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IN CHARGE THIS ISSUE

Carole A. Clarke '21 Charles G. Ball '22

WEDNESDAY, AUGUST 13, 1919

AMERICAN INDUSTRY FACES CRISIS

AMERICAN industry faces new and serious labor problems involving the greatest interests of the nation. Hand in hand with the cry against the high cost of living come universal strikes involving great sections of the country, tying up railroads, telephone systems, and street car lines, causing complete or partial suspension of business for considerable periods. Economists say the country must produce more to make up for the ravage of war before the cost of living can be reduced and the reward for labor increased, yet strikes are becoming more common than ever, with the resulting reduction in production. Organized labor demands the elimination of private capital from some of the greatest industries, and their activities are assuming the aspect of a political organization. The demands for the nationalization of industry and government ownership become more insistent at the very time that the business interests of the country are bringing pressure to hasten the return of railroads and telephones to their former owners. Higher wages, a greater share in the control of industry, socialism, nationalization of industry, in fact, complete social and labor unrest is the problem facing industry today.

In September the combined Technology clubs will meet in Philadelphia, when they will discuss the relation of Technology to the Industries. A book will be published showing what the Institute does in the industrial world. This book will show that the problems of labor have an important influence on the Engineer's work.

Up to the present time Technology students have pursued their work at the Institute with little or no regard to outside affairs such as labor questions and politics—matters which they must deal with when they enter upon their industrial work. The academic aspect of the labor question has been given to the men in the Engineering Administration Department during their third year, but no attempt has ever been made to present up to the minute, present-day industrial problems such as are now holding the interest of the whole country. However, pressure has been brought to bear upon the Transition Committee of the Faculty so that they have arranged for such a course, which will be offered next year as one of the third year options. The Economics Department will present this course and it will be taught by Professor Doten, who has had considerable experience with labor matters, especially during the war, while he was in the employ of the government.

This is a step in the right direction, nevertheless we do not wish to let matters stand. These are problems about which every Technology student should be thinking and forming opinions during his four years of training. Such matters are constantly changing and such movements as underlie the labor situation, Bolshevism, Socialism, Nationalization and Government Ownership of industry, take tremendous strides in the course of a single year. Their significance cannot be understood by a brief study such as could be offered in an optional course of a term's duration. We feel that the importance of such problems warrants their being offered to all students in the upper classes. Rather than have the course represent the opinions and experience of a single man, we believe that men prominent in this field outside of the Institute faculty should be invited to present their side of the question to the students. By this we mean that we would like to see the side advocated by organized labor explained to the students as well as the side taken by the industrial interests, employers and capital. There is no doubt that the time has come when all believe that the technical school should send out men better informed on business and industrial affairs. We believe such a course will do much to accomplish this purpose.

Alumni Notes

FRANK GELETT BURGESS '87, who was graduated from Technology in the course in Civil Engineering, is the author of a "Series of Brilliant Satires on the Rampageous Sex," which is appearing in the current issues of "Judge," the weekly humorous periodical. The series details the adventures of one Angela Bish of the six-cent store. It begins with a description of her personal charms, if such they may be called, and her attachment for a youth clad in a plaid suit with purple spots. It is a clever piece of satire upon the gum-chewing girl and the lounge lizard of today, guaranteed to furnish the Tired Engineer with two pages of chuckles. Burgess will be remembered for the Tech songs which he wrote while he was at the Institute, copies of which are kept in the main library, together with cartoons which illustrate these songs.

C. H. Howell '07, newly elected president of the Ohio Electric Light Association, is vice-president of The Ohio Service Co., Coshocton, Ohio. He was graduated from Richmond College, Richmond, Va., in June, 1905, with the degree of Bachelor of Science, and immediately thereafter became a car barn foreman with the Newport News & Old Town Street Railway Co. at Hampton, Va. In January, 1906, he entered the student course of the General Electric Co. at Lynn, Mass., and coincident with this work in 1906-1907 took post graduate work in thermodynamics and electrical engineering at Technology. In 1908 Mr. Howell entered the student course of the General Electric Co. at Schenectady, N. Y., and in 1909 entered sales work as commercial engineer in the power and mining and small motor department of the General Electric Co., Pittsburgh. He pursued this work until August, 1912, when he accepted the position of manager of the Coshocton Light & Heating Co., Coshocton, Ohio. In January, 1913, jointly with this position, he took the management of the New Midland Power & Traction Co., Cambridge, Ohio, and in May of the same year took a similar position with the County Electric Co. at New Philadelphia and Dennison, Ohio, and the Twin City Traction Co. at Dennison, Ohio, and the Tuscarawas County Light, Heat & Power Co., New Philadelphia. Also during the year 1913 he was appointed manager of the Lafayette Light & Power Co., Strasburg, Ohio. All of these companies, including the Strasburg Electric Co., Strasburg, the Newcomertown Light, Heat & Power Co., Newcomertown, were later merged into a single corporation, which is now known as The Ohio Service Co.

