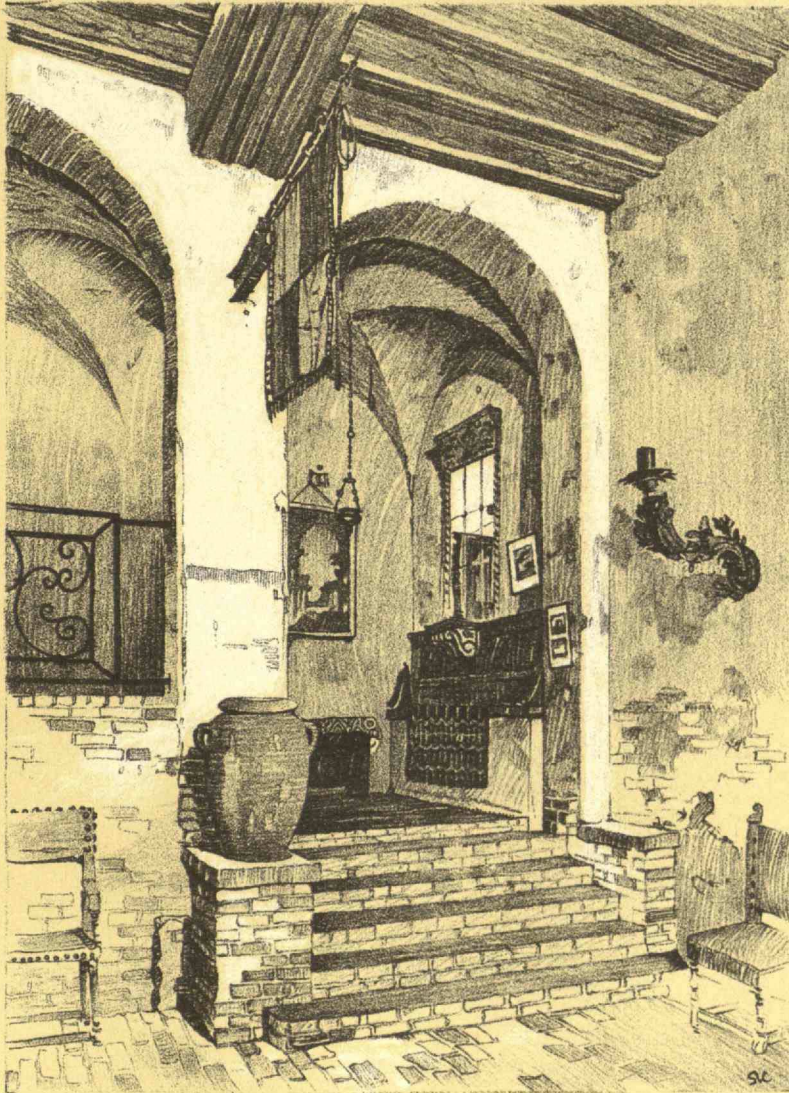


# THE TECHNOLOGY REVIEW



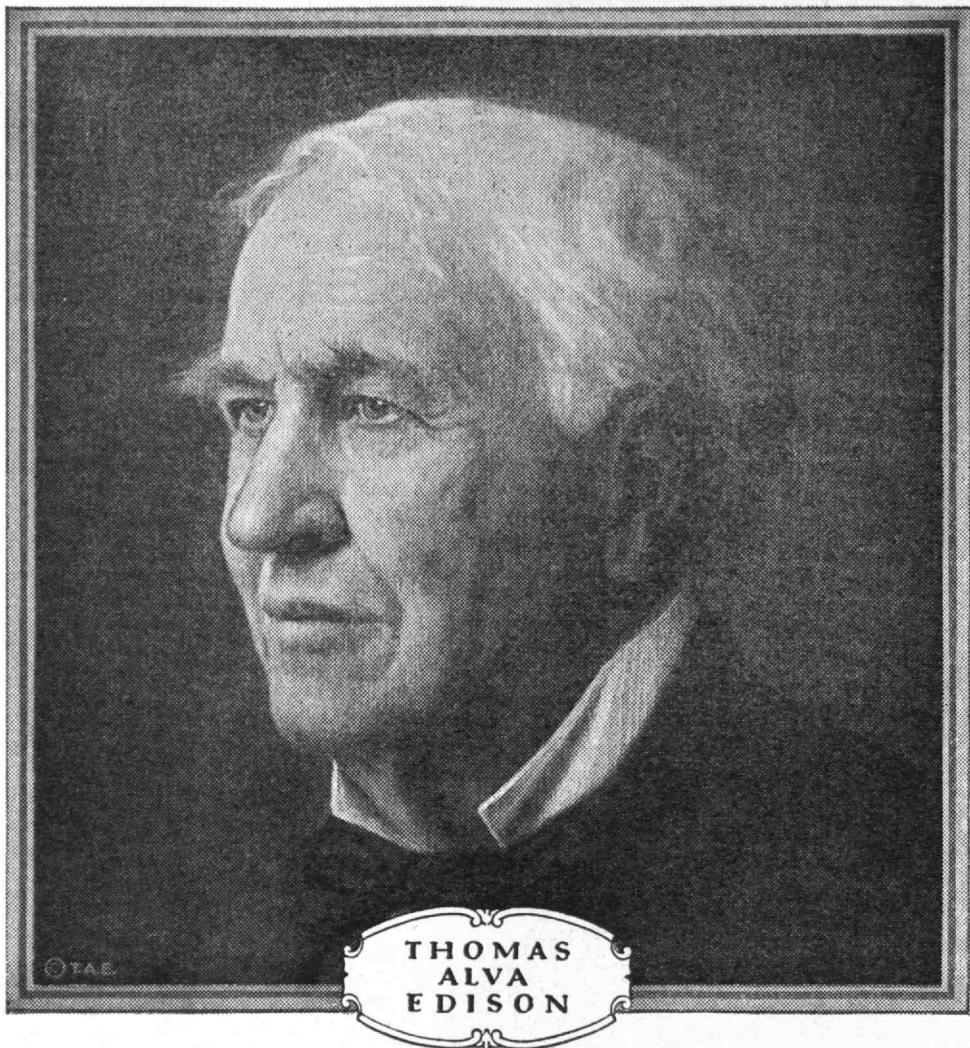
ROGERS COMMON ROOM

BY SAMUEL CHAMBERLAIN, '18

FEBRUARY 1927

RELATING TO THE  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY





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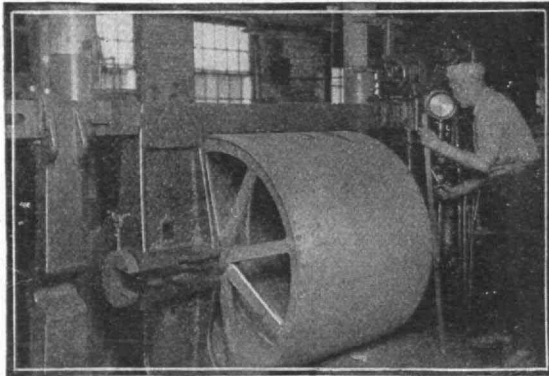
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February 1st, 1927

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Yours for Tech.

*Howard F. MacMillin*  
II-21.

Howard F. MacMillin,  
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P.S. The Saco-Lowell Shops pressing operation is described in some detail in a previous issue of our magazine--"THE HYDRAULIC PRESS." A limited supply is available. I'll send you a copy and place your name on the regular mailing list, at your request--with no charge.



# The TECHNOLOGY REVIEW

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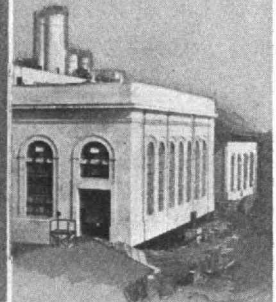
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# The TECHNOLOGY REVIEW

VOLUME 29     FEBRUARY, 1927     NUMBER 4

## The Trend of Affairs

### *An Aëronautical Building*

A GRANT of \$230,000 by the Daniel Guggenheim Fund for the Promotion of Aëronautics, announced on January 17, will bring to the Institute, always in the forefront in aëronautical instruction, means for the construction, beginning in the spring, of a new building to be devoted exclusively to the Department of Aëronautical Engineering.

