life is an education, and life itself in all its phases is the great school. Not a situation in life but leaves its influence on the individual. Every agency of civilization is an education. From this point of view, education becomes the resultant upon the individual of the sum total of the influences of life. Every human situation is an educational situation, in which we grow from less to more."

He shows the attitude the Company has toward every worker in further defining training as simply a short cut for education. President Reyburn feels that every new employee is being educated to a cer-

(11) TRAINING IN DEPARTMENT STORES---Lord & Taylor

tain extent by being in contact with the more mature and more experienced workers of the Lord & Taylor Company. He feels, however, that much time can be saved by applying the scientific principles of pedagogy to their work. The courses offered by this organization have been changed and improved considerably each year for a number of years past and at present seem to be serving the purpose very satisfactorily. The motto of the Company seems to be "to be efficient, they must continue to train." They recognize the prevalent idea that today is one of specialization and that the training department must assist the workers of the Company in becoming specialists. A couple of years ago some business men in similar activity asked Mr. Reyburn what his policy would be in case of hard times; if he would continue to spend the amount of money they are now spending on their training program. His answer was that they would not only continue the present work but that they would probably place more emphasis upon it because he felt that the work of that department should show them wherein they were weak and thus expose the cause of

the poorer showing for the year.

The policy in this Company is to have the buyers and similar executives give at least part of the lectures. These are followed by instructors who have received their enthusiasm from the officers of the Company and who have in addition a knowledge of teaching methods. The following sample of a week's program of the 1927 training schedule will probably show the extent of the Company's work along this line.

MONDAY

Adjustment Report on Packing
Current Hosiery Shades for New Shoes

TUESDAY

Camp and Summer Merchandise
Advertised Merchandise
Merchandise Fitters

WEDNESDAY

Presentation of Summer Merchandise
Salesmanship
Summer Fashion Show Merchandise
Uses of Silk
Advertised Merchandise

THURSDAY

Salesmanship
Presentation of Summer Merchandise
Combining Fabrics for Summer

Homes
Merchandise
Summer Opening Plans

FRIDAY

Credits
Advertised Merchandise
Summer Lamps with Summer Fabrics
Presentation of Summer Merchandise
Summer Fashion Show Merchandise
Summer Opening Plans

SATURDAY

Credits, Advertised Merchandise
Summer Fashion Show, Merchandise
Color and Design in Accessories
Merchandise, Saturday Extras

BOSTON ELEVATED RAILWAY

Boston, Massachusetts

Many of the public utilities are realizing that they can profitably supplement the public and private schools in the matter of educating their employees.

They have only recently seriously considered this problem but have now organized a number of courses. The policy of the Boston Elevated Rail-
(12)
way can well be seen by quoting from Mr. Henry H. Norris, their educational advisor. "An education is the process of self-improvement and it should not stop at the end of school days but should continue throughout life." Many of their employees study in the evening schools of the city and some take correspondence courses but there are very few, if any, courses offered which cover the local requirements of a great transportation system.

About three years ago, the Railway System co-operated with the division of University Extension, Massachusetts Department of Education by offering special courses of instruction. In 1926 the educa-

(12) MINUTES OF FOREMAN CONFERENCES, EDUCATIONAL PROGRAM,---Boston Elevated Railway 1929
WHAT ONE RAILWAY IS DOING ALONG EDUCATIONAL LINES---Aera for January 1926

tional program consisted of five series of conferences held for the employees of the various departments: transportation, maintenance, power, rolling stock and also for the women employees. Each series included anywhere from 10 to 20 group conferences which were carefully planned for the value they contained.

About 1100 employees enrolled for these courses. They were supplemented occasionally by combined meetings when the general policies of the organization were taken up. The policy changed somewhat the next year in that an educational director was chosen. This supervisor had had training along educational as well as practical lines. The following is a list of courses which were offered:

- Public utility economics
- Foreman training
- Public speaking
- Correspondence and reports
- Inter-departmental accounts
- How to invest one's savings
- Transportation problems as a whole
- Timetable construction
- Selling service
- Accident prevention
- Reading of electrical diagrams and other drawings
- Automotive maintenance, with special reference to buses
- Signals and signaling
- Current events
- Business psychology
- Business English
- Parliamentary law

In practically all cases the registration has been large enough to indicate that the employees really want these courses and are willing to sacrifice their time in order to learn more about their life work.

It is to be noticed that the above list of courses may be grouped into three general classes; first, those which apply primarily to the local system's own work for most of the knowledge acquired would be of little value on another job. The second group includes those which consider the transportation field in a general way and would be of no value to an employee not working with some phase of this industry. The third group includes the academic and cultural subjects.

Three plans of instruction have been adopted. The first is generally called the "Straight Conference" method, employed mostly in foreman training. The Company furnishes practically all the information on which the discussion is based, the conference leader having for his function the guiding of the discussion so as to confine it to a definite topic and along the most practical line.

The next plan is termed the "Group Conference Plan" in which series of logically selected topics are treated by experts in the respective subjects covered. The third plan is the regular school method varying only to suit local conditions. The Boston Elevated Railway feels that these training programs pay in that a high degree of cooperation between industry and the educational world must exist if best results are to be obtained.

CANADIAN NATIONAL RAILWAYS

Moncton, N. B., Canada

The educational and training department of the
(13)
Canadian National Railways is quite unique in
that it started in 1921 as a branch of the well-
known International Correspondence Schools of Scranton,
Pennsylvania. They have endeavored to make these home
study courses supplement the class instruction rather than
take the place of it. In their present set-up, each class
receives approximately 10 hours of class-room instruction
per month. During these periods, technical matters and local
conditions such as could hardly be taken care of by an
outside school are emphasized. The record which the
student makes with his correspondence course is made a
part of his shop record and is taken into consideration
in following his progress and recommending him for
promotion.

The head of the training department has also tried to take care of the differences which exist in the
large number of employees who are studying

(13) BRINGING OUT THE LATENT ABILITIES OF APPRENTICES---Trained Men, July, 1921.

these courses. He feels that no two need exactly the same amount of instruction, so in order to place them on more nearly an equal plane, elementary work is given to those who need it. He finds that after six or seven months of special instruction, many boys have been able to go into groups with others who have either greater ability or have had better opportunities in their previous education. Another interesting phase of the work in this large corporation is the fact that they emphasize the dignity of the overalls job and do not try to encourage their young employees to get "white collar" jobs. They want them to take pride in their work and to feel that becoming first-class workmen is a most desirable thing and something well worth working for.

This makes an interesting study in that it illustrates another large corporation which has started its training work since the War and one which has been anxious to cooperate with the outside agencies to the extent that the services of a private correspondence school have been secured.