Under Mr. Howell's directorship the company since 1914 has constructed over 111 miles of 33,000-volt transmission lines, connecting all the above towns some 21 miles of 13,000-volt power feeders, and two new power houses. The company is now operating in 26 different communities scattered over four counties; two railway systems; two central district heating systems and two hydroelectric plants. Since 1914 the revenue of The Ohio Service Co. has grown more than 100 per cent, and the number of customers connected to its lines since the beginning of 1916 has increased 77 per cent. Mr. Howell was one of the first among those who appreciated the possibilities of selling utility stock to customers and residents in the territory served by the utility. Today he is reaping the benefit of this for his policy has been prosecuted most successfully. He is a member of the American Institute of Electrical Engineers, American Electrochemical Society, the Boards of Trade of Coshocton, Cambridge, Dennison, Uhrichsville, New Philadelphia and Dover, and is a director in the Coshocton Board of Trade, a Rotarian at Coshocton, and for a number of years has been a member of the executive committee of the Ohio Electric Light Association.

COMMUNICATION

Wellsville, N. Y.

To the Editor of THE TECH:

You will find enclosed three dollars in payment of the enclosed bill. I have just returned to the United States after sixteen months service overseas, where the mail service has been at times a little irregular and uncertain, which explains the delay in paying this account.

While in France, I eagerly watched for THE TECH, which was frequently forwarded to me from home. It was read with great interest, not only by myself, but also by the men from other colleges, with whom I was associated. Permit me to extend my heartiest congratulations to you for the high standard which you have set for the paper.

Yours very truly,

(Signed) Arthur W. Carpenter '13,
Captain, San. Corps, U. S. A.

POLICE GUARD INSTITUTE CAMPUS

The petty thieving which was being carried on around the Institute, has caused the faculty to make arrangement with the city of Cambridge to have the grounds thoroughly policed. This went into effect some time ago, and now the grounds are patrolled at all hours of the day, one policeman being on from 8 to 6 o'clock in the day time and two shifts at night, from 6 to 1 and 1 to 6 A. M. The experiment has proved very successful, and Patrolman Kelly has recently been commended for his good work of rounding up some of the miscreants.

Later four police boxes are to be installed, one at each corner of the Institute grounds.

RESUME COOPERATIVE COURSE IN ELECTRICAL ENGINEERING

(Continued from page 1)

latitude may be exercised by the students in the selection of their line of work, and their assignments will be made either to shop management in the Works' offices or to research in the Company's research laboratories, depending upon the individual aptitudes and preferences of the individual students.

The co-operative training occupies the last three years of the five year course as above indicated. This work will open this year on Monday, October 6, the registration days being the same as for the Ordinary Institute courses, namely October 2-4. Course VI-A men should preferably register as early as Thursday, October 2, and not later than Friday, October 3, in order that they may be ready for instruction on Monday morning. The Group A which is assigned to the Works for the first term should be located in the Thomas Club by Saturday night after registering at the Institute.

For the class entering on the co-operative work this year, the work begins on October 6 1919 and continues for eleven terms, there being four terms per year. For classes entering in later years an additional term will be provided in the first summer.

The first ten terms beginning with October 6 are spent alternately in residence at Technology and at the works, the Institute terms being of eleven weeks each followed by two weeks vacation, and the Works terms being of thirteen weeks each. Each class is divided into two groups of students, one group being at the Institute and the other group being at the Works in each term. The two groups exchange terms at the end of each term. The eleventh term occupies nine weeks immediately prior to the Institute Commencement, and is spent by both Groups at the Institute. At the conclusion of the prescribed work an optional additional term of thirteen weeks at the Works is offered.

Successful completion of this Course leads to the degree of Master of Science conferred at the Institute Commencement which comes at the end of the prescribed work. The degree of Bachelor of Science, conferred as of the year preceding the conferring of the Master's degree, is associated with the Master's Degree.

