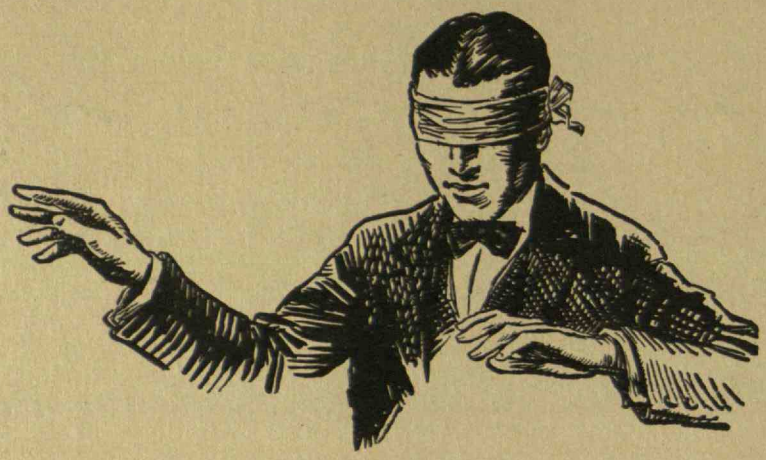
THE TECHNOLOGY REVIEW

RELATING TO THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

DECEMBER
1923

PUBLISHED BY THE ALUMNI ASSOCIATION



Most popular college sport

"As I look back on my college days," said the old grad, "it strikes me there were more men playing blind man's buff than all other games combined. I understand this is still the case.

"Get me straight. It was no child's play. What we were groping around for was pretty serious business—nothing less than a career.

"Too many men are in the dark as to what they will do after graduation. Either they neglect to specialize in anything, or hastily select a major which they afterwards regret.

"I know I would be considerably ahead in business if back at college I had sat down for a few hours' earnest thought to find out just what work I liked best—and then gone in for it heart and soul.

"Pick the thing that appeals to you, and don't let them tell you that particular line is overcrowded. Talk this over with graduates you know. Talk it over with your professors. Talk it over with the industrial representatives next Spring. Most of all, talk it over with yourself.

"The main thing is to get on the right track and to keep going. There's no fun in being 'It' in the game of life, with every change in fate ready to push you off an uncertain course."

Published in the interest of Electrical Development by an Institution that will be helped by whatever helps the Industry.

Western Electric Company

This advertisement is one of a series in student publications. It may remind alumni of their opportunity to help the undergraduate, by suggestion and advice, to get more out of his four years.

CLASS OF 1923's TRIBUTE TO THEIR ALMA MATER

THESE policies represent $125,000 in endowment insurance payable to M. I. T. at the 25th Reunion of the Class of 1923. The members have insured as individuals and will pay their own premiums as a visible evidence of their loyalty to the Institute. This picture is reproduced in a Tech publication for several reasons:

