The Technology Review

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THE COMING CONGRESS OF TECHNOLOGY

It will mark the 50th Anniversary of the granting of the Charter to the Institute—Anniversary Smoker and Banquet to be given

The Congress of Technology which will be held at the Institute, Monday and Tuesday, April 10th and 11th, will be the most important event in the history of the Institute since its foundation because it will surely mark the beginning of a new era of prosperity and of achievement. The event will partake of professional, social and public features and the notable papers to be presented will constitute a unique record of the practical achievements of science in modern life. The meetings of the Congress will be open to the public and arrangements are being made to care for the large numbers that will be in attendance from New England as well as from the entire country.

The occasion marks the fiftieth anniversary of the granting of the Institute's charter. During these fifty years, the world has seen the fruition of President Rogers' plans, for the "advancement, development, and practical application of science in connection with arts, agriculture, manufacture and commerce," which the Institute was organized to promote.

The social features of the anniversary have been delegated to an alumni committee which has arranged for an anniversary smoker in Symphony Hall on April 10th. This will probably be the largest affair of the kind ever held in New England. The Waltham Watch Company Band of thirty pieces will furnish music and specialties of an unusual character will be presented at intervals during the evening. The moving pictures of the Technology Reunion of 1909 will be thrown on the screen and a special committee is at work on lantern slides of amusing episodes during the history of the Institute taken largely from Techniques.

Application for tickets will be made in the usual way on blanks to be sent out within a few days. With the regular ticket application there will be a blank for ladies' tickets to the balcony.

The Association of Class Secretaries is actively engaged in arranging for class suppers of all the classes on Monday, April 10th. Most of the classes will, no doubt, be glad to have their regular meeting at that time. Others who prefer to have a class meeting at a time when the whole evening can be devoted to it, will

meet informally or arrange to dine in a public dining room of some hotel and go to Symphony Hall later. The hall will be open at 7.30 and the fun will begin about 8. It is expected that 1,000 Tech men will be on the floor.

On Tuesday evening, April 11th, an anniversary subscription banquet will be given at Symphony Hall to which alumni and prominent citizens of New England are invited. The banquet will be arranged on a magnificent scale and will be somewhat similar to the reunion banquet, of 1909. The speakers will be men of national reputation more or less directly connected with the development of industry. Invitations to this banquet will be sent out within a short time with application blanks. It is believed that some very interesting announcements will be made during this banquet.

The first session of the Congress of Technology will be held in Huntington Hall, Monday, April 10th, at two o'clock. President Maclaurin will open the exercises with an address and he will be followed by prominent speakers who have been invited to prepare papers for the Congress. April 11th will be the second day of the Congress and will be continued in Huntington Hall. The papers themselves will mark the advance skirmish line in science and technology and will reflect rather than recount the victory of technical education which was conceived by William B. Rogers.

Half a century ago there were many forces at work to impress on far-seeing men the necessity of radical changes in education in order that the country might profit as it should by the discoveries of science and by the application of its method and spirit to the great practical problems of the day. Following the plan laid down for it the Institute has trained a great number of men who are now in the very front rank of science, men who have extended far the boundaries of knowledge and thereby gained a world-wide fame. In addition to this its former students are to be found in positions of power and responsibility in every state of the Union, engaged in the work of developing mines, opening up the country by means of railroads, applying scientific methods to the great problems of transportation, power production and distribution, advancing chemical industries, conserving the public health, and contributing in countless other ways to the increase of the nation's wealth.

This practical application of science to the affairs of life will be surveyed and described, as also the conditions and problems of groups of allied industries, in a large number of papers by alumni and members of the faculty of the Institute. The record of the proceedings of the Congress, will furnish an epitome of what has been done by the application of technical science to the world's business.

The papers to be presented at the Congress of Technology are as follows:

Landscape Architecture,—Stephen Child, '88, Landscape Architect and Consulting Engineer, Boston.

Some Phases of Modern Architectural Practice,—Walter H. Kilham, '89, of Kilham & Hopkins, Architects, Boston.