The number of men who may be admitted to the first co-operative year is at present limited to thirty, with a possible increase to a maximum of forty in future years. On account of this limitation of the number admitted to the course each year, and the desirability of maintaining the Groups A and B of each year alike, no student should apply for admission to the course unless he expects to carry it through to completion, unless prevented by exceptional circumstances.

Students may be taken into the co-operative years of the Course who have not been in residence at the Institute for the first two years, provided they have had engineering school training which is the equivalent of the first two years of the electrical engineering course at the Institute, and their records have been good. Students applying for admission to the co-operative years under such circumstances, should forward their engineering school records to the Secretary of the Massachusetts Institute of Technology, Cambridge, Mass., and along with their application should send personal recommendations of one or more professors under whom they have studied, preferably including the head of the engineering department in which they have studied. University graduates with A. B. or B. S. degrees, who are eligible to enter Course VI as Juniors are eligible to enter this Course on the same credentials.

While at the Works the students are subject to the usual requirements applying to employees of the General Electric Co. Compensation is paid by the General Electric Company to students in this co-operative course at an hourly rate, coming to approximately fifteen dollars a week for the first two terms at the Works, seventeen dollars and a half a week for the next two

terms at the Works, and twenty dollars a week for the last two terms at the Works. This makes a total payment of over \$1300 during the co-operative period. Students also share the regular conditions of bonuses, and in case of working overtime are paid at the rate of time and a half. The working week in the shops is forty-eight hours and in the offices forty-four hours, which provides for Saturday half-holidays in both cases. Living accommodations for students when at the Works are satisfactory, as the Thomson Club, a residence near the Works where excellent sleeping rooms, shower bath, reading room and recreation rooms are provided, has been set aside by the General Electric Co. for these students. Students receive these residence accommodations for a charge of \$3.25 per week per student. Table board is not provided in the Thomson Club, but may be obtained in the immediate neighborhood, and the Company operates a noon day cafeteria and lunch room at the Works.

The work in the shops, testing departments and engineering offices is supplemented by bi-weekly conferences with Company department heads, which technical and administrative problems of the Company are intimately discussed under the direction of a Company officer. Afternoon discussion sessions are also held at the Thomson Club, with one of the professors from the Institute presiding, the object being to make the residence of each group while at the Works a period of definite educational activity and serviceableness. While in the Works the students are expected to carry on duties as apprentices in each one of the various departments to which they are assigned, the advancement of each student through the departments being determined by his aptitude and capacity shown in both his studies and his Works performance. It is expected to make each student familiar with the methods of carrying on the manufacturing activities in each department of these Works. The Works are notable in size and their product is of a multifarious character, including steam power machinery, such as steam turbines and small reciprocating engines; electrical machinery including direct and alternating current generators and motors; electrical instruments, such as meters; alternating current transformers, and special mechanical and electrical appliances.

The student employment at the Works includes service in the machine shop to obtain experience in the operation of the different machine tools in different kinds of manufacturing; service in the drafting room in drafting, detailing and laying out elementary designs; service in the testing department including testing direct current and alternating current motors and generators; service in the winding department for winding generators, motors and transformers; service in the meter testing department; service in the transformer department in winding and testing; service in the turbine department testing steam turbine and turbo generators; service in engineering assignments, designing, calculating costs, instruction in project engineering; and service in the special research laboratories of the Company.

The residence of the co-operative students at the Institute is in periods substantially coincident with the regular terms of the Institute and consequently the Groups are able to enter into the usual student life of the Institute.

No contract is made between students and the General Electric Company and graduates are free at the conclusion of their course to enter employment wherever offered and in accordance with their personal desires.

Well qualified students who have completed at another institution the equivalent of the work of the first two years of the electrical engineering course at the Institute of Technology may be admitted to advanced standing at that time, but the course is particularly intended to meet the needs of students who have spent the first two years in successful study at the Institute.

Well qualified students who have completed at another institution the equivalent of the work of the first two years of the electrical engineering course at the Institute of Technology may be admitted to advanced standing at that time, but the course is particularly intended to meet the needs of students who have spent the first two years in successful study at the Institute.

The curriculum for the co-operative years (namely the junior, senior and graduate years) of the Course is contained in the following pages. The curriculum for the two years preceding the co-operative work, (the freshman and sophomore years) may be obtained from the circular on Courses of Study from the Institute. Enquiries regarding the class entering on October 6, 1919, should be made to Professor Donald C. Jackson, Massachusetts Institute of Technology, Cambridge, Massachusetts.