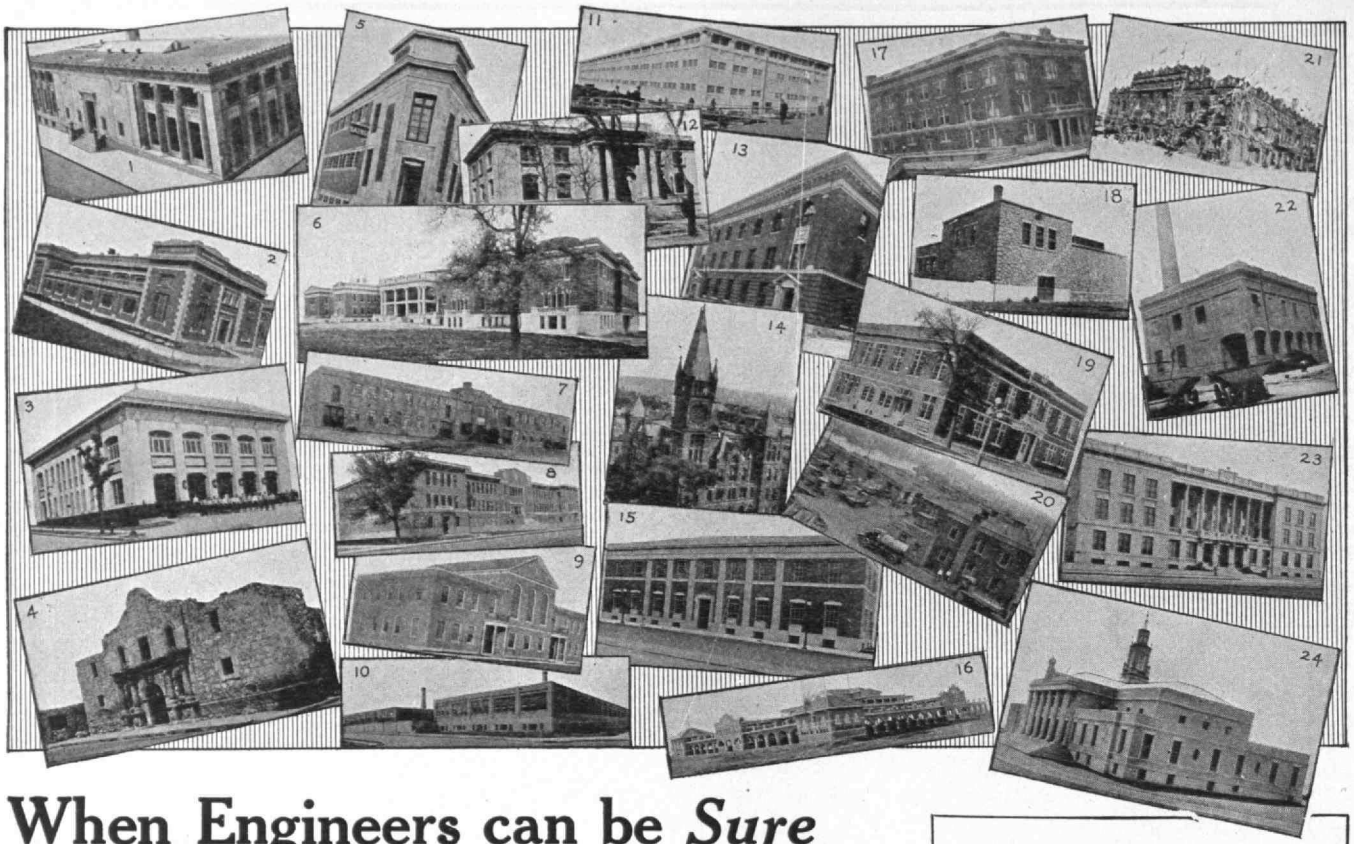
The M. I. T. Alumni Association naturally hopes that the 1923 example will be followed by subsequent graduating classes,—by individual undergraduates who are able and willing to do more individually—by graduates who may take simultaneous action individually or in groups, thus assisting in providing endowments for future needs in a large way—and by individual alumni who will make provision for general funds or for promotion of some special interest.

The Massachusetts Institute of Technology was founded in April, 1861, just a year before the John Hancock Mutual Life Insurance Company was chartered in the Commonwealth of Massachusetts. Both of these institutions have developed in Boston, side by side, and both have become leaders in their respective spheres.

The John Hancock Mutual Life Insurance Company desires to serve Technology to the best of its ability. Information in regard to Technology endowments can be secured from any agent of the John Hancock Mutual Life Insurance Company or by addressing the Home Office, 197 Clarendon Street, Boston, Massachusetts.

John Hancock
MUTUAL
LIFE INSURANCE COMPANY
OF BOSTON, MASSACHUSETTS

Sixty-one Years in Business—Now Insuring One Billion Seven Hundred Million Dollars In Policies On 3,250,000 Lives.



When Engineers can be *Sure* that the Roof is Right

PICTURED above are a few of the hundreds of municipal buildings in the United States protected with Barrett Specification Roofs.

Today these roofs are recognized as the most permanent it is possible to build. They are bonded for twenty years against repair and maintenance expense. Many roofs of this type are in first class condition after forty or more years of service. Moreover, they take the base rate of fire insurance.

Here are the factors on which the leadership of Barrett Specification Roofs is founded. Each factor has a definite value to the engineer.

(1) The Barrett Specification (for flat or nearly flat roof construction) prescribes the number of layers of Specification Felt, the amount of Specification Pitch, the top coat of pitch *poured* (not mopped) and finally the wearing surface of firmly embedded gravel or slag. *No supervision by the engineer is necessary to see that quantity and quality of materials are right.*

(2) The man who lays the roof must have a name for dependability. Only such men can obtain the Bond for the owner. *No supervision by the engineer is necessary to make sure that a dependable man is laying the roof.*

(3) Highly trained Barrett technical men are on the job to see that The Barrett Specification is followed in every detail. *No supervision by the engineer is necessary to be sure that his client gets a roof in which every detail of material and construction is exactly according to the specification.*

There are two types of Barrett Specification Roofs—Type "AA" bonded for 20 years, Type "A" for 10 years. Send for The Barrett Specification.