CINCINNATI MILLING MACHINE COMPANY

Cincinnati, Ohio

(14)

The Cincinnati Milling Company feels that sufficient attention has not been given to the training of boys for skilled work in the mechanical trades during the period after the World War. They feel that this lack of training is recognized by most public school authorities and by industry. In an endeavor to remedy the acute shortage which exists for well-trained, all-around machinists, tool makers, pattern makers, foundrymen and other highly specialized workers, this Company has organized an apprenticeship school which seems to be operating very successfully. It was first organized about a quarter of a century ago with some forty boys in attendance. It attracted so much attention at that time that very soon afterwards the instructor and his plans were taken over by the public schools which was the beginning of the Continuation School system of Cincinnati.

The requirements to enter the Cincinnati Milling Machine Company Apprenticeship School are that the

(14) TERMS OF APPRENTICESHIP---Cincinnati Milling Machine Company.

applicant must be between sixteen and nineteen years of age, of good moral character, in good physical condition and have an educational background representing grammar school graduation. The regular probationary period of from six hundred to twelve hundred hours is required before a permanent agreement is signed. The course extends over a period of ninety-six hundred working hours.

The various courses are well-organized, having definite amounts of time to be spent on the various phases of the work. The work is in charge of the Supervisor of Apprentices who regulates class instruction, promotion and keeps the records of all the students enrolled. The school is now operating very smoothly with about thirty apprentices. Classes average half a day per week and are operated in cooperation with the Public Continuation School.

This Company is also working on a more or less formal program for the training of foremen. At this time, they are holding weekly and bi-weekly conferences with various groups on matters relating to their work and responsibilities. As is true elsewhere, this phase of employee training is much less developed and is only well organized with the beginners or apprentices.

BETHLEHEM STEEL CORPORATION

Bethlehem, Pennsylvania
(15)

The Bethlehem Steel Corporation has maintained for some time an Apprentice's School, whereby a steady supply of trained workers may be assured. Bethlehem recognizes the necessity for trained minds as well as trained hands and courses are designed accordingly. At the present time, more than thirty different courses are offered, which include actual job training as well as instruction in the classroom. Such semi-vocational subjects as science, mathematics, industrial hygiene, civics, trade practice and theory are offered. The nature of the work of the Bethlehem Steel Corporation is such that preparation can be given for the various crafts. Representative of these are machinist, pattern-maker, printer, draftsman, carpenter, electrician, moulder, and coppersmith.

The courses are in general charge of the Supervisor of Apprentices. He requires candidates to fill out applications indicating their desires and preferences which blanks he generally submits to the parents for approval. The Supervisor endeavors to find out as much

(15) APPRENTICE TRAINING, TEN YEARS' PROGRESS IN HUMAN RELATIONS---Bethlehem Steel Corporation.

as possible about the applicant's attitudes and qualifications and then arranges an interview for him with the head of the department in which he is interested. If he continues to meet with the approval of these various representatives of the Company with whom he comes in contact, he is taken on probation. At the end of this period, he may enroll for the regular four year course. It is possible to reduce this somewhat by securing good marks and by being regular and prompt in attendance. Credit is also given for studies taken outside of the plant.

AMERICAN LOCOMOTIVE CO.

Schenectady, New York
(16)

The American Locomotive Company has a school for training the younger men who apply to the Company for positions in an endeavor to make them skillful workers. The most active of the various training courses which they offer is that for supplying the demands of the Drafting Department. The requirements are somewhat higher with this Company than they are with many others and especially in this particular Department, where they expect the candidate to have had high school graduation in addition to a natural adaptation for engineering work, to have good health and to be of good moral character. The age limits are seventeen to nineteen. They require an entrance examination, although in cases of applicants who live some distance from Schenectady, arrangements may be made whereby the examination may be taken in their home town. As with other concerns, the probationary period of six months is enforced.

Class room work of about three hours per week is carried on during working hours, with a consid-

(16) AN APPRENTICE COURSE FOR DRAFTSMEN---American Locomotive Company.

erable amount of additional study at home on his own time expected of every student. Each student works individually and progresses independently of the others. Four years is the normal length of each course.

Advancement in this School is based upon the completion of a definite amount of school work in addition to the completion of satisfactory work on the job. This is another instance of a Company operating its own school with the assistance of outside educational organizations.

THE GENERAL ELECTRIC COMPANY

Lynn Works, Lynn, Massachusetts
(17)

The General Electric Company affords an example of a large manufacturing corporation which is practically self-containing as far as the training of its employees is concerned. The apprentice school was organized early in 1902 to insure a supply of skilled mechanics, proficient designers and competent business men. Different schools have been organized for young men with a grammar school education and for those who have completed high school. The latter is a requirement for those who plan to enter the drafting field or the engineering phases of the industry. Applicants must be between sixteen and twenty years of age, must be well recommended and must pass entrance examinations in school subjects as well as a physical test. The trial period is reduced to one of from thirty to sixty days. The rules and regulations applying to the ordinary workmen also apply to the students.

Class room work is carried on from September to July. The school year is divided into three terms of fourteen weeks each. Students attend five

days a week for an hour and a quarter period. The school which requires but grammar school graduation is known as the Apprentice School while the one for high school graduates is known as the Engineering School.

The Apprentice School instructs in the following: arithmetic, mechanical drawing, algebra, geometry, mensuration, plane trigonometry, elements of mechanics, business English and correspondence, economics, principles of mechanism, strength of materials, tools design, metallurgy, general physics, and accounting.

The Engineering School offers the following: advanced algebra, mechanical drawing, metallurgy, plane trigonometry and slide rule, elementary electricity, descriptive geometry, elementary calculus, advanced electricity, mechanics, mechanism, strength of materials, electrical design, machine design, economics, business English and correspondence, thermodynamics, and accounting.

Through the Apprentice Fraternity, an organization of all the students, athletics and social functions are encouraged. Facilities for inside and outside recreation are furnished by the Company.

An Alumni Association binds the past and present students together. This association has at the present time something over a thousand members. The following table of graduates shows the growth of General Electric's training school in its Lynn branch since its inception.

1903	17	1916	53
1904	15	1917	29
1905	14	1918	14
1906	25	1919	31
1907	27	1920	60
1908	23	1921	59
1909	37	1922	54
1910	31	1923	72
1911	27	1924	44
1912	30	1925	82
1913	41	1926	79
1914	36	1927	77
1915	57	1928	88

THE NATIONAL CASH REGISTER COMPANY

Dayton, Ohio

(18)

The National Cash Register Company has made an exhaustive study of training departments in operation in various cities of the United States and has endeavored to take the best of each in formulating its own department. The plan illustrates a high degree of cooperation between a private enterprise and public school and the University of Cincinnati.

To be eligible for this training, it is necessary that a boy have two years of regular high school work. He must be between fourteen and sixteen years of age and be of good moral habits and in good health. He is given employment during the summer vacation following his second year in regular Industrial High School where he attends school two weeks and works two weeks alternately. Full time is allowed on the term of apprenticeship but the student is paid only for the time he works.