Since 1908, when the first wind tunnel was built at Technology under the direction of Professor Gaetano Lanza, then Head of the Department of Mechanical Engineering, the Institute has held an enviable place in aërodynamics, a branch of engineering then but lightly regarded, and by few held in the esteem which it is now accorded. Even after the construction of the two larger wind tunnels still in use, the appointment, in 1924, of Edward P. Warner, '17, to be in charge of Aëronautical Engineering and the establishment, in 1926, of Aëronautical Engineering as a separate Course (XVI), the Institute has been forced to give its instruction in make-shift quarters, and its prestige arose not because of any large munificence but in spite of inadequate facilities.

The generosity which now prompts the grant of the Daniel Guggenheim Fund will make possible a long delayed forward step in aëronautical instruction. The new building, to be constructed in accord with the general architectural plan of the Institute (for elevation and floor plan see pages 214 and

215), will make possible the consolidation of all activities under one roof and the transfer of the two wind tunnels from their present temporary and inadequate quarters. Provision for a working museum, a library, a large rigging laboratory, drafting rooms and several special laboratories for the testing of aircraft materials, studies of flight test instruments, and so on, will give the Department facilities which it has never before

possessed, and will bring its equipment, after many years of waiting, to a par with its personnel.

In addition, plans have been made for the addition of a future wing to the building when necessity arises, and Dr. Stratton, in announcing the gift, made the significant remark that "it is expected further grants for personnel and equipment will follow."

Further details concerning plans and progress of the new building will appear in forthcoming issues of The Review.

### *\$200,000*

DORMITORIES, adequate to pressing student needs, come a notable step closer to actuality with the announcement, made by Former Dean Alfred E. Burton now acting as manager of the Dormitory Fund Committee's campaign, that \$200,000 is already definitely available for construction. Nor is that all. Another \$100,000 is assured, another \$300,000 will shortly be available, and Dean Burton reports every expectation that the remaining \$400,000 necessary to complete the quadrangle will be secured by June.

Of the \$200,000 already



*From a lithograph drawn for The Review by Kenneth Reid, '18*

ELISHA LEE, '92

*Vice-President of the Pennsylvania Railroad and President this year of the Alumni Association, he presided at the Annual Dinner of the Association held at the Boston Chamber of Commerce Building, January 15*



in hand, half comes as sole gift of Charles Hayden, '90. The other half comes in the name of the Class of 1901. These combined gifts will be sufficient to erect a unit of the size of the existing Class of '93 Dormitory, built in 1923. It is expected that the source of the pending \$100,000 gift will be available for publication shortly, and it is thus expected that construction of two units or four staircases will thereby be made possible beginning in the spring.

Professor Burton, who in his official statement pays tribute to the work of the Dormitory Fund Committee under the Chairmanship of Gorton James, '10, has been manager of the campaign since last November, and has been engaged since that time in visiting local Alumni Clubs and individual Alumni with such good effect that the success of his campaign seems definitely assured. Said he, "The Alumni generally indorse the idea that the new Dormitories are the Institute's most urgent present need."

### *Annual Dinner*

**T**HIS year exactly coincident with press time on this issue of The Review, the Annual Dinner of the Alumni Association was held at the Boston Chamber of Commerce Building on the evening of January 15. Features of the evening were in accord with the schedule earlier presented. Elisha Lee, '92, Vice-President of the Pennsylvania Railroad, presided in his capacity as 1926-27 President of the Alumni Association. In order, President Stratton, Former Dean Alfred E. Burton, Professor William Emerson, Head of the Department of Architecture, and Charles M. Schwab, spoke. An adequate account of the affair is impossible in this issue; for March, The Review will present full details, and has pleasure in announcing a story of

the evening, riotously local-colorful, by Contributing Editor Robert E. Rogers, Associate Professor of English.