The Engineer and Architect Unite,—Luzerne S. Cowles, '97,—Asst. Designing Engineer, Boston Elevated Railway Co., Boston.

The Improvements in Efficiency of Electric Lighting Properties and What the Public Gains Through These Improvements,—William H. Blood, Jr., '88, Engineer with Stone & Webster, Boston.

Instruction in Finance, Accounting and Business Administration in Schools of Technology,—Harvey S. Chase, '83, of Harvey S. Chase & Company, Certified Public Accountants, Boston.

Commercial Development,—Charles Hayden, '90, of Hayden, Stone & Company, Bankers, Boston.

The New Profession of Economic Engineering,—Roger W. Babson, '98, "Babson's Reports," Wellesley Hills, Mass.

Prevention and Control of Fires Through Scientific Methods,—Edward V. French, '89, Vice-President and Engineer, Arkwright Mutual Fire Insurance Company, Boston.

Reclamation of the Arid West,—Fred-

erick H. Newell, '85, Director of the Reclamation Service, Washington, D. C.

Research as a Financial Asset,—Willis R. Whitney, '90, Director of the Research Laboratory of the General Electric Company, Schenectady, N. Y.

The Spirit of Alchemy in Modern Industry,—Professor William H. Walker, Director of the Research Laboratory of Applied Chemistry, M. I. T.

The Responsibility of Manufacturers for the Training of Skilled Mechanics and Shop-Foremen,—Prof. Arthur L. Williston, '89, Director, Wentworth Institute, Boston.

Training of Industrial Foremen,—Prof. Charles F. Park, '92, Director, Lowell School for Industrial Foremen, M. I. T.

The Technics of Iron and Steel,—Theodore W. Robinson, '84, Vice-President Illinois Steel Co., Chicago, Ill.

The Industrial Need for the Exceptional Man,—Odin B. Roberts, '88, Lawyer, Boston.

Education—Its Function in Training for the Textile Industry,—Charles H. Eames, '97, Director, Lowell Textile School, Lowell, Mass.

Development of Mining Schools,—Prof. Robert H. Richards, '68, in charge of the Department of Mining Engineering, M. I. T.

Technical Education and the Contracting Engineer,—Sumner B. Ely, '92, Vice-President, Chester B. Albree Iron Works Company, Allegheny, Pa.

The Technical School Graduate; His Strength and His Weakness,—Prof. H. P. Talbot, '85, in charge of the Department of Chemistry and Chemical Engineering, M. I. T.

The General Educational Value of the Study of Applied Science,—Alan A. Claflin, '94, President, Avery Chemical Company, Boston.

The Influence of the Institute Upon the Development of Modern Education, James P. Munroe, '82, Executive Director Boston 1915, Boston.

The Elevation of Applied Science to an Equal Rank with the so-called Learned Professions,—Mrs. Ellen H. Richards, '73, Instructor in Sanitary Chemistry, M. I. T.

Factory Sanitation and Efficiency,—Prof. C.-E. A. Winslow, '98, Associate Professor of Biology of the College of the City of New York, and Curator of Public Health in the American Museum of Natural History, New York City.

The Pollution of Streams by Manufacturing Wastes,—William S. Johnson, '89, Sanitary and Hydraulic Engineer, Boston.

Sewage Disposal with Respect to Offensive Odors,—George W. Fuller, '90, of Hering & Fuller, Hydraulic and Sanitary Engineers, New York City.

Present Status of Water Purification in the United States and the part that the Massachusetts Institute of Technology Has Played,—George C. Whipple, '89, of Hazen & Whipple, Consulting Engineers, New York City.

Profitable and Fruitless Lines of Endeavor in Public Health Work,—Prof. Edwin O. Jordan, '88, Professor of Bacteriology, University of Chicago, Ill.

The Technical School Man in Public Health Work,—Harry W. Clark, '88, Chief Chemist, Massachusetts State Board of Health, Boston.

The Life Saving Corps of the Technical School,—Prof. Severance Burrage, '92, Professor of Sanitary Science, Purdue University, Lafayette, Ind.