This particular high school has been designed to meet the requirements of the National Cash Register Company and other manufacturers of Dayton. The

(18) OUTLINE OF PLAN FOR THE EDUCATION OF APPRENTICES---The National Cash Register Company.

school is in session five days a week and seven hours a day for a term of fifty weeks per year, giving each boy twenty-six weeks in the shop and twenty-four weeks in school. Full High School credit is allowed for the satisfactory completion of each term's work. On Saturday morning of each week, except during the summer months, the student reports for special instruction at the factory, when an attempt is made to co-ordinate the work of shop and school.

The School Board of Dayton has placed both the Co-operative High School and the Continuation School under control of an Advisory Committee composed of one member representing the school authorities, two members representing the manufacturers, and two skilled mechanics. For those apprentices who do not care to complete high school under this plan or who are unable to do so for one reason or another, it is so arranged that they may attend continuation school one-half day per week for which time they are paid, as well as having it applied on their term of indenture.

Those who have completed the Co-operative High School satisfactorily, may be admitted to the co-operative course of the University of Cincinnati. Here they spend four weeks with their studies and return

for four weeks at the factory, alternating in this way throughout the five years which the University course takes instead of the usual four. Eleven months a year is the duration of the school year instead of nine or ten.

Courses are offered in chemical engineering, civil engineering, electrical engineering, mechanical engineering and metallurgical engineering, the three last named open to employees of the National Cash Register Company. Engineering degrees are conferred upon completion of the University courses. The co-operating company recommends students to the University, and vice versa, the University offers the young men with whom it comes in contact to the companies.

A special department of co-ordination is designed to secure the greatest value possible from both school and work. The faculty offers vocational guidance throughout the course.

YALE & TOWNE MANUFACTURING COMPANY

Stamford, Conn.

(19)

The Yale and Towne Manufacturing Company makes a variety of products in the hardware line and also in the electrical line. For the most part they manufacture locks and lock supplies. Their main plant is located in Stamford, Connecticut and they employ upwards of five thousand people. They established an Apprentice School in March, 1908, in order to train young men for the skilled trades, thus insuring a constant supply of competent labor.

The instruction was designed so as to develop such qualities as reasoning power, initiative, and ambition, and included as well the equivalent of an ordinary vocational school. They require their graduates to be 16 years of age and to have had at least grammar school education. They are then appointed for a probationary three months during which time their aptitude and attitude are studied and if found to be satisfactory an agreement is signed for the regular four year period.

(19) THE APPRENTICE SCHOOL---The Yale & Towne Manufacturing Company.

The Yale and Towne Company feels that its workers who have been trained in its own department are better than those coming from the outside and are encouraged to remain in the Company's employ.

A few years ago when a survey was made it was found that forty-two per cent of the graduates of the school were working for the Company.

The School is supervised by a Director of Trade Schools and is considered a distinct part of the organization. Instructors are chosen who have teaching knowledge as well as a practical working knowledge of the subjects they are supposed to teach.

A minimum of four hours of class work each week is required. Many of the requirements are similar to those found in the regular public schools, such as the conduct required, attendance record, and the issuing of reports. Some of the subjects included in class room work which might be found in a public school are Mathematics, Mechanical Drawing, English, Industrial Geography, Economics and the Principles of Electricity. Shop work is about the same kind as one would find in any similar plant.

Probably this Company has what we might call a representative type of apprenticeship system for corporations in the manufacturing field.

THE INGERSOLL-RAND COMPANY

New York, New York
(20)

The Ingersoll-Rand Company offers four year training courses in a number of the more common trades. The requirements are somewhat more flexible than are usually found in this type of concern. Age limits are sixteen to eighteen years; educational requirements, eighth grade to high school graduation with at least an 85% grade in an arithmetic test on fractions and decimals; other requirements are physical strength, good health and a height of at least five feet four inches, good habits and moral character.

The shop work has been well organized in that a specified time is spent by each student on each machine or in each phase of his work, thus covering the entire trade in the four year period. Class work is offered in mathematics (shop arithmetic, algebra, trigonometry and the theory of mechanics), also courses in mechanical drawing and machine design. In addition to this, several evenings of home work are required each week. The passing grade for both shop and class work

(20) THE GRADUATING ENGINEER AND INGERSOLL-RAND---
Ingersoll-Rand Company.

is 85%. Library facilities and participation in athletics are available to all students.

The Ingersoll-Rand Company also inaugurated in 1914 a systematic training course for graduates of technical schools. This extends over a period of about seven months and is intended to be a proving ground for future executives of the Company. Extreme care is used in picking the members of this group, each one being chosen as an individual rather than as one of a type or to fill a certain quota, only enough are taken to fill the demands of the Company in its three plants at Painted Post, New York; Phillipsburg, New Jersey; and Easton, Pennsylvania.

By the time the student has completed his training course, it is expected that he shall be able to recognize the particular field of service in which he is interested and for which he is best fitted; (1) sales engineering, (2) production, (3) development engineering, or (4) special departments, such as work in metallurgy, heat treating, plant engineering, etc.

UNITED STATES ALUMINUM COMPANY

New Kensington, Pa.
(21)

The following outline summarizes so well the activities of manufacturing plants of a similar type that it is being copied verbatim from a report issued recently by the Company:

For purposes of classification the employees taking educational work outside of their regular employment on the job in the factory are divided into three groups:

GROUP 1 - Those taking training within the plant under our direct supervision made up as follows:

A - Trade Apprentices (Must be Common School graduates with High School training preferred)

Machinists	Blacksmiths	Draftsmen
Toolmakers	Electricians	Power Plant Engineer
Patternmakers	Moulders	

B - Operating and Sales Apprentices (College Graduates)

C - Lectures for Foremen.

D - Foremen's Conferences.

GROUP 11 - Those taking training in the New Kensington Public Evening School under our indirect

(21) BRIEF OUTLINE OF INDUSTRIAL TRAINING---
United States Aluminum Company, 1929

supervision.

Employees of this group during 1929-1930 took up such courses as:

Mach. Shop Practice	Typewriting
B. P. Reading	Shorthand
Drafting	Advanced Mathematics
Shop Mathematics	Bookkeeping
Accounting	Business Law
Chemistry	English
Electricity	Art
Americanization	Public Speaking
Auto Mechanics	French
Cooking	Sewing
H. S. Subjects	China Painting

GROUP 111 - Those taking correspondence and evening school work not under our direct or indirect supervision.

Detailed records are kept on the progress each employee makes through this medium of training.

The institutions most closely co-operating with our educational department in this respect offer a variety of courses and are as follows:

Carnegie Institute of Technology.
International Correspondence Schools.
University of Pittsburgh.
Pennsylvania State College.

NOTE: - From 8% to 10% of our employees take some form of educational work.