1 Wilmington Public Library, Wilmington, Del.
2 Calumet Sewage Pumping Station, Chicago, Ill.
3 Central Fire Station, Shreveport, La.
4 The Alamo, San Antonio, Texas.
5 Public Bath Association, Philadelphia, Pa.
6 Parkland City Hospital, Dallas, Texas.
7 Park Board Warehouse, Minneapolis, Minn.
8 Public High School, Provo, Utah.
9 Recreation Building, South Manchester, Conn.
10 Bureau of Water, Philadelphia, Pa.
11 Municipal Bath House, Coney Island, Brooklyn, N. Y.
12 Public Library, Mason City, Iowa.
13 Police Station, Trenton, N. J.
14 City Hall, Scranton, Pa.
15 Park & Fire Departments Building, Baltimore, Md.
16 Fair Building, Fair Grounds, Sedalia, Mo.
17 Community Building, Johnsburg, Pa.
18 Water Works, Harrodsburg, Ky.
19 City Hall, Moorhead, Minn.
20 Department of Public Works, Philadelphia, Pa.
21 Corn Palace, Mitchell, S. D.
22 Incinerator Plant, New Orleans, La.
23 Memorial Hall, Topeka, Kan.
24 West Roxbury Court House, Boston, Mass.

The Barrett Company

40 RECTOR STREET — NEW YORK CITY

THE BARRETT COMPANY, LIMITED: 2021 St. Hubert St., Montreal, Que., Canada

Barrett Specification Roofs

Bonded for 20 and 10 Years

THE TECHNOLOGY REVIEW

RELATING TO THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Published monthly, from November to May inclusive, and in July at Cambridge, Mass.

Vol. XXVI No. 2

Contents for December, 1923

Cover Design by Kenneth Reid, '18

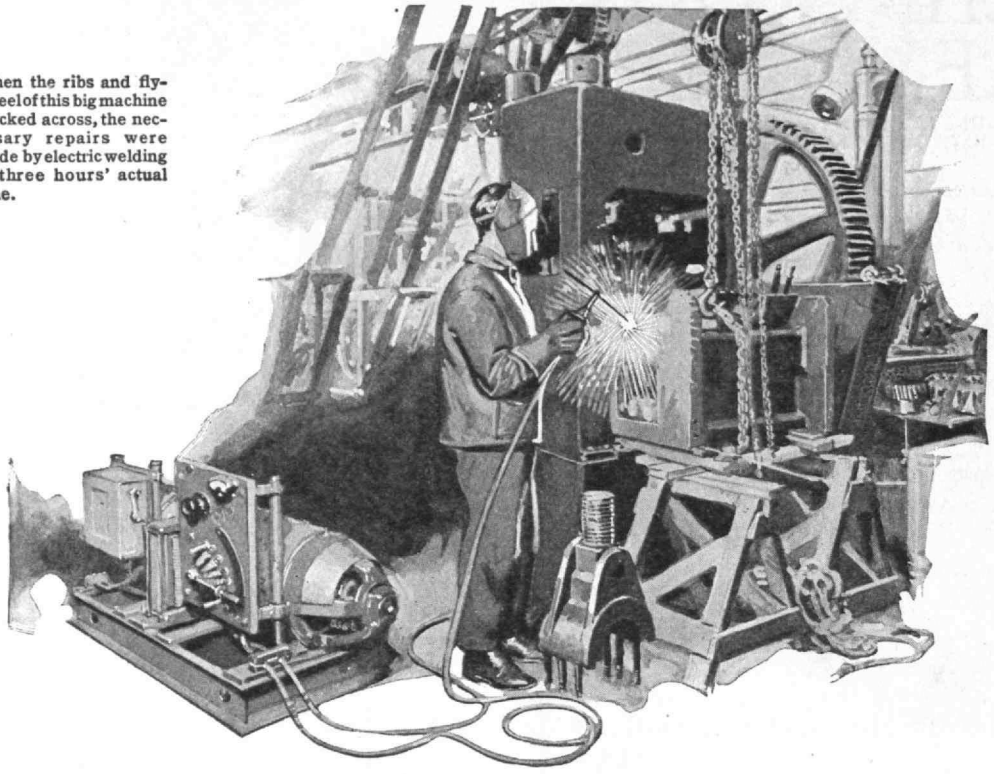
PUBLISHED BY THE ALUMNI ASSOCIATION

George L. Gilmore, '90, *President*
Arthur T. Hopkins, '97, *Secretary*
Orville B. Denison, '11, *Executive Secretary*