Reliability of Materials, Walter C. Fish, '87, Manager General Electric Works, Lynn, Mass.

The Chemist in the Service of the Railroad,—H. E. Smith, '87, Chemist and Engineer of Tests, Lake Shore and Michigan Southern Railway, Collinwood, Ohio.

Scientific Industrial Operation,—Tracy Lyon, '85, Assistant to First Vice-President, Westinghouse Electric & Manufacturing Company, Pittsburgh, Pa.

The Natural Increase in the Ratio of Burden to Labor in Modern Manufacturing Processes,—James B. Stanwood, '75, Engineer and Vice-President, Houston, Stanwood & Gamble Co., Cincinnati, Ohio.

Scientific Management, David Van Alstyne, '86, Vice-President, Allis-Chalmers Company, Milwaukee, Wis.

An Object Lesson in Efficiency,—Wilfred Lewis, '75, President, The Tabor Manufacturing Company, Philadelphia, Pa.

The Scientific Thought as Applied to Railroad Problems,—Benjamin S. Hinckley, '99, Engineer of Tests, N. Y., N. H. & H. R. R., New Haven, Conn.

The Field of Scientific Management in Railroad Work,—Samuel M. Felton, '73, President, Chicago Great Western R. R., Chicago.

The Development of Economical Ore Dressing Systems,—Frank E. Shepard, '87, President, Denver Engineering Works, Denver, Colorado.

Metallography and Its Industrial Importance,—Prof. Albert Sauveur, '89, Professor of Metallurgy and Metallography, Harvard College, Cambridge.

The Conservation of our Metal Resources,—Albert E. Greene, '07, Electro-Metallurgist with the American Electric Smelting and Engineering Company, Chicago, Ill.

An Electric Furnace for Zinc Smelting, —Francis A. J. FitzGerald, '95, Consulting Engineer, Niagara Falls, N. Y.

Some Causes of Failures in Metals,—Prof. Henry Fay, Professor of Chemistry, M. I. T.

Analysis of Some Losses of Efficiency in a Large Producer-Gas Engine Plant, John G. Callan, '96, Engineer with A. D. Little, Inc., Boston.

Coal Combustion Recorders,—Prof. A. H. Gill, '84, Professor of Technical Analysis, M. I. T.

Thirty Years' Work in Boiler Testing, —George H. Barrus, '74, Expert and Engineer, Boston.

Mechanical Handling of Materials,—Richard Devens, '88, Manager, Eastern Office of the Brown Hoisting Machinery Company, New York, N. Y.

The General Solution for Alternating Current Networks,—George A. Campbell, '91, Engineer, American Tel. & Tel. Company, New York City.

Mail Handling Machinery at the Pennsylvania Railroad Terminal and United States Post Office at New York City,—Julian E. Woodwell, '96, of L. B. Marks & J. E. Woodwell, Consulting Engineers, New York City.

The Development of a System of Underground Pneumatic Tubes for the Transportation of United States Mail,—B. C. Batcheller, '86, Chief Engineer, American Pneumatic Service Company, New York, N. Y.

The Control of Thermal Operations and The Bureau of Standards,—George K. Burgess, '96, Associate Physicist, Bureau of Standards, Washington, D.C.

Improvements in Cotton Bleaching,—Walter S. Williams, '95, Textile Expert, Arthur D. Little, Inc., Boston, Mass.

Power Plant Betterment,—H. H. Hunt, '89, Stone & Webster Management Association, Boston, Mass.

The Debt of the Manufacturer to the Chemist,—Hervey J. Skinner, '99, Vice-President, Arthur D. Little, Inc., Boston, Mass.

The Record of Technology

In an article published in the *Popular Science Monthly* a few years ago, Professor George F. Swain summarized the claims of the Institute to recognition as a leader in the development of technical education as follows:

"It was the first school in the world to institute laboratory instruction in physics and chemistry to students in large classes as a part of the regular course of each candidate for a degree; the first to equip a mining and metallurgical laboratory for the instruction of students by actual treatment of ores in large quantities; the first to establish a laboratory for teaching the nature and uses of steam, and a laboratory for testing the strength of materials of construction in commercial sizes; and the first in America to establish a department of architecture. Later still, it was the first school in America to establish distinct and specialized courses of study in electrical engineering, in sanitary engineering, in chemical engineering and in naval architecture."