During 1929-1930 the figures were approximately as follows:

Total number of employees	4800
Employees in Group I	250
" " Group 11	100
" " Group 111	130
<u>TOTAL</u>	480 or 10%

NATIONAL CITY BANK

New York, New York

The story of the training department of the National City Bank (22) of New York is one of the best illustrations of a company which has changed from a policy of training most of its employees within its own walls to one of using the existing educational agencies. This large banking institution has something over 3000 New York employees and approximately an equal number scattered over other parts of the world. It has long been considered a leader in its field for activities of this kind and is often held as a model in financial and industrial circles. This Corporation feels that for a man to advance--to deserve promotion--the specialization of the age demands that he study on his own time.

The educational activities of this concern started in 1904 when a small program was inaugurated for the staff members. This grew in size and scope until 1915, when a maximum of interest and number of students enrolled was reached with practically all instruction

(22) USE THE EXISTING AGENCIES---Trained Men,
June, 1921

being given within the organization. Such courses as languages were taught by instructors who came from the outside, but practically all of the courses pertaining to the actual banking business were taught by the members of the staff. The policy of compulsion was adopted, too, their experience teaching them that this was necessary just as it is in the public school system.

Shortly after this, the policy changed to the extent that now the educational department goes outside for all courses that it is possible to get. Only very technical ones are handled by its own staff. Charges have also been made for these courses, those supervising the work feeling that a student takes little interest in anything which costs him nothing--the more at stake, the more anxious is he to "get his money's worth." This is modified somewhat by what they call their "Refund Plan." This means that the employees are encouraged to take outside courses with the understanding that part or all of the tuition will be refunded upon satisfactory completion of the course. The educational program a few years ago covered the following objectives:

A. The instruction of boys under 17 years of

age in such courses as English, physical education, civics and elementary banking. In reality, this was a continuation school for those who had been forced to leave their school at a young age.

- B. Technical courses in correspondence, foreign exchange, international banking and credit for use of employees as a home study course.
- C. Classes studying elementary banking practice.
- D. Group discussions of current events in the banking world.

Through the Employees' Club of the Bank, considerable assistance has been given to members in securing an education, a great many scholarships being available among other things. Co-operation to a high degree exists between the Bank and such recognized educational institutions as Columbia University, New York University, and the College of the City of New York. Reputable correspondence schools are also recognized. Probably a financial institution like the National City Bank is able to find courses offered which meet the needs of its employees to a greater extent than most other phases of business enterprise. Judging from the educational

work of the two types of business, it would seem that financial courses have been developed much more than have selling courses in our higher institutions of learning.

Today is a day of organization. Every year there are hundreds of new ones appearing in various fields so that we naturally wonder how much room there is left for further expansion of this kind. Practically every trade, industry, and profession has many such groups which have been organized within it for one purpose or another.

"We have trade associations and institutes embracing particular industries and occupations; chambers of commerce embracing representatives of many groups; the labor unions representing the different crafts; associations embracing the professions; farmers' associations and co-operatives; and a great increase in municipal and community organizations for the general advancement of the community."⁽²³⁾

The Department of Commerce has listed in one of its publications⁽²⁴⁾ more than 13,000 organizations, which are presumably working for the good of their respective groups. This indicates a new era in the attitude of private organizations to cooperate for their common welfare. "Cut-throat" competition seems to be a thing of the past.

(23) COMMERCIAL AND INDUSTRIAL ORGANIZATIONS OF THE UNITED STATES---United States Department of Commerce-1929 Page V

(24) COMMERCIAL AND INDUSTRIAL ORGANIZATIONS OF THE UNITED STATES---United States Department of Commerce-1929

Naturally enough one of the outstanding objectives of such organizations is an exchange of ideas and knowledge along educational and training lines, so that all members may be benefitted thereby. An examination of representative organizations in various fields shows considerable activity in providing such programs. Fairly brief descriptions of some of these organized groups will indicate, as much, probably, as can be done in any other way, the trend of the times in private enterprise's attempt to train its own employees.

THE NATIONAL ASSOCIATION OF RETAIL GROCERS

St. Paul, Minnesota

(25)

The National Association of Retail Grocers has organized a course in business training for the benefit of the retail grocers who are members of this association. Their program is the result of the combined efforts of

1. Officials of the National Association of Retail Grocers.
2. Representative men in various branches of the food distributing industry.
3. Successful retail grocers serving both individually and in committees.
4. Vocational training experts from the staff of the Federal Board of Vocational Education.
5. Directors of the Bureau for Business Training for the National Association of Retail Grocers.

Every effort has been made in designing this program to consider every phase of it from the angle of practical educational procedure and that of accepted

(25) MISCELLANEOUS PAMPHLETS---The National Association of Retail Grocers. See Bibliography

business practice. It has been carefully worked out and only tested sources of material and methods are used. They are as follows:

1. Vocational information has been secured from practical and successful men in the industry.
2. The educational principles were supplied by the staff of the Federal Board for Vocational Education---probably our outstanding authority for vocational training for employed people.
3. The program has been approved in detail by many successful educators and practical grocers who had no part in this development and were for that reason in a position to judge it from an unbiased standpoint.
4. The course has been applied to an experimental group with very satisfactory results.
5. The value of the methods employed and the content is vouched for by seven hundred odd students, part of whom were members of conference groups while the others were enrolled in correspondence courses.
6. Many of the members who have taken this

course have been very enthusiastic about it and not one who devoted himself sufficiently to realize its value has complained.

The nature of the grocery business is such that a training program is of value to both the employer and the employed. This course is designed especially for those who are actively engaged in this business. The progress for the first year of operation of this training program far surpassed all hopes for it.

Many educational principles have been recognized in the operation of the plan, among which appear the following:

1. Inexperienced workers primarily need instruction while experienced ones are in greater need of thought development.
2. Progress in vocational training is fundamentally an individual problem.
3. Strict thinking must be developed so that the individual may build upon his own experiences.
4. The best and most approved method now known for developing such thinking is based upon well-directed group conferences and free exchange of ideas.

5. The element of time and patience are essential in successful thought development. These training programs cannot be administered overnight.

6. The only way to build a substantial and enduring structure is to start with a sound foundation.

The material is so arranged that the introductory or fundamental course is followed by more specialized ones along such lines as sales promotion, management and commodities.

There are no territorial restrictions. They are offered to groups working as such or to individuals who prefer the home study method. Leaders for the conference plan are always local men, but their experience need be only such as to enable them to serve as effective chairmen.

The material consists of topics so arranged that they be discussed in such a way that each will benefit by the experience and good ideas of the others. The notes are more the thought provoking type than those which must be memorized. Answers are sent in, corrected, and returned with suitable explanations. Every effort is made to obtain the enthusiasm and interest of those taking the course rather than to have any compulsion attached to it.

NATIONAL ASSOCIATION OF REAL ESTATE BOARDS

Chicago, Illinois

The National Association of Real Estate Boards
(26) is an organization of real estate groups scattered throughout the country, with the home office in Chicago, Illinois.

It has various departments through which it tries to gather ideas and plans as tested out in various sections, and proven to be successful to the extent that they should be of value to other operators. One department has been organized for the education and training of its members, and is called the Department of Education and Research.

