

THE TECHNOLOGY REVIEW

• RELATING • TO • THE • MASSA-
• CHUSETTS • INSTITUTE •
• OF • TECHNOLOGY •



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The Life of Francis Amasa Walker

Third President of the Massachusetts Institute of Technology

By James Phinney Munroe



GENERAL WALKER was eminent as a soldier, a statistician, an economist, an administrator, an educator, and, above all, as a man.

He was born in 1840, graduated at Amherst in 1860, fought through the Civil War and was breveted Brigadier General at twenty-five; was Superintendent of the Census at twenty-nine, Commissioner of Indian Affairs at thirty, Professor in Yale at thirty-one, President of the Massachusetts Institute of Technology at forty-one, and died at fifty-seven.

His first book, on the Wages Question, published in 1877, at once attracted the attention of economists, and was made part of the curriculum at Oxford. His Political Economy, published in 1883, marked him as the leading economist of America, if not of his time. He was the first President of the American Economic Association, and filled many other posts of usefulness and honor.



Partly because his family felt that no man's biography should be written until his life work has been before the world for twenty-five years, the present biography is but just ready. Its author was Secretary of the Faculty of the Institute of Technology during a large part of President Walker's administration.

The extracts from the author's Civil War reminiscences and letters meet a wide and undying interest; the accounts of his activities as a statistician, economist and educator are of very exceptional value to all associated with these pursuits; the chapters on the Institute must be of great interest, not only to all Technology Alumni, but also to every undergraduate who finds daily satisfaction in the use of the Walker Memorial; and the book as a whole appeals to all who find entertainment and instruction in reading exemplary biography.

The publishers intend to make a book worthy of its subject. It will contain 437 octavo pages of text, exclusive of the index and some half-dozen half-tone illustrations.

It will be published in May and the price will probably be \$4.00.

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THE TECHNOLOGY REVIEW

RELATING TO THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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X = ?

Wanted— *men to find the answer*

THIS is written to the man who loves to seek the unknown quantity. He is the kind of laboratory worker who ventures into untried fields of experiment, rather than the man who tests materials.

Industry has need of both types, but of the former there is a more pressing demand.

College men may have been discouraged from pursuing pure research. In this highly practical age it may seem there is little room for work which does not have an immediate dollars and cents application. But such is not the case.

The pure research man is the pathfinder. Without him our fountain of knowledge would dry up. His findings in themselves may be uncommercial, but they establish a field for others to develop.

Volta worked out the crude voltaic pile—unimportant until other men improved and applied it. And so with Papin in the field of steam, or Lavoisier in chemistry.

Men of the inquiring slant of mind, stick to your last. In post graduate study, on the faculty, in the laboratory of some industrial organization, there will always be an "X" to baffle other men and call for the keenest thought of you blazers of the trail.

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THE

TECHNOLOGY REVIEW

RELATING TO THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY



The Past Month

PLANS for the inauguration of Dr. Stratton are rapidly taking shape as these words are written.

The time and the place have already been selected; other details are still nebulous. The triangular committee appointed to serve from the Corporation, the Faculty and the Alumni Association is headed by Francis W. Fabyan, '93, who is a term member of the Corporation and is President of the Algonquin Club of Boston. H. S. Ford, Bursar, is Secretary. At the first meeting it was voted that the exercises be held at Symphony Hall in Boston at 11.00 a.m. on Monday, June 11. The definiteness of this announcement settles the vexing question of a suitable theatre for the ceremony. It was likewise formally voted that full academic regalia be prescribed for members of the Corporation and the Faculty and all candidates for degrees.

Frank L. Locke, '86, was appointed as Chief Marshal of the academic procession, a position which likewise he filled at the inauguration of President Nichols.

Sub-committees have been appointed to deal with the program, invitations, budget, dinner and music. These committees are constituted as follows:

Program Committee—James P. Munroe, '82, Chairman, A. D. Little, '85, Professor William Emerson,

Professor Davis R. Dewey and George L. Gilmore, '90; Invitations Committee—Professor H. W. Tyler, '84, Chairman, Leonard Metcalf, '92, Professor A. L. Merrill, '85, Professor Charles L. Norton, '93, and Arthur T.