WORKING FOR A STATE GRANT

Committee of Education and Senate Ways and Means favorable—Hearing before Joint Committee of Ways and Means

The Institute's bill for $100,000 a year was passed on favorably by the joint Committee on Education of the Legislature and was given a hearing before the joint Committee on Ways and Means, on February 28. The Senate Committee reported February 29 that the bill ought to pass and it will come up in the Senate for vote probably before the REVIEW is issued. It will then go to the House and be referred to the Ways and Means Committee. After this committee has reported, it will be finally voted on.

The hearing before the joint Ways and Means Committee of the Massachusetts Legislature took place February 28th. Those who appeared for the bill were Edwin S. Webster, '88, of Stone & Webster Corporation; President R. C. Maclaurin; Colonel T. L. Livermore of the Corporation; Francis R. Hart, '88, chairman of the board of directors of the Old Colony Trust Company, and former treasurer of the Institute; Harvey S. Chase, '83, of Harvey S. Chase & Company; B. Preston Clark of the Plymouth Cordage Company; J. Franklin McElwain president of the W. H. McElwain Company; Everett Morss, '85, president of the Simplex Electrical Company, and Edgar N. Wrightington, vice-president of the Consolidated Gas Company. No one appeared in opposition.

James W. Rollins, '78, chairman of the Committee on State Aid, conducted the case for the Institute.

Mr. Webster stated that ever since Stone & Webster started in business twenty years ago, they have been taking a number of graduates from the Institute each year, some years as many as twenty-five or thirty, and in his opinion, this has been one of the greatest sources of strength in the development of the business, not only along scientific lines, but along practical lines as well.

Dr. Maclaurin gave a brief résumé of the arguments made at the hearing before the Committee on Education and in response to questions from the committee made a statement in regard to the financial condition of the Institute and outlined the plans for future development. He pointed out that the great industrial advance in Germany during the last twenty-five years from a poor country to a rich one has been accomplished largely through technical research and showed that there was no reason why this community should not attack the business problem just the same as Germany has. He spoke especially of the laboratory of applied chemistry and the practical work it is accomplishing for the community as well as for the country at large. In one case a concern was throwing away a by-product which through the advice of the laboratory was utilized and a saving of $80,000 a year was made.

In regard to a query about the McKay will, Dr. Maclaurin made the following statement: It is not uncommonly supposed that the plan which was suggested some years ago by the terms of which the Institute was expected to derive some benefit from the McKay will was rejected by the Institute of Technology, and its trustees are blamed in certain quarters for having turned down what some people consider a good proposition.

Now, as a matter of fact, the Institute of Technology did not reject the plan at all. The only body that had any power to enter into such an agreement was the Corporation of the Institute, and on the only occasion when it expressed any opinion on this plan it approved it. In spite of this the plan fell through, because a judgment of the Supreme Court made it impracticable for the Institute to fulfill the conditions of the agreement. The case that the court decided (*Wilson*

v. *Massachusetts Institute of Technology*, 188 Mass., page 565) had reference to the restrictions on our Boylston Street property and the decision made it impossible to carry through the plan of coöperation with Harvard that would otherwise have been possible. I may add that even if the scheme had not miscarried, the Institute would not have been free from financial difficulties today. The benefit to be derived was mainly prospective, and the Institute's share of the present income from the McKay bequest would have been small. That is a matter that has beeen greatly misrepresented in current discussion of this question."

The President was followed by Colonel Livermore who made a condensed statement of the Institute's case as follows: At the present time the Institute has to depend largely for making up the deficit incurred in its current expenses on contributions from the community, from alumni and others. It has become apparent that the Institute in order to provide for the increasing number of students that are pressing upon it, and to provide enlarged and adequate facilities, must move to a new site. It is going to take all of its resources, and all that it can get contributed by its friends, to pay the expenses of moving and establishing a new plant.