About two years ago this Department undertook to prepare a series of specialized courses for its members' use. Today it has completed the following:

Real Estate Advertising

Real Estate Appraisal

Real Estate Selling

The Department is now composing a fourth course on Real Estate Finance. These are intended to be

(26) MISCELLANEOUS PAMPHLETS--National Association of Real Estate Boards. See Bibliography

taken on the individual course plan. A charge of \$10.00 is made to the members for each course. Arrangement has been made, however, whereby they may be taken by the group method. Examinations are sent to the candidates and are graded upon return. At the satisfactory completion of the course, a certificate is granted.

The material for these courses has been gathered from all parts of the country, which means that local problems cannot be taken into consideration in the text material.

These courses probably duplicate similar courses offered by colleges and universities, but it is doubtful if many who take advantage of them would find the university courses available.

The work of this organization shows the striking tendency of most associations of its kind to give specialized training to its members.

HOTEL GREETERS OF AMERICA

Los Angeles, California
(27)

The "Hotel Greeters of America" is an organization of hotel officials which has approximately 11,000 members scattered throughout the United States and Canada. It has organized a plan whereby it can secure an interchange of ideas, disseminating throughout its organization the plans which the various members have been able to devise. One of the problems which it took under consideration in its second year's series was "Hiring, Training, and Discharging of Employees". In this study, it discussed its natural educational problem--to standardize and systemize the training of hotel workers. Some of the larger hotels have instruction books which cover all departments. Other large ones have manuals of instructions in each department, covering policies, services, etc. Much has been done in the revision of these manuals so that they may be as effective as possible. For instance, it has been suggested that it is most practical for smaller hotels to have rather brief instruction enclosed in a glass-covered frame

(27) MISCELLANEOUS PAMPHLETS--Hotel Greeters of America. See Bibliography.

and placed so that they may be readily seen and read by the employees in the different departments. Many members of this Association have suggested that the larger hotels, at least, would find it a paying proposition to install special business libraries under the supervision of one of their department heads or secretaries or even a trained librarian. This library should be available to executives, and to employees as well, and if necessary, to guests in order that it be practical and the cost justified. Many hotel patrons would welcome and appreciate a special business library, covering the major industries of the locality. From the employees' point of view, however, such a business library would afford an opportunity for the acquisition of information that would make them of more value to themselves as well as to the hotel organization.

Filing systems are being devised especially for hotel use, and training in the operation of the systems is being taught to the various employees in small classes by the group method. Not only are filing systems for the records of the hotel being advocated but also for educational purposes, such as an Idea File

which would cover many different phases of hotel operation and which would be divided into several hundred such divisions if not more. This can be referred to by the employees when information on any particular subject appertaining to the hotel industries was required. The organization has also considered the value of hotel journals as an adjunct in training their workers. Many hotels plan to have these periodicals come regularly, and even though a regular library is not supported they make sure that the magazines are available to all who may desire them. As is true with industry, so in this particular branch it has been found that the bulletin board can serve as a valuable medium for the dissemination of instruction and training material. Articles of local interest, printed placards, notices, graphs and similar ideas could be employed. Executives are being trained to a rather limited extent by higher institutions of learning, such schools as the College of Business Administration of Boston University having offered courses on hotel administration during the past few years. There are also one or two correspondence

schools in the country which advertise courses for the training of hotel executives, but most hotel owners feel that a combination of school and practical training are necessary to make an efficient hotel worker. The efforts of this organization seem to indicate the uniqueness of this field, in that but limited work can be done by a group in training employees. It brings out the desire of a large organization to train its members more than it shows any practical or extensive set-up in its present endeavors.

THE INSTITUTE OF AMERICAN MEAT PACKERS

Chicago, Illinois

(28)

The Institute of American Meat Packers is an example of an organization which is cooperating to a large degree with existing educational bodies. At the present time a very definite arrangement has been made with the University of Chicago, whereby it is possible for the employees of meat packing houses and others interested to take a great variety of courses whether residence, during the evening or as home study courses. These are recognized University courses and count as such toward recognized degrees.

This organization came into existence at a convention held in Chicago in 1922. A systematic plan was soon formulated for the various divisions mentioned above, being completed during the next year.

The evening courses offered for the current year include the following: History and Economics of the Packing Industry, Foremanship, Pork Operations, Beef Operations, Economic Problems in the Packing Industry, Problems in the Marketing of Packinghouse Products,

(28) MISCELLANEOUS PAMPHLETS---The Institute of American Meat Packers. See Bibliography

Problems of the Packing Industry. These are offered primarily for those who are already engaged in the industry and wish to further their knowledge of it and prepare for promotion.

The courses offered for home study are very much alike in content and employ the usual methods adopted by correspondence schools. This year's courses are listed as follows: Economics of the Packing Industry, History and Organization, Production and Marketing of Live Stock, Superintendency, Pork Operations, Beef Operations, Manufacturing Operations, Packinghouse Science, Packinghouse Accounting, By-Products in the Packing Industry, Merchandising Packinghouse Products. This study mainly enables those who are interested in this occupation to become more familiar with it, even though they live a considerable distance from the city of Chicago.

The residence courses are of two types: 1. A four-year course of study of collegiate grade leading to the degree of Bachelor of Philosophy in Commerce and Administration; 2. Graduate courses leading to the master's degree in Business Administration.

The individual courses can be grouped under one of three headings, namely, Science, Commerce and Administration, and Specialized Courses in Meat Packing, as can be seen from the list which follows: Accounting and Costs in the Packing Industry, Personnel and Labor Administration in the Packing Industry, Pork Operations, Beef Operations, Science in the Packing Industry, Production and Marketing of Livestock, History and Economics of the Packing Industry, Financial Problems of the Packing Industry, Advertising and Selling Packinghouse Products, Problems in the Marketing of Packinghouse Products.

Cooperative methods are very much in evidence throughout the work, especially in the third and fourth years when students are kept in close contact with the packing industry by means of instructors who have been experienced executives in the field, by many inspection trips, and special lectures by packinghouse officials. An earnest endeavor is made to place the graduate of this department in the local industry although no guaranty is made. Arrangements have also been made for special two-year courses for advanced students and for advanced research work in packing problems. This organization stands as a splendid example of coop-

eration between existing educational institutions and private industrial associations. Through outside assistance, exceptionally specialized courses are being offered in a regular university.

AMERICAN MANAGEMENT ASSOCIATION
and the
TAYLOR SOCIETY

New York, New York

Two other organizations which may be mentioned as having definite educational programs although operating somewhat differently from those already named are the American Management Association and the Taylor Society.

(29)

The American Management Association is a group of companies and individuals formed partially for the purpose of exchanging experiences, thereby educating its members along the lines of what is being done by others in their particular fields. It secures articles and reports on work being done which might interest its members and then publishes them in book or pamphlet form. Thirty-six different lines of endeavor are listed in this organization's membership. They have issued twenty-six publications on the training of employees.