Hopkins, '97; Budget Committee—Everett Morss, '85, Chairman, and Walter Humphreys, '97; Luncheon and Dinner Committee—George L. Gilmore, '90, Chairman, J. F. McElwain, '97, Professor E. F. Miller, '86, and Harry J. Carlson, '92; Music Committee—H. J. Carlson, '92, Chairman, Professor H. G. Pearson and Allan Winter Rowe, '01.

The Chairman and Secretary of the full committee are ex-officiis members of all sub-committees. Professor William L. Emerson, head of the Department of Architecture, was appointed as Chairman of the Hospitality Committee with power to select additional members as needed. This committee will deal with possible afternoon functions and the entertainment of visiting delegates.

Plans already made contemplate the escort of the President across Harvard Bridge (if the day is fine) by the Senior Class, in cap and gown, this procession to be joined at Horticultural Hall by visiting delegates and faculty members, and to enter Symphony Hall.



Photo by Backrach

FRANCIS WRIGHT FABYAN, '93

Who is Chairman of the Committee on President Stratton's inauguration, now set for June 11.

SIR J. J. Thompson one of England's most illustrious scientists, famous in the popular regard for his conception of the electron theory, visited the Institute on April 5. His previous knowledge of the Institute dated back to 1903 when he was in this country for a short time and had expressed interest in the future growth of the Institution which was then housed on Boylston Street.

Sir Joseph was tendered a reception in the President's office which was attended by the heads of the several departments. He likewise made a tour of the various laboratories, engineering, chemical, electrical and physical, and expressed great interest. He came to Boston on the fifth, after having addressed members of the American Chemical Society the previous day at Yale.

From Boston, he proceeded to Philadelphia to deliver a series of lectures at the Franklin Institute.

DEAN Henry P. Talbot, '85, left the Institute on March 26 on a leave of absence that will last until the beginning of the next school year. Dr. Talbot, accompanied by Mrs. Talbot, has now begun an extensive tour which will include besides the Far West, perhaps Alaska and the Hawaiian Islands.

Although Dr. Talbot is nominally on vacation, he will visit numerous educational institutions in the country and among other things examine the several systems of student government in effect at them. His itinerary includes Princeton, University of Pennsylvania, Johns Hopkins, University

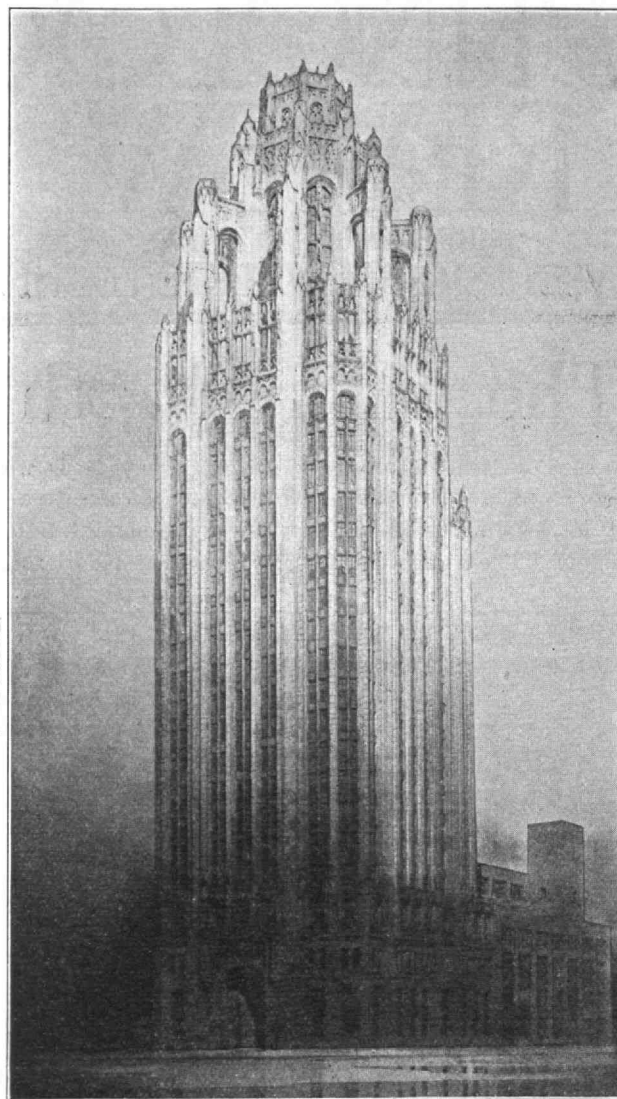


Photo by P. & A. from original drawing

ANOTHER ARCHITECTURAL TRIUMPH FOR TECHNOLOGY

The \$100,000 prize winning design in the Chicago Tribune's competition for the "Most Beautiful Office Building in the World," of which John Mead Howells, '90 and Raymond M. Hood, '03 are Associated Architects.

of Virginia, Richmond College and the Georgia Institute of Technology. From the South, Dr. Talbot expects to travel West and to greet former Dean Burton in California.