It is hopeless to expect that the community during the ten years in which this new establishment is being built will contribute both the deficiency in current expense and the amount which must be raised to build the new plant. For that reason the Institute now asks the State for this contribution of a hundred thousand dollars a year for its current expenses, and for that reason only, so that its requests to its friends and the community and the alumni shall be addressed entirely to its wants for establishing the new plant.

If the bill does not explicitly confine the expenditure of this $100,000 a year to current expenses there is not the slightest objection to having any phraseology incorporated within the bill which will make it clear.

Now, the property of the Institute may be divided largely into two lots. There is the Boylston Street property on which it has two buildings opposite the Brunswick Hotel, and there is the property on Clarendon Street where its group of engineering buildings is situated; and outside of that it has some property on Garrison Street, and some exercising grounds in Brookline.

The Legislature has released to the Institute of Technology all its right in the land on Boylston Street, but the court has intervened and says that the abutters have rights which must be respected, and as long as they insist upon those rights it is impossible to sell the Boylston Street property for its value, or anywhere near its value. This, I understand, cannot be remedied by an act of the Legislature; the Legislature has given all it has a right to give in the most liberal manner; but the court says the abutters have rights which the Legislature cannot take away.

THE CHAIRMAN.—Do I understand you to say that by a further act of the Legislature that situation could not be remedied?

COLONEL LIVERMORE.—I understand it cannot be; I understand the effect of the decision of the court is that the Legislature cannot take away the rights of the abutters.

THE CHAIRMAN.—That is, under the police power of the Legislature am I to understand that the Legislature could not take away those privileges from the abutters—if it was for the best interest of the state?

COLONEL LIVERMORE.—I should be very reluctant to oppose my judgment to that of the chairman of the committee, or the committee on that point, but I understand that the Supreme Court has intimated that that is its opinion.

THE CHAIRMAN.—That is their opinion of the present act; do you understand the Supreme Court to make a forecast of the future?

COLONEL LIVERMORE.—I understand that is a correct inference from what they have decided, but I may be wrong. I wish to say further, that we should be

extremely glad to entertain the view which the chairman intimates may be the correct one, that the Legislature could enable us to sell that land regardless of the abutters, but our counsel whom we have employed in the matter, and who are learned in the law, have not been able to come to that conclusion. And as for myself, with a certain reminiscence of legal learning which I once had, I have not been able to come to that conclusion.

THE CHAIRMAN.—The Legislature does some very queer things.

COLONEL LIVERMORE.—It does.

THE CHAIRMAN.—And if some of our laws are not better obeyed than others I know of, I don't think it makes so much difference what the State thinks about it.

COLONEL LIVERMORE.—I sympathize with you; but for the moment assuming that what I suppose to be the legal situation is the true situation, this is the fact—that the Institute of Technology cannot now sell the Boylston Street property for its adequate value and devote the proceeds to the new site. At any rate, the Executive Committee of the Institute, of which I am a member, has acted upon that hypothesis and has assumed that the property cannot be sold for an adequate value and that until the abutters themselves release that right, the Institute must make whatever use they can make of the Boylston Street property.

We are not without hopes that in the course of time, as business advances to the westward, and invades Newbury Street, that it will become apparent to the abutters that it is for their pecuniary interests to have those restrictions released, but at what time that will happen no one can predict.

THE CHAIRMAN.—If those restrictions were not there what do you believe that property would be worth?

COLONEL LIVERMORE.—Well, I have not made any estimate, but I assume that what Dr. Maclaurin said may be relied upon as the probable value,—$2,000,000. But assuming that we cannot sell that land today for its true value, the plans of the committee have been to continue to occupy the buildings on Boylston Street for one department of the Institute while moving other departments to the new site, and probably continue to occupy those buildings on Boylston Street until the legal situation shall be changed. The other land on Clarendon Street, and the buildings, I have reason to believe can be sold for three-quarters of a million dollars, and it results that to move to the new site the Institute must raise from its friends a million dollars or a million and a half in addition to what has already been offered for the site.