Entered as Second Class Mail Matter at the Post Office at Boston, Mass.

TERMS:—$3.00 a year, in advance; a single copy, 50 cents. To undergraduates of the Massachusetts Institute of Technology $2.25 per year, in advance, a single copy, 30 cents. Canadian and foreign postage, 50 cents per year additional. Back numbers over three months old, 60 cents each. Instructions for change of address should be sent three weeks before the date they are to go into effect. Both old and new addresses should be given.

When the ribs and flywheel of this big machine cracked across, the necessary repairs were made by electric welding in three hours' actual time.



The needle that knits metal

One of the interesting departments of the General Electric Company's works at Schenectady is the School of Electric Welding, to which any manufacturer may send men for instruction.

There was a time when a broken frame or wheel of an important machine would tie up a big plant for days.

Now electric welding tools literally knit together the jagged edges of metals and insure uninterrupted production. That means steady wages, steady profits, and a lower price to the consumer.

GENERAL ELECTRIC

THE TECHNOLOGY REVIEW

RELATING TO THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Vol. XXVI DECEMBER, 1923 No. 2

The Past Month

THE fall meeting of the Corporation was held this year on October 24. At this meeting three new life members of the Corporation were elected. They are Gerard Swope, '95, President of the General Electric Company, Arthur D. Little, '85, President of Arthur D. Little, Inc., and Franklin W. Hobbs, '89, President of the Arlington Mills. Several new appointments to the Corporation's Visiting Committee of the Department of Military Science and Tactics were made: Frank L. Locke, '86, W. Cameron Forbes, Henry A. Morss, '93, and Samuel M. Felton,'73. President Stratton, Edward J. Holmes, '93, and Desmond Fitzgerald were elected Trustees of the Museum of Fine Arts. Two changes in title, six promotions, and seven appointments of faculty grade were officially passed upon at this meeting. President Stratton and Everett Morss, '85, Treasurer of the Institute, both presented their reports.

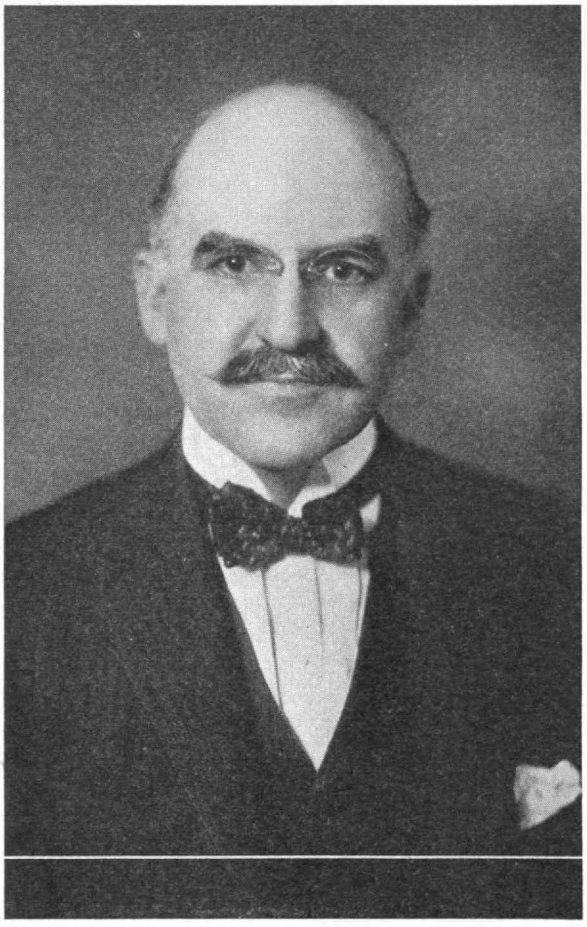


Photo by Pach

JOHN E. ALDRED

Who on November 9 saw the successful establishment of his course of special lectures at the Institute.
See page 75

GIFTS during the fiscal year of almost one and one-half million dollars, a slightly greater deficit than last year, increased income from investments but less from students and signs that the constantly rising cost of fuel seems to have come to an end, are outstanding items of interest gleaned from the Treasurer's Report submitted at the last meeting of the Corporation. The gifts include $1,000,000 received from the estate of Francis Appleton Foster and nearly $300,000 of payments on account of the Educational Endowment Fund. These additions bring the capital account of that fund to about $7,070,000.