(30)

The Taylor Society is a similar organization, having been started nineteen years ago for the pro-

- (29) MISCELLANEOUS PAMPHLETS---American Management Association. See Bibliography
MISCELLANEOUS PAMPHLETS---The Taylor Society. See Bibliography

motion of better management by helping industry to approach all phases of the management problem, including that of industrial relations. Under this head provision is made for research work and the furnishing of material on employee training. Frequent discussion conferences are held, at which time this topic is often discussed.

Part IV
DEDUCTIONS

Some deductions which can reasonably be made from this study of the educational and training programs of representative forms of business and organizations are:

A. The business man has learned that training pays in dollars and cents. The practical man recognizes the importance of the instructor or educator as never before.

B. Educational systems on the outside, whether public or private, are wholly unable to train students for special jobs. This must be done on the inside--by business itself.

C. Educators have learned that vocational training has a place in their program and that business is inclined to judge the efficiency of a school system by the efficiency of those students who have been trained in vocational subjects.

D. There is room for considerable cooperation between business and educational systems which will reduce much over-lapping and save for both parties in time, energy and money.

E. There is a willingness to cooperate--a desire to understand the other fellow's work--existing

between business and educators to a greater degree than ever before.

F. Training departments in business are increasing and may be found in most of the leading corporations today.

G. The extent to which the existing agencies for training employees can be utilized depends on the nature of the business. Such institutions as banking houses can depend largely on outside sources whereas others like manufacturers of technical apparatus must rely largely on their own training activities.

H. Training programs of business institutions are recognized as community assets, helping out with a social program as well as an economic one.

I. With the state of Wisconsin paving the way, the governmental bodies are taking increased interest in this type of work.

J. There seem to be plenty of young people who are willing to learn while at work. Progress seems to depend mostly on the employee.

K. The plan of alternate periods of work and study which has given Antioch College so much publi-

city appears to be gaining, many corporations mentioned in this report utilizing it.

L. The training of employees by employers is increasing rapidly.

Part V
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Part VI
APPENDICES

BETHLEHEM SHIPBUILDING CORPORATION LTD.

FORE RIVER PLANT

APPRENTICE SYSTEM

PART I

In the establishment and maintenance of this System, Apprenticeship Courses will be provided by the Management wherein systematic training and instructions will be given suited to the education, abilities and inclinations of the Individual Apprentice, to the end that broadly trained, skillful, intelligent, loyal mechanics who are capable of developing-through Post Graduate examinations and experience-into Supervisors, Foremen and Superintendents, that the Management may be able to secure men trained for these positions from their own organizations.

With this end in view it becomes necessary that each Apprentice, as soon as possible after entering upon his Apprentice Course, should be given duties in which he will assume the responsibility for the manufacturing, installation and supervision of the various duties of his craft.

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APPRENTICESHIP COURSES

Apprenticeship Courses will be given in the following Crafts, or Departments, as they are known at the Fore River Plant.

Pipe Fitters	Blacksmiths
Coppersmiths	Brass Moulders
Electricians	Ship Carpenters
Pattern Makers	Sheet Metal Workers
Ship Joiners	Ship Fitters
Loftsmen	Boiler Makers
Engine Draftsmen	Electric Draftsmen
Marine Machinists	Hull Draftsmen

APPRENTICE SUPERVISOR

An Apprentice Supervisor will be appointed directly responsible to the General Superintendent; his duties shall be to interview the applicant for Apprenticeship, explain the various Crafts of the Industry, length of Apprenticeship Courses, rates of pay and rules of Employment, etc. He shall select and see that necessary training is given to Apprentices, both in the Shops and Departments, and wherever they have their class studies.

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During the Course of Apprenticeship it shall be his duty to obtain accurate information regarding the Apprentices' education, application and ability, their proficiency, character of work and attendance and also co-operate with the foremen, and in general look out for the welfare of the Apprentices.

An accurate record shall be kept in the Service Department, of the work of all Apprentices. A weekly time report for each Apprentice shall be furnished from the Time Office and recorded in the Apprentice's time books.

A weekly report will be made out for each Apprentice and shall be maintained on file in the Service Department. This weekly time record will be a complete record of the individual Apprentice's accomplishments. A copy is to be mailed to his parents, or guardians, should there be no parents, if the boy is a minor.

He shall furnish the General Manager, and General Superintendent with a chart showing the progress of each Apprentice, monthly.

He shall arrange lectures for the Apprentices

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to be held three (3) times a year, and arrange for addresses to be given by the General Manager, General Superintendent, or both, in the way of instructions and aid to the boys. He shall arrange with the Foreman to hold meetings with the Apprentices in their Departments, each month.

Should unusual conditions arise whereby Apprentices have been laid off due to reduction in force, it becomes the duty of the Apprentice Supervisor to see that the Apprentice is re-instated in his department, or Craft, upon the resumption of work.

APPRENTICESHIP COURSES

PART 2

The Apprentice Year shall consist of 2,268 hours which shall be worked, subject to such credits and absences as may be approved by the Foreman and Apprentice Supervisor.

Group I The following named Courses shall consist of four (4) years, each of 2,268 hours:-

Pipe Fitters & Plumbers	Ship Joiners
Sheet Metal Workers	Marine Machinists
Electricians	Loftsmen
Coppersmiths	Pattern Makers

Group II The following named Courses shall consist of three (3) years, each of 2,268 hours:-

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con.

Group II (con.): -

Blacksmiths	Boilermakers
Brass Moulders	Ship Fitters
Ship Carpenters	

Group III The selection of Apprentices for the Drafting Rooms will be open to candidates who have completed two (2) years of their Apprenticeship Course in the Yard. Competitive examinations will be arranged by the Apprentice Supervisor with the Drafting Rooms Concerned for the necessary examinations.

A special schedule shall be arranged for the Apprentice's probationary period so that the record at the end of the period will show, without question, the desirability of retaining, or terminating the boy.

A regular schedule of performances shall be arranged for each Dept., allotting to the different classes of work, certain hours or marks; also an outline of the order in which these classes of work should be taken up.

A maximum number of hours to be allotted to each section of the schedule. If the boy shows special aptitude in that special direction he shall be given an examination; if he qualifies, promote

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him to the next section, thus giving the boy with previous experience, or superior ability, an opportunity of completing his Apprenticeship ahead of the maximum time allotted. This schedule shall be made up by a group of executives, approved by the General Superintendent, and finally approved by the General Manager.

POST GRADUATE COURSES

To the exceptional Apprentice upon invitation of the Management and Apprentice Supervisor a Post Graduate Course of one year will be given upon completion of three (3) years of his Apprenticeship Course in Group I, and two (2) years in Group II, in the yard for the training and development of Supervisors or other specialized positions.