Now, it is because we must raise that sum to move that we cannot hope to get the additional sum from our friends to make up the deficit, that we are asking the Legislature that the State may contribute a hundred thousand dollars a year during ten years. I want to add one word as to my views upon the policy which should govern the State in matters like this. I should not wish to subscribe to the view that the State ought to embark on a policy of giving aid to all institutions of higher learning in the state; I don't think it would be a good fiscal policy, and do not think it would be wholesome, and I do not think it would be for the benefit of the institutions themselves. I think that the so-called institutions of liberal learning can, in the future as they have in the past, depend upon private contributions. Their education is more in the nature of a luxury than is technical education that is offered at the Institute of Technology, and some other institutions in the state, and people are ready to contribute for their luxuries and are not ready to contribute for the economical welfare of the State; and it seems to me if I were upon this committee, with my present lights, I should wish to consider whether this subsidy was one which contributed to the economic benefit of the State. And because to my mind it is most essential for the economic welfare of the State to support the Institute of Technology, I am willing to appear here and advocate as a citizen the grant of this $100,000 a year.

This State has very little out of which to make money; its agricultural products

are one fifteenth of the value of the manufactured products. It has ice, it has granite, and I don't know of anything else that it produces except men, and the best crop it can cultivate for its future is men—men to bring a revenue to the Commonwealth.

Mr. Hart, who followed Colonel Livermore, said that he thought it would be a surprise to the community in general if they could know the sacrifices made by Massachusetts boys who go to the Institute for an education and the enormous advantages which they derive from their training there. He thought that there were more Massachusetts boys who were obliged to make sacrifices than those from other states for the reason that their parents lived in the vicinity giving them an opportunity which those farther away do not have. He spoke of the prospects of the Institute for securing aid from alumni and the community in general and indicated that the people would be largely influenced by the action of the Legislature upon this matter. If the question of running expenses could be taken care of, donors would be encouraged to give for the construction of buildings and for equipment.

Mr. Chase presented financial statistics of the Institute in tabular form to the members of the committee and made a statement in regard to the deficits during recent years.

Mr. Clark spoke as follows: "Colonel Livermore has said that which I wished to say, so much better than I could have said it, that I need only say amen to what he has said with regard to the economic value of the Institute to the State. My interest in this matter is not simply in the men who graduate from the Institute; I wasn't fortunate enough to be a graduate myself, but my interest in it lies in the effect on the working people of Massachusetts, and it is my belief that the effect of the kind of men that the Institute sends today into our manufacturing industries, is very great, and the good effect of one such a man in a concern cannot easily be over-estimated.

"Our working people like to work with men of that character,—men of trained minds, men with the new methods who are able to supplement by their technical knowledge the practical knowledge which our working people have."

A Member.—I would like to ask if you have graduates of Tech working in the Plymouth Cordage Works?

Mr. Clark.—Our present treasurer and general manager was a graduate of the Institute, Mr. Frank Holmes.

The Chairman.—How many others have you?

Mr. Clark.—I could not state that; Mr. Holmes is the most prominent one. I am not appearing in an official capacity, but as a private citizen who has been manufacturing thirty years in the Commonwealth and I can think of many graduates of the Institute whose work I have followed.

The Chairman.—You appear as a private citizen, and you do not think this request is excessive.

Mr. Clark.—It is a very large amount of money, but on the other hand isn't it true that the saving in any industry by men of bright minds very often runs in excess of this in a single industry? I believe that is the case in very many. There is the industry I am connected with; I can recall three instances where savings of many thousands of dollars have been made annually by men with technical training.

Mr. Clark was followed by Mr. McElwain who said: "The value to New England of an institution that can turn out men qualified to cope with and absolutely solve the problems of the elimination of waste in time and material is of inestimable value. Such is my opinion of the Institute of Technology, and I believe that any sum of money that may be appropriated will be returned to the community by seeing its industries thrive and prosper because of their efficiency, notwithstanding the barriers as far as freight rates and competition with the West are concerned.