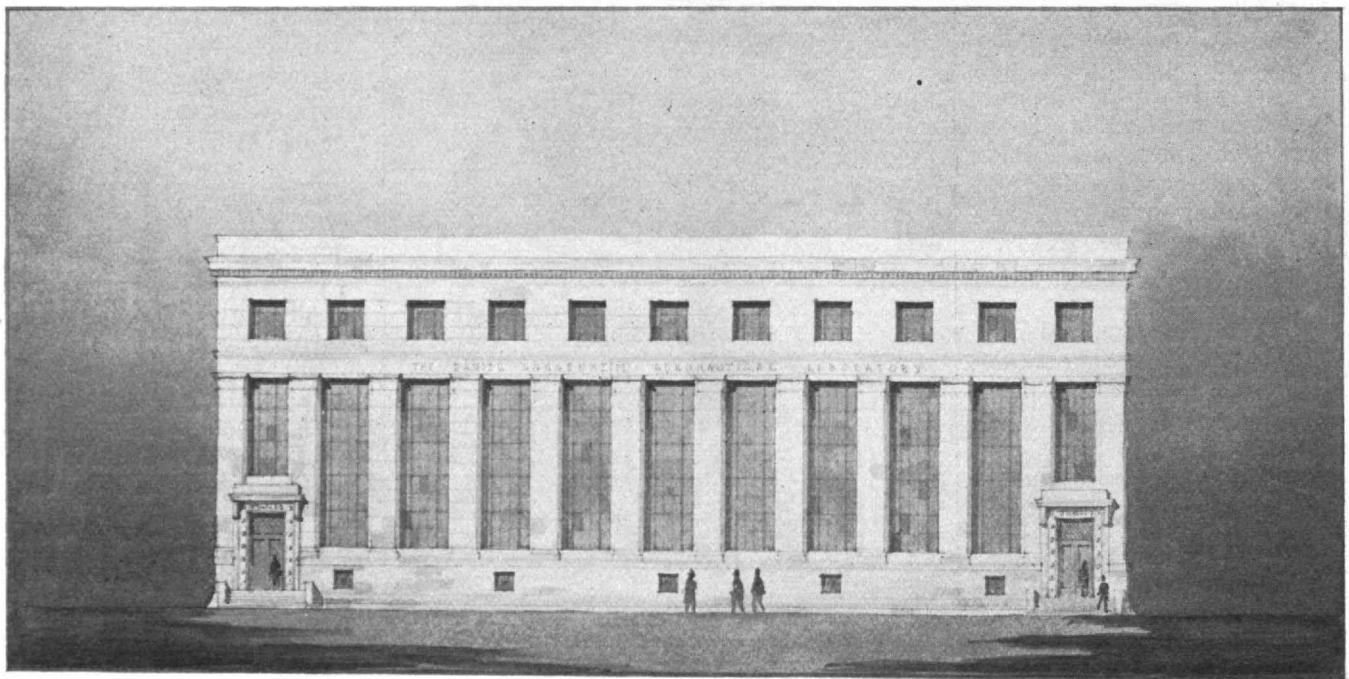
### *Ultra-Violet*

**M**OVING pictures, projected on invisible beams of ultra-violet light, and brought within the ken of human vision on a fluorescent screen, were shown by Donald C. Stockbarger, '19, in a Popular Science Lecture given at the Institute under the auspices of the Society of Arts on January 14, 15 and 16, for what is believed to be the first time.

Last year Dr. Stockbarger, who is an Instructor in the Institute's Department of Physics, succeeded in sending the human voice over beams of visible and invisible light. (See The Technology Review for May, 1926.) Further studies and improvements in his apparatus to increase sensitivity enabled him to demonstrate his experiments publicly for the first time during this lecture, the subject being "Invisible Light and Its Effects."

Those who insist that the youth of America is tobogganing to perdition would have found small comfort in support of their theories had they seen the young men and women who came from public and private schools to hear Dr. Stockbarger. Their steadfast attention and eager questions were indications that more than youthful curiosity had brought them to the lecture.