H. E. Lobdell, Assistant Dean, is in charge of the office during Dr. Talbot's absence.

GEORGE E. Russell, '00, Associate Professor of Hydraulic Engineering in the Civil Engineering Department of the Institute, is the winner of the second leg in the four-year Alma Mater song competition. This information was made public on March 6. The song will be made vocal for the first time at the coming performances of Tech Show and at the Spring Concert of the Musical Clubs.

During Professor Russell's undergraduate days he was a member of the cast of the first Tech Show ever to be produced. Since his graduation he has been connected with the Institute's Department of Civil Engineering.

SMOKERS have hitherto seemed a prerogative of the undergraduate, but on April 18 there was held in Walker Memorial an Alumni Smoker which will be, perhaps, the first of a long line. It

included an Athletic Carnival and a circus which was an echo of the undergraduate one held on March 1. There were jazz bands, movies, wrestling, fencing and boxing contests, leaps for life, chariot races, specially transported Egyptian tombs and other big-top features all done in the tradition of P. T. Barnum.

The Volume XXV Index

Indices to subjects and personalities dealt with in the twenty-fifth volume of The Technology Review will *not* be included with the last issue of the volume as has been the previous practice. A copy of this index will, however, be mailed separately to all subscribers who make application and state that they wish the index for binding purposes. Such application should be mailed immediately to the Managing Editor of The Technology Review.

THE Committee System of the Faculty has recently undergone a change which discontinued over half of the standing committees. The administrative gap which this discontinuance causes has been filled by the creation of a Faculty Council consisting of the President, the Chairman of the Faculty, the Dean, the Secretary of the Faculty, the Director of the Summer Session and the heads of the several departments, including the heads of Courses IX and XIV. This Council is in the future to act with power on ordinary business and will bring before the Faculty questions of educational policy and any other business which the Council feels is of sufficient importance for the consideration of the entire Faculty. The records of the Council are to be reported to the Faculty. Some members of the Faculty shall be designated as sub-committees of the Council to represent it in coöperation with the Administration Officers in dealing with matters which were formerly administered by the abolished committees.

If You Forget, You'll Be Disappointed

There is no June issue of the Review. You will probably remember that our original schedule called for this omission, but as a reminder to those who have forgotten, we give a definite reiteration in this number. The June issue of the Review is omitted because it would be forced to appear too early to contain news of the Annual Council Meeting, Senior Week, Graduation or various Class Reunions. In consequence, the eighth and last number of Volume XXV will be dated July and will be placed in the mails on July 14.

This change in Faculty make-up was the result of a report, recently approved, of a sub-committee of senior professors, appointed by the President. The Committees on Admissions, Undergraduate Courses, Graduate Courses and Scholarships, Undergraduate Scholarships, Petitions, Provisional Students, First Year Instruction, Second Year Students and Third Year Students all remain unaffected by the change.

PI [DELTA EPSILON, honorary journalism fraternity, whose local chapter is among the most active of Technology's honorary societies, recently indulged in annual elections at the Convention held at Appleton, Wisconsin, which are of interest to the Institute. H. E. Lobdell, '17, the Assistant Dean of the Institute (and coincidentally Editor of *The Technology Review*) is Grand Vice-President and Joseph C. Patty, '22, of Greenville, Ohio, a former General Manager of *The Tech Engineering News*, was re-elected as Grand Treasurer. The 1924 Convention is to be held at the Institute next April.