"You might ask why we, as shoe manufacturers, should have in our employ twenty Institute men, and I will tell you the reason. It is because we have absolutely got to have men who have

keen, analytical minds, and who are truthful observers,—people who do things, and not people who talk. Now, that is what we really get out of the Institute men.

"I should like to see the money appropriated because I believe that future generations of New England will bless you, because the industries of New England or the future success of New England depends largely on its handling successfully the large plants that are located in this section; and those plants, in order to be run successfully, must be handled by men imbued with the scientific spirit. I believe that the Institute of Technology can develop men who can operate these plants successfully for the future, and I believe it is up to the manufacturer to take these men and develop them into positions of responsibility. The age of rule-of-thumb is gone and science must have its day even more in the future—particularly with the shoe industry."

THE CHAIRMAN.—What is the specific employment of those twenty men; what do they do?

MR. MCELWAIN.—I think there is creeping into business today more than ever what is termed today "scientific management." Now, scientific management means largely planning out the work beforehand in a very definite form, and that requires a very analytical mind, and a mind which can grasp details. Now, these men that we employ are largely engaged in what you might call efficiency work and in planning work. We have two types of mind in our business,—one is this scientific man who is planning, who is economizing, who is figuring where we can save money in handling help and material; and the other type of man who is more generally executive.

Mr. Morss made a brief statement in regard to the assistance the alumni had given to the Institute as follows: "There have been two main efforts on the part of the alumni as a body for securing money for the Institute. First, there was a subscription started to provide a building as a memorial to President Walker, this being in the form of a subscription payable annually for five years, and the amount raised for that was approximately $100,000; raised, I will say, in small subscriptions, for if I remember the largest wasn't over a thousand dollars. And about 1905, a subscription was raised to help pay the running expenses of the Institute; that taking the form of a subscription as before, annually for five years. The result of that subscription has been that beginning with 1906 there has been paid into the treasury of the Institute for the expense account $206,000 during the five years, and in approximately a steady amount each year. Now, the result of those two subscriptions is that the men have paid, as they say, last year's coal bill for five years. It is rather hard to get men to pay last year's coal bill; they would rather pay something else.

"Instead of asking that, we wish them to help furnish money to put the buildings on the new site which we expect to have very shortly, and there is absolutely no doubt in my mind that they will give double for a new building as compared with what they would give for coal bills."

Mr. Wrightington who was the last speaker spoke in high terms of work done by Technology men and stated that the prosperity of the Consolidated Gas Company was very dependent on technically trained men as were other large institutions of the community. He said the State had a distinct duty to perform in granting the assistance which the Institute of Technology needs.

The Alumni Association Needs Your Support

Any former student of the Institute making application for associate membership to the secretary of the Alumni Association, and passed upon favorably by the Executive Committee, can become an associate member on the payment of the regular dues of $2.00 per year, which includes subscription to the nine issues of TECHNOLOGY REVIEW.

Things are Moving Faster at Tech

Tech Club of Washington

The Washington Society of the Institute of Technology has issued a directory showing that there are 159 members of the society in Washington proper and 99 members in the vicinity, or a total of 258 members. The first part of the directory contains a historical sketch which shows that the society was founded in 1899 with a membership of twenty men. The society took a leading part in the founding of the University Club in Washington and when the new clubhouse was built, the first smoker was held by Technology alumni.

Addition to Sanitary Research Staff

Simeon C. Keith, Jr., '93, chemist and industrial biologist, has been appointed assistant professor of bacteriology at the Institute on the staff of the sanitary research laboratory. It is also announced that an anonymous donor has just given this laboratory $6,000 for carrying on its work which, with previous gifts from the same friend, makes a total of $50,000 up to date.

New Automobile Delivery Truck

The Institute has just purchased a new automobile delivery truck for general expressing and "pick-up" work about the city. The Bursar found that by investing in a truck, a considerable amount now paid to local expressmen could be saved. The truck is in charge of the chief engineer's department.

Death of Frank S. Farrell

Frank S. Farrell, '05, died at his home in Stoughton, February 25th. Mr. Farrell was an expert sugar chemist and was employed by the Emerson Research Laboratory at the time of his death.