The balance sheet for the year shows a deficit of $18,600 as compared with the previous year's deficit of $12,500. Actual operating expenses left a balance of income of $13,000, but this was more than wiped out by charges to the profit and loss account. Losses in this account were incidental to the sale of many odd lots and low-return securities which had come to the Institute as gifts, and the investment of the proceeds in securities of better quality and, in many cases, of better yield. Income from investments increased $138,000 over 1922, largely due to the increase in funds. Income from students fell off practically $50,000 and with other adjustments the net operating income was $60,000 more than in 1922. Expenses for teachers' salaries increased $40,000 over 1922, but department expenses, general expenses and power-plant operation all decreased. New equipment (a compression laboratory and a new garage) caused a charge of $36,000. As a result of all these items, the total expenses increased $37,000 over 1922.

As above stated, the cost of fuel seems now to be stabilized at a figure less than in 1922. In view of the favorable coal contracts recently made, next year's

report is expected to show a saving over 1923.

The dormitories show a better net income this year than ever before. Although part of this improvement is due to greater use of the dormitories during the summer, a considerable part of the difference is due to the small amount spent this year for repairs. The dining service has had another successful year due largely to the efforts of Mr. W. E. Smith of the Georgian Cafeterias.

The total of investment funds now exceeds $17,000,000. With the exception of approximately $500,000 these funds are completely restricted and can be used only for the specific purposes for which they were given. Financial authorities of the Institute mention, as one of the greatest present needs of the Institute, an increase in funds for unrestricted purposes.

DINNER time is approaching once again. On Saturday, January 5, 1924, in Walker Memorial, the annual Alumni Banquet will be held. At present it is impossible to announce speakers and other features of the banquet, but William R. Mattson, '13, has made informal announcements which indicate that the speakers' list will include the names of several prominent, interesting, national personages. The January issue of the Review, which will appear some two weeks before the Banquet, will contain an announcement of the program in detail.

ANNOUNCEMENT is made by the Society of Arts of the usual yearly series of four lectures on Science popularly presented for the year 1923–24.

On December 16, Professor Hervey W. Shimer will lecture on "The Age of the Earth as Revealed by Geology and Radio-Activity." The other lectures are "Fire and Fire Prevention" by Professor Gordon B. Wilkes, '11, on January 13; "Photography, and Some Recent Applications" by Professor Arthur C. Hardy on February 10; and "Molecules, Atoms, and Electrons" by Professor James F. Norris on March 9.