APPRENTICE WAGE RATES

<u>Group I Four (4) Yr. Courses</u>				<u>Group II Three (3) Yr. Courses</u>			
1st Year.....	\$.25	per Hr.		1st 6 months.....	\$.25	per Hr.	
2nd "30	" "		2nd 6 "30	" "	
3rd "34	" "		2nd Year34	" "	
4th "40	" "		3rd "40	" "	

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Apprentices who have developed ability will, upon entering their last year course, be re-rated from time to time until he receives the rating of a first-class mechanic.

BONUS

Upon the satisfactory completion of an Apprentice Course, a bonus will be given consisting of Seventy-Five Dollars (\$75.00) for a three (3) year course, and One Hundred Dollars (\$100.00) for a four (4) year course.

Bonus hours shall be allotted for ability shown, to be determined through consultation between department foremen and Apprentice Supervisor.

The Apprentice who is ambitious enough to take up outside studies in any of the various educational institutions with the approval of the Apprentice Supervisor, and upon satisfactory completing each year's work in such institution he shall receive credit in the form of bonus hours on his Apprenticeship Course. The number of hours to be credited will be decided by the Apprentice Supervisor.

DIPLOMA

At the completion of the Apprentice Course a

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diploma shall be awarded, signed by the Foreman of the Department, Apprentice Supervisor, General Superintendent, and General Manager, setting forth the accomplishments, and this diploma will be given to the apprentice personally by the General Manager of the Plant.

ELIGIBILITY FOR ENROLLMENT

Part 3

Applicants for enrollment in any of the Apprenticeship Courses, must be sixteen (16) years or over, must be sound physically, mentally and morally. Applications may be filed twelve (12) months prior to reaching entrance age. Preference will be given to applicants from families of the Company's employees, and to those who have made the best progress in the Public Schools.

Should the candidate for Apprenticeship be a graduate of a High, Technical, Trade or Vocational School, or its equivalent, he may be allowed to qualify through examinations for a materially shortened Course. If successful in the examination and Apprenticeship requirements, he is to receive all the rewards and recognitions awarded for completion of the

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con.

Standard Courses.

Candidates shall apply in writing on forms prepared for this purpose which may be obtained from the Apprentice Supervisor, who will explain the work and advantages of the several Courses, and advise on the applicant's fitness to undertake the work in any of these courses.

RULES AND REGULATIONS

Apprentices will be subject to the rules and regulations governing the employees of the Company. The Company reserves the right in its sole discretion to terminate an Apprenticeship and suspend or discharge an Apprentice for any of the following reasons:

- Non-conformity to the yard rules and regulations.
- Indifference to duties.
- Improper conduct within or without the yard.
- Lack of industry.
- Reduction in forces under unusual conditions.

Should unusual conditions arise whereby the Apprentice is suspended because of business conditions he has the option of resuming training before any additional Apprentices are hired in his trade, and if suspension for violation of rules or unsatisfactory work, reinstatement may follow a conference between the Company and parent or guardian of the Apprentice.

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On account of the Workmen's Compensation Laws under which the Works of the Company are operating, it is the practice of this Company to require all applicants for employment as Apprentices to present themselves for physical examination by the Plant physician. Employment can only be given to those applicants, all other conditions being satisfactory, whose physical examination does not reveal any defect which in the opinion of the Company might prove detrimental to efficiency and safety of employment.

PROBATIONARY PERIOD

Applicants who have been accepted conditionally shall put in a probationary period of from three (3) to six (6) months, during which time the foremen of the departments and the Apprentice Supervisor will carefully observe and determine the fitness of the probationer for the Apprentice Course.

The applicant is not finally accepted as an Apprentice unless satisfactory reports on his fitness made by the Foreman and Apprentice Supervisor. When finally accepted the probationary period shall become a part of the Apprentice's term.

APPRENTICESHIP AGREEMENT

On the satisfactory completion of the probationary

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period, the accepted Apprentice shall, together with his parent, or guardian, sign an Apprenticeship Agreement which is attached as Exhibit A which shall be binding upon both parties during the period of Apprenticeship.

TOOLS

Any Apprentice finding it necessary to purchase tools for his work may have the same purchased for him by the Company's Purchasing Department upon presenting an order to the Apprentice Supervisor for these tools on the form provided, properly signed and provided by his foreman.

Upon receipt of such order the Apprentice Supervisor shall give the Purchasing Agent a requisition (Form 1001) to purchase the tools against the Apprentice's Account, and upon the arrival of the tools at the Storehouse the Apprentice shall be notified and he shall call and sign a receipt for the delivery of same.

A statement of the purchase price will be billed to the Apprentice and payment will be deducted from his earnings in installments from time to time as may be arranged by the Apprentice Supervisor and the Apprentice. He will receive a statement monthly from

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the Accounting Department showing his unpaid account. These tools shall be considered the property of the Company until all payments are made.

Whenever an Apprentice completes his Course or terminates, the remaining payments due for tools purchased will be deducted from his earnings.

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RULES AND CONDITIONS

Under which Special Apprentices taking the Four Year
Cooperative Industrial Course in the High School of
York, Pa., are received for instruction at the
Works of

.....

1. The applicant for apprenticeship under this
agreement must have satisfactorily met requirements
for entrance to this course at the York High School.

2. The apprentice is to work for us continuously,
well and faithfully, under such rules and regulations
as may prevail, at the works of the above company, for
the term of 5400 hours commencing with the acceptance
of this agreement, in such capacity and on such work
as specified below.

.....

.....

.....

And such other work, according to the capability
of the apprentice, as pertains to our branch of manufac-
turing.

This arrangement of work to be binding unless
changed by mutual agreement of all parties to this
contract.

3. This contract becomes null and void if and when the Cooperative Industrial Course of the York High School is discontinued.

4. The apprentice shall report to his employer for work in alternate two week periods when the York High School is in session, and on all working days when the said high school is not in session, except during vacation periods provided below and he shall be paid only for actual time at such work.

5. The Apprentice is to have a vacation, without pay, of two weeks each year, during school vacation.

6. The employer reserves the right to suspend regular work wholly, or in part, at any time it may be deemed necessary.

7. Should the conduct or work of the apprentice not be satisfactory to employer or to said high school authorities, he may be suspended for a time, or dismissed, by the employer without previous notice. The first two months of the apprentice's shop work are considered a trial time.

8. Lost time at either school or shop shall be made up before the expiration of each period, at the rate of wages paid during said period, and no period of service shall commence till after all lost time

by the apprentice, at either shop or school, in the preceding period shall have been fully made up.

9. Apprentices must purchase from time to time such tools as may be required for doing rapid and accurate work.

10. The said term of 5400 hours (three-years shop term) shall be divided into six weeks as stated below, and the compensation shall be as follows, payable on regular pay days to each apprentice.

For the first period of 900 hourscents per hour
For the second period of 900 hourscents per hour
For the third period of 900 hourscents per hour
For the fourth period of 900 hourscents per hour
For the fifth period of 900 hourscents per hour
For the sixth period of 900 hourscents per hour

11. The above wage scale shall begin the first week the apprentice enters upon the first year of shop work of the High School Industrial Course.