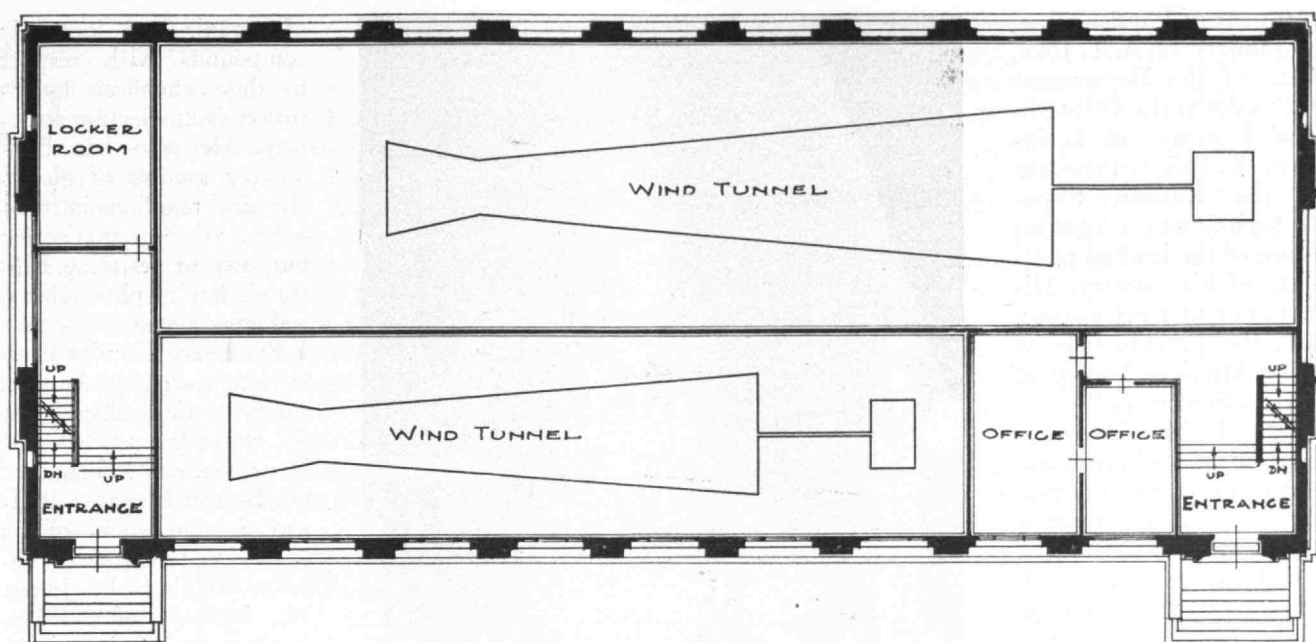
Of ultra-violet light and its valuable properties, Dr. Stockbarger told much. Not the least interesting revelation was of the growing use of these invisible rays in the treatment of disease. In this connection he disclosed that after years of investigation an American manufacturer has produced a glass virtually equal to fused quartz in transparency to ultra-violet. Although this new glass is still expensive, Dr. Stockbarger predicted it would be available at a reasonable price within



AERONAUTICAL LABORATORY

*A rendering of the new Daniel Guggenheim Aeronautical Laboratory made possible, as announced on January 17, by a grant of \$230,000 from the Daniel Guggenheim Fund for the Promotion of Aeronautics. Construction will begin in the spring. See the story on page 213*





GROUND PLAN

*Provision is made in the design of the new Aeronautical Laboratory for the housing of the two wind tunnels, now in temporary quarters; for completely equipped laboratories, a museum, class and drafting rooms*

a few years. Such glass in sun-parlors would permit the ultra-violet rays to penetrate into homes of the future, he said, and would probably be in common use. It also would prove valuable in hospital solariums, he thought.

Delving into the future, he discussed the possibilities of using ultra-violet light for automobiles to abolish the menace of glaring headlights. This he demonstrated with the aid of a section of miniature highway on which the road, fences and bridge abutments were coated with a fluorescent substance. A model motor-bus, painted with a fluorescent substance, completed the demonstration, and when the room was darkened and ultra-violet light was directed on the scene, the road was revealed as a band of pale green light and the model car, the fences and the bridge were similarly outlined.

The uses of ultra-violet radiations in the examination of manuscripts from which the ink has all but disappeared, and for the detection of fraudulent alterations in documents were also shown. One interesting exhibit was that of a check on which the original figures had been obliterated with the aid of chemicals and a larger amount inscribed. The photograph made with ultra-violet light revealed in shadowy outlines the original figures which were invisible to the eye.