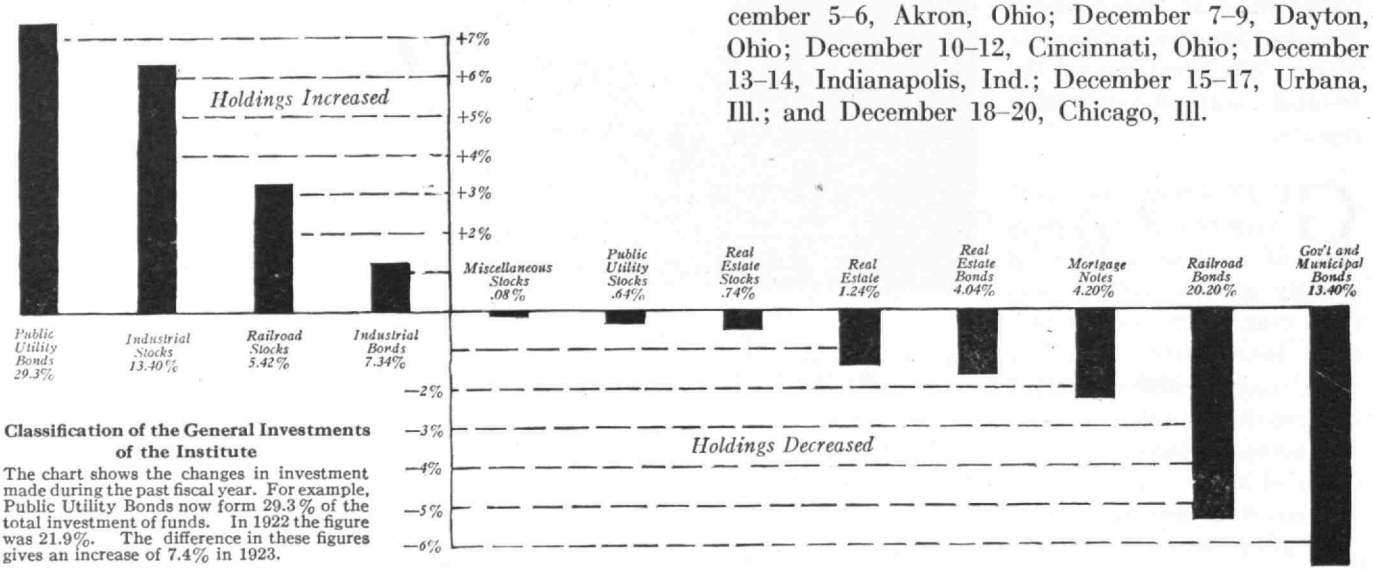
The lectures are scheduled for Fridays, Saturdays and Sundays at 4:00 p.m.

HENRY B. Phillips, Associate Professor of Mathematics at the Institute, began a series of lectures in radio reception and transmission on October 30 for the State Division of University Extension. The ten lectures of the course are to be given in the evenings at the Institute buildings and will include the problems of radio construction, installation and operation, both for transmission and reception.

Professor Phillips, says the *Boston Post*, "is regarded as one of the foremost authorities on radio in this country."

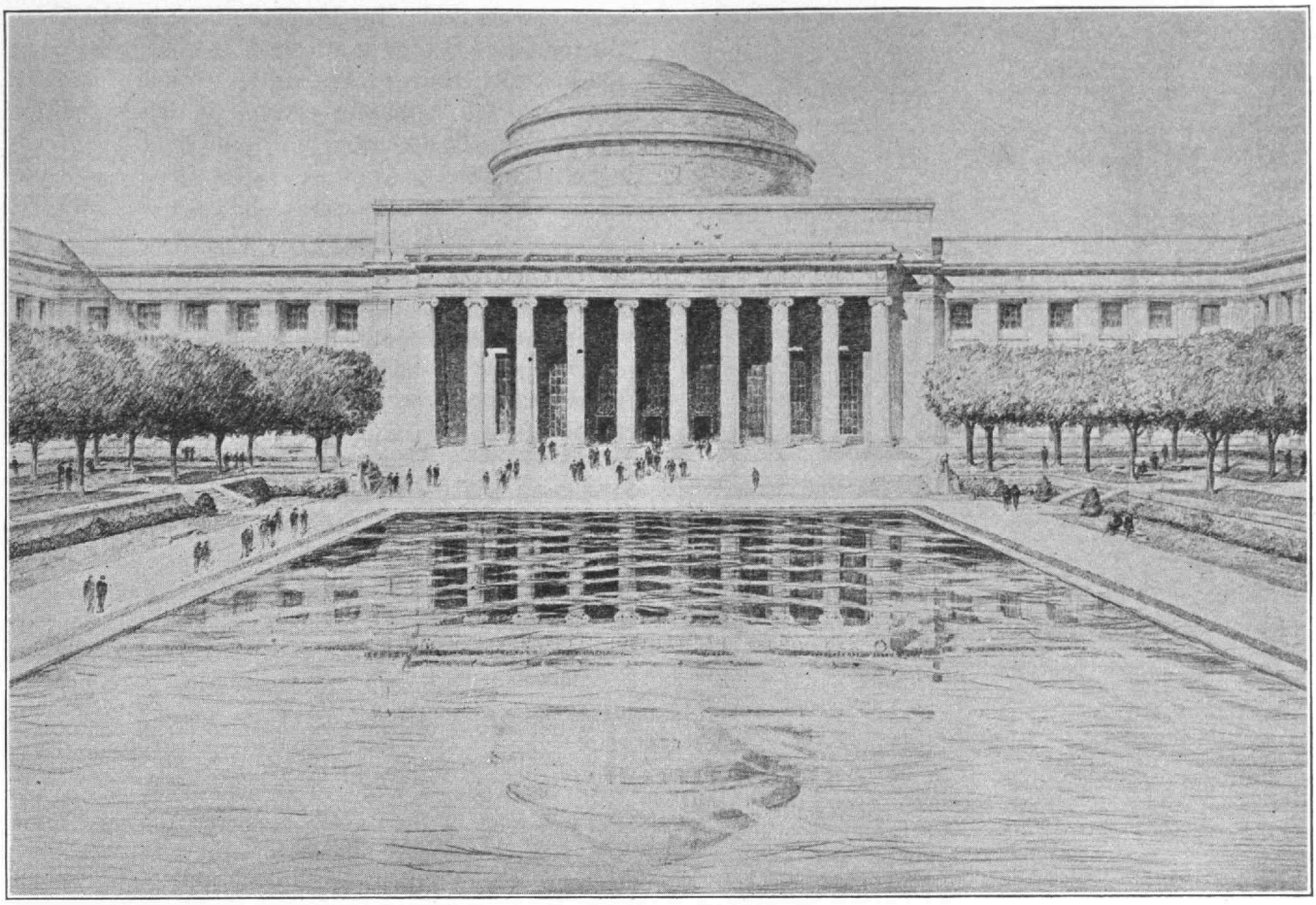
IN this section of the November Technology Review the statement was made that the Massachusetts Power Committee, of which Charles T. Main, '76, is Chairman and Professor Dugald C. Jackson, Head of the Department of Electrical Engineering is Vice Chairman, had completed a report upon the power situation in New England. The Review is now informed by Mr. Main that its information (which was based upon newspaper reports) is inaccurate and that the extensive report upon which the Committee is working is still far from complete. The Review regrets that this inaccuracy should have been spread further in its columns and is glad of the opportunity to correct its earlier information.