These papers, subject to the two months' trial noted in paragraph 7, shall be signed by the parties to the contract at the time the boy enters the shop.

The satisfactory fulfillment of the conditions of this contract leads to a diploma, unless the course is discontinued, to be conferred upon the apprentice

by the Board of School Directors of the School District of the City of York, Pa., upon his graduation; which diploma shall also be signed by an officer of the company with which he served his apprenticeship after the specified time has been served.

At a regular meeting of the Board of School Directors of the School District of the City of York, Pennsylvania, held on the 8th day of February, 1912, the following resolution was adopted:--

"RESOLVED, that suitable diplomas, executed by the authorities of this School District, and countersigned by the respective employers, be awarded to all such students who may complete the Cooperative Industrial Course, as provided in the curriculum of the high school, to the satisfaction of the school authorities and of the respective employers, the latter to be evidenced by report to that effect to the School Board, by such employers."

Certified from the minutes of said Board this ninth day of February, 1912.

DAVID N. CRIDER,
Secretary

-II-

AGREEMENT

I,by and with the
 (Applicant's Name in Full)

, consent of.....my parent
 (Parent or Guardian's Name)

or Guardian, who evidences his consent by entering
 into this agreement, hereby request.....
 (Firm Name)

to receive me into their works, thereby giving me an
 opportunity of learning the trade of.....
 (Trade)

at my own risk of life, bodily injury, and health,
 and under and subject to foregoing rules and con-
 ditions, to which I expressly agree, and which I
 accept as a part of this agreement; and I hereby
 covenant, promise and agree, in consideration of the
 premises, to be bound and governed by said rules and
 conditions, and, further, to well and faithfully per-
 form my duties.

I consent to this agreement, and request.....

 (Firm Name)

to receive said.....
 (Applicant's Name)

as above, and in consideration of the premises, I
 his.....
 (Parent or Guardian)

hereby become responsible to..... as
 security for the faithful performance of this agree-
 ment.

IN WITNESS WHEREOF, we have hereunto set our hand
 this.....day of.....A. D. 192..

.....
 (Applicant's Signature)

.....
 (Parent or Guardian's Signature)

WITNESS:

.....

.....

-III-

AGREEMENT OF RELATIVE OR GUARDIAN

I,.....of the above named
(Parent or Guardian)

.....do hereby give my consent
(Apprentice)

to his entering the employ of the said

.....
(Employer)

Upon the terms named in the above articles of agree-
ment; and I further agree that in consideration of
such employment the wages or earnings of my said

.....shall be paid directly to him,
(Son or Ward)

and I hereby release all claim that I now have or may
have hereafter thereto.

Dated.....this.....day of
.....,192....

.....
(Parent or Guardian)

.....
.....

We hereby accept the applicant as apprentice under
the above rules and conditions, this.....day
of.....A.D., 192.....

.....
(Firm's Name)

WITNESS:

.....

.....

QUESTIONNAIRE SENT BY THE DEPARTMENT OF MANUFACTURE
CHAMBER OF COMMERCE OF THE UNITED STATES

Ques..I. Do you cooperate with any manufacturers
or industries in the training of apprentices?

Yes, 22 cities No, 8 cities

Ques..2. If your answer is "yes" to Question I,
is it on Full-time, Part-time Trade Course, or Evening
Class Basis?

While some of the replies to Question 2 were vague,
the trend is given by the following:

Evening Class Basis.....17 Cities

Part-time Trade Course.....14 Cities

Full-time Instruction..... 9 Cities

Cooperative Plan..... 7 Cities

Ques. 3. If you offer courses NOT in cooperation
with industries, is there practical work connected?

Yes, 20 cities Indefinite Replies, 7 No, 3 Cities

Ques. 4. Is there difficulty in satisfactorily
placing those who have been trained, or is there an ap-
parent oversupply or shortage in some lines, and if so,
in which lines?

No difficulty in placing apprentices.....20 cities

Decided shortage of apprentices..... 4 cities

Difficulty in placing and over-supply...3 cities

Indefinite replies.....3 cities

Ques. 5. What do you consider your greatest handicap in apprentice training?

1. "Our greatest handicap is in an adequate practical training on production work."

2. "Employer attitude."

3. "Lack of money for teachers' salaries and equipment, also building accommodations. Greater wholehearted support and cooperation of both employers and employees."

4. "Our greatest handicap is to secure cooperation of the smaller plant and store. It is comparatively easy to secure cooperation from larger plants."

5. "I am inclined to say that the lack of adequate facilities for coordinating the educational system with the industrial establishments."

6. "In some way, a great number of parents have the idea that education is to be given their children so that they will not 'have to work'. If I could overcome this idea and inculcate in the minds of both parents and children that education is only a training to enable one to hold a place as a self-supporting and self-

respecting member of society, my job would be much easier."

7. "Securing teachers who have both trade skill and information and educational or teacher training. In most cases we find organized labor more eager for the training than employers. In many instances the question of paying the apprentice for the day in school presents a problem."

8. "Inadequate equipment."

9. "Our greatest need is room."

10. "Apprentice classes are our most satisfactory classes."

11. "The unwillingness of many employers to assume their share of a training program for apprentices in the skilled trades."

12. "Industry is not always prepared to employ the number of boys available at graduation time."

13. "Difficulty of getting industries to realize that apprenticeship time should be shortened when apprentice has had preliminary training in our school shops."

14. "The greatest handicap to apprentice training is the lack of intelligent appreciation of the problem by the employer and his failure to realize that train-

ing for industry must be either paid for by supporting real trade schools or greater, through hidden costs in his manufacturing department."

15. "Getting employer and organized labor together."

16. "Have had such splendid cooperation that we have not encountered any difficulty."

17. "Getting the right kind of boys and holding them long enough."

18. "Tendency of parents to exploit their children for wages high for a boy but low for a man."

"Next in importance is disposition of employers to use the juvenile worker for mere employment, disregarding the fact that the initial experience of young people in industry should be primarily educational and only secondarily employment."

19. "Employers refusing to employ apprentices to the number permitted by the joint agreement with unions or the number which the size of their industry would permit, lack of sufficient teaching material specially adapted for apprentice groups. Insufficient appropriations."

30. "Classes are held in the evening at a time when the boys are tired. It would, in our estimation, be much

better if these classes could be conducted as part-time day classes."

21. "Lack of space."

22. "Lack of knowledge on part of parents and so-called 'Regular' teachers in the public schools regarding the superior advantage offered by a genuine system of apprentice training. Another is that employers are slow to appreciate the fact that the schools belong to the public and that they will meet any reasonable demand made by that public."

23. "Employers are seldom willing to bear their part of the burden of providing ways and means for apprentice training."

24. "Lack of cooperation on the part of our employers. Organized labor has been very helpful."

25. "Lack of standardized methods of training."

26. "Mostly with the small employers in getting cooperation."



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