THE ACADEMIC PROCESSION OF TWO YEARS AGO
Scene at the Inauguration of President Nichols

The Place of Chemistry in Business

An Introductory Essay to Recent Words by Dr. E. E. Slosson at the Boston City Club

There is in most of us a curious disinclination to have new knowledge forced upon us, and until recently the business executive, so far at least as the teachings of science were involved, was little more receptive than the college undergraduate who was out for a place on the football team. To chemists, who, like myself, were trying thirty years ago to preach the gospel of research to militantly skeptical business men, the process of assimilation by them bore a striking resemblance to the forcible feeding of suffragettes. Happily, the situation has greatly changed in recent years to the marked advantage of both business men and chemists. This happy result is due in large measure to two men, the authors of two books, which are, or which ought to be, known to all of you. The first of these men was Dr. Robert Kennedy Duncan, the founder of Mellon Institute of Industrial Research and the author of "The Chemistry of Commerce." The second is our distinguished speaker of the evening, the author of "Creative Chemistry," Dr. Edwin E. Slosson, Editor of Science Service.

I am anxious not to encroach upon Dr. Slosson's preserves this evening, but he will, I feel sure, permit me to bring some brief cumulative evidence in support of his general thesis.

In the mind of the average business man chemistry is something quite apart from business, an abstruse science that deals with things of evil smell and unpronounceable names, something for the laboratory or the underpaid professor, but with which the hard-headed man of affairs has little need to concern himself. Yet you business men, who deal in dollars, think it well worth your while to learn all you can about them. You want to know where they are plentiful and where they are scarce. You follow their purchasing power and the interest rate they carry. You sit up nights trying to devise new ways to put salt on the eagle's tail. You employ bookkeepers and accountants and income tax specialists in order that you may trail these dollars through every portion of your establishment and persuade the Government that a few of them really belong to you. You study balance sheets and audits and inventories, and base your decision upon what they tell you about dollars.

But the dollar is merely a symbol, a generic symbol, of the value of things. The values are in the things the dollars represent, not in the dollars themselves. The things behind the dollar are materials and labor, and labor creates values only as it works upon material. Obviously, therefore, the ways and properties of material or matter are of greater fundamental importance to you as business men than even the properties and ways of dollars.

Now chemistry is the science which deals with the properties of matter and the changes which they undergo. Whether you know it or not, chemistry is, therefore, a partner in your business in a far more real and vital sense than the Federal Trade Commission, the Interstate Commerce Commission, the Tariff Board, the labor unions, the Federal Reserve Bank, or any other of the man-made agencies with which you admittedly have to reckon. As wise business men you take carefully into account freight schedules, city ordinances, insurance regulations; you observe the man-made

By ARTHUR D. LITTLE, '85, Chem. D.
of Arthur D. Little, Inc.

laws of Legislatures and of Congress. But chemistry has some laws of its own that are not man-made; laws

beyond the power of any Legislature or Congress to repeal. What do you know about them, or how far do you take them into account in the conduct of your business? The science of chemistry is simply a codification of these laws and an orderly arrangement of the innumerable facts upon which they are based. The chemist is the counsellor-at-chemical-law, and as such you need him in your business. I suggest that you make an early reservation, as there is only one chemist to each 7000 of our population. An ounce of whiskey in 55 gallons of water is a pretty thin mixture.

The war, which has changed everything, has given a new aspect to chemistry and a fresh impetus to research. Hereafter, the nation which would live must know. Through the wreck and peril of other peoples, Americans have learned with them that research has something more to offer than intellectual satisfactions or material prosperity. It has become a destructive, as well as a creative agency, and in its sinister phase the only weapon with which it may be fought is more research. The organization and intensive prosecution of research has thus become a fundamental and patriotic duty which can neither be ignored nor set aside without imperiling our national existence.

Now we are carrying as cheerfully and hopefully as we may the stupendous burden of the war. Chemistry, with the sympathetic and understanding cooperation of business and financial men like yourselves, can do more to lighten that burden by the creation of new wealth in vast amounts than all the law makers in Congress and State Legislatures. And the first step is to stop the stupid, wicked, childish waste of our basic

natural resources. The time has passed for quoting figures. They are of astronomical proportions, anyhow, and make no more impression on the mind than the distances of the fixed stars in light years. The time has come to demand action, to the end that we may pay our bills with what we waste. Let us develop our estate. It has potentialities vastly beyond anything we have accomplished.

A very large proportion of industrial problems are problems in applied chemistry. Many of these so-called problems have already been solved somewhere. The present need of industry is not so urgent for new research and for new facts as for the immediate and



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Author of *Creative Chemistry*