DURING the month of November, Orville B. Denison, '11, Executive Secretary of the Alumni Association, swung about his circuit to make eight visits to the Local Alumni Associations specified in the November Review. His tentative schedule for December is as follows: November 30–December 1, Detroit, Mich.; December 2–4, Cleveland, Ohio; December 5–6, Akron, Ohio; December 7–9, Dayton, Ohio; December 10–12, Cincinnati, Ohio; December 13–14, Indianapolis, Ind.; December 15–17, Urbana, Ill.; and December 18–20, Chicago, Ill.



Classification of the General Investments of the Institute

The chart shows the changes in investment made during the past fiscal year. For example, Public Utility Bonds now form 29.3% of the total investment of funds. In 1922 the figure was 21.9%. The difference in these figures gives an increase of 7.4% in 1923.



THE MIRAGE

No sheet of water in a desert ever gratified the eye more than this sketch (from the office of Welles Bosworth, '89, Institute Architect), which shows a possible solution of the problem, ever before the Institute authorities, of beautifying the Great Court The Review's cover this month emphasizes this particular idea

ANNOUNCEMENT was made on November 13 of the appointment of Dr. Douglas W. Johnson as exchange engineering professor to France from the seven American educational institutions which first banded together a few years ago for the purpose of promoting scientific liaison with France. Dr. Johnson's connection with Technology as an Instructor in Geology from 1903 to 1905 and as an Assistant Professor of Geology from 1902 to 1907 makes his appointment of particular interest to Technology men.

In 1922 Professor Johnson received the Elisha Kent Kane gold medal of the Geographical Society of Philadelphia in recognition of his services to geographical education and to the science of Military Geography as exemplified in his volume, "The Battlefields of the World War."

The first exchange professor to go to France under this arrangement was Arthur E. Kennelly, Professor of Electrical Communication at the Institute, who went in 1921–22.

WITH great regret the Review records the death of General Edmund Hayes, '73, which occurred on October 18, after a short illness and at the age of seventy-four years.

One of General Hayes' most notable accomplishments was the design and erection of the cantilever bridge over the Niagara River in New York. Besides his work in America, he was considerably interested in civil engineering projects in other countries. He retired from active engineering practice a few years ago. General Hayes acquired his honorary military title while Chief of the Engineering Division of New York State. He was at one time a member of the Executive Staff of Former Governor Cornell, of New York.