Dr. Stockbarger discussed the uses of ultra-violet light in chemical analysis and exhibited photographs of spectra demonstrating that the invisible radiations projected through various solutions made possible the detection of differences between pure whiskey, denatured alcohol and that mysterious, potion popularly known as "hooch."

### Gas

**N**O symposium on gasoline, nor on industrial chemistry for that matter, would be complete without a Technology representation. At the Institute of Politics in Williamstown last August,

Professors Warren K. Lewis, '05, James F. Norris, and Robert T. Haslam, '11, played an important part in the discussions of chemistry's rôle in world affairs. At the Jubilee Meeting of the American Chemical Society in Philadelphia last September, its then-President, Professor Norris, made notable comment on the petroleum situation, as did also Irénée du Pont, '97, Professor Haslam, Samuel C. Lind, '02, and other Technology men. At the International Coal Conference held recently at the Carnegie Institute of Technology, Professors Haslam and Lewis were important figures, together with Arthur D. Little, '85. At the Power Conference in Basel, Switzerland, Oscar C. Merrill, '05, was an official United States delegate.

So the stage was set and well adapted and the cast of characters at hand for the Symposium on Gasoline which met on January 15 here at the Institute, under the auspices of the American Chemical Society. The arrangements were in the hands of Professors Haslam, and John T. Ward and of Lt. Alden H. Waitt, '14, of the Research Laboratory of Applied Chemistry. Dr. Little acted as chairman. Professor Lewis delivered an address on "Petroleum Resources and the Influence of New Refinery Methods on the Supply of Gasoline"; Arno C. Fieldner, chief chemist of the United States Bureau of Mines, on "Motor Fuels from Coal"; T. A. Boyd, in charge of the fuel section of the General Motors Corporation on "The Gasoline Engine as a Converter of Chemical Energy"; and Graham Edgar on "Research on the Knock and Its Causes."

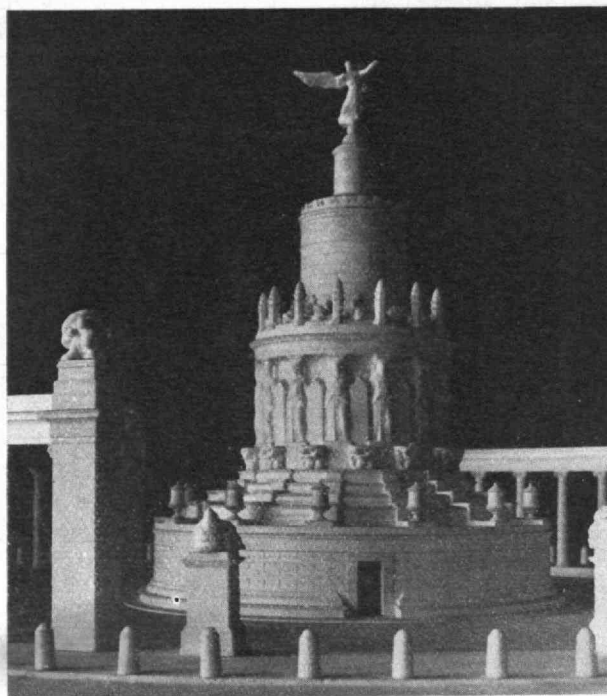
### Lectures

**P**ARTICULARLY fortunate is the Institute during this scholastic year in the number and quality of lecturers that are appearing before Faculty, staff, and students. Under the auspices of the De-

partment of Physics came, on January 12, A. T. Joffé, Head of the Department of Physics at the Polytechnical Institute of Leningrad. Dr. Joffé is President of the Russian Physical Society and is regarded as one of the leading physicists of his country. His lectures at Technology have the general title of "The Physical Theory of Crystal Structures."

Dr. Joffé's investigations in the electric and plastic properties of crystals, carried on over a period of seventeen years, constitute a valuable contribution to the knowledge of the solid state of aggregation. The results of his studies were published in 1924 by the Solvay Congress. Recently he has been particularly interested in photo-electric phenomena.

Beginning on February 7, Victor Henri, Professor of Physical Chemistry at the University of Zürich, will give a series of twelve lectures in the Department of Physics on "The Structure of Molecules and Their Chemical Activity." Dr. Henri, formerly Professor of Physical Chemistry at the Sorbonne, has made important studies in the industrial uses of ultra-violet light for the sterilization of water and liquid food stuffs. His recent work has been on the absorption spectra



Guy Lowell, Architect

#### MEMORIAL

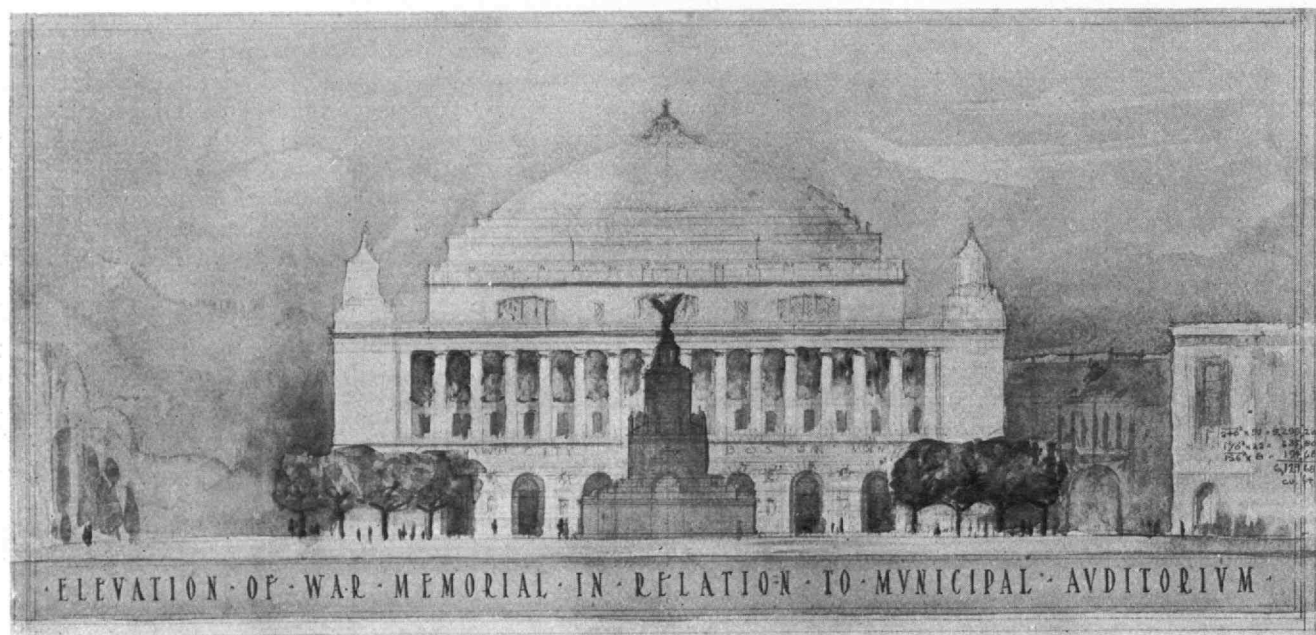
*As the proposed war memorial on Copley Square will look if it runs the gamut of the State Commission and the State Legislature*

of organic and inorganic compounds with respect to their chemical constitution and molecular structure. He also has been making studies of photochemical reactions in monochromatic illumination for purposes of verifying Einstein's law of photochemical equivalents.

Before the Faculty Club have appeared speakers on a great variety of subjects. On December 17, Edward Dana, General Manager of the Boston Elevated Railway System, spoke of his work. On January 6, Professor William F. Jones, '09, formerly of the Department of Geology, told of recent experiences in Mexico while engaged in professional investigations there. On January 17, Lewis Fox, President of the National Student Federation,

elaborated upon the aims of that organization.

For the two Aldred Lectures lately scheduled, Charles H. Herty, new advisor of the Chemical Foundation and until recently President of the Synthetic Organic Chemical Manufacturers' Association, delivered one on "A Chemist's Formula for Industrial Success" on January 7. R. F. Pack, President of the National Electric Light Association delivered the other, one week later, his subject being "The Engineer and the Man."



Guy Lowell, Architect

#### AUDITORIUM

*To lend proper background to the War Memorial and to give Boston a fitting Madison Square Garden, this civic auditorium has been proposed to be placed between Dartmouth Street and an extension of Trinity Place*