He was one of the Institute's most prominent alumni and was a Life Member of the Corporation. At its recent meeting, the Corporation passed a resolution of regret at his death. General Hayes was married in 1878. His widow survives him.

NEXT MONTH: AN ANNIVERSARY

In the January, 1924 number, the Review will celebrate with considerable pride and enthusiasm its Twenty-fifth Anniversary. It was in January, 1899, that a small brown-covered quarterly magazine began its career with the hesitant hope that it was not adding too much to the bulk of the printed word. By fitting ceremonies the Review will hope next month to celebrate its Silver Jubilee.

ECLIPSES THEN AND NOW: NOW

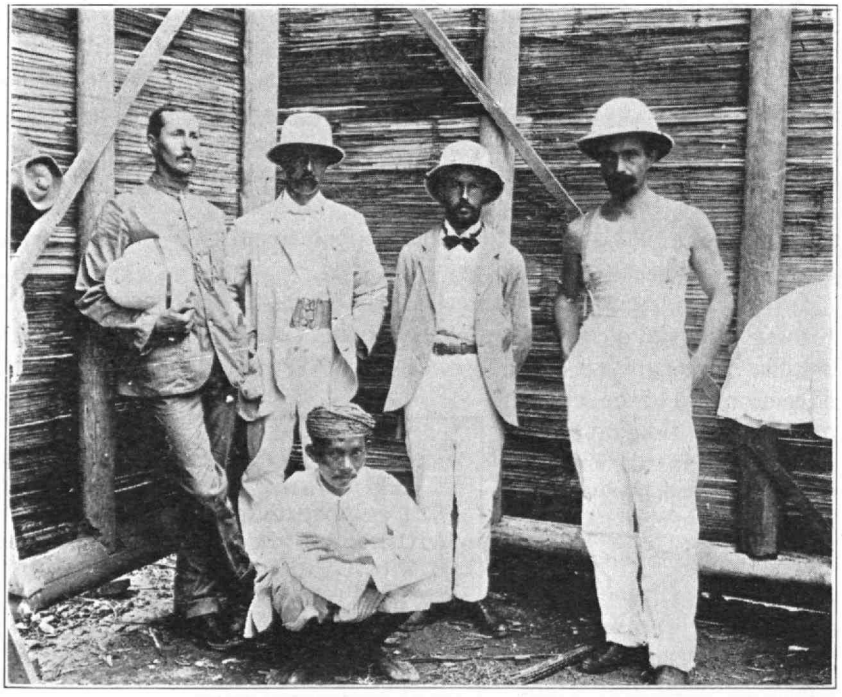
Dr. James Worthington of Oxford University, and Former Dean Burton of the Institute, as members of a party which, at Lompoc, Cal., on Sept. 10, obtained remarkable photographs of the solar eclipse

FORMER Dean Burton of the Institute, who is now living at Carmel-by-the-Sea, in California, came suddenly into the scientific limelight on September 10 when, at Lompoc, California, he and Dr. James Worthington of Oxford University succeeded in obtaining almost the only satisfactory photographs in this country of the solar eclipse which occurred on that date. Mr. Worthington, who was in charge of the expedition, used nine different cameras especially designed for solar eclipse work, some of which he had already used in Portugal, Tasmania, the South Sea Islands and Brazil. In the newspaper accounts which toured the country, Technology's former Dean found himself transfigured first of all into Professor Emeritus of Astronomy and later to cap the climax, of Astrology. Besides Dean Burton, Technology had another representative in Russell H. White, '16.

Dean Burton's part in this expedition calls to mind his organization of an expedition which in 1901 left the Institute for Sumatra, there to photograph another solar obscurement. In this expedition, besides Dean Burton, were George L. Hosmer, now a Professor at the Institute, Harrison W. Smith, '97, and Gerard H. Matthes, '95. A lengthy account of this expedition appeared in the January, 1902 number of The Technology Review.

EDWIN H. BLASHFIELD, '69, it was recently announced, has been chosen to paint a large mural to decorate the main hall of Walker Memorial. The mantel in the room has already been removed and on December 17 the hall will be closed to permit Mr. Blashfield's work on the mural and to allow workmen to set about the complete redecoration of the room. A Corporation Committee on the decoration of Walker Memorial has been considering for some time plans whereby the building could be made more truly a memorial to the man whose name it bears. The mural is but one of several changes that have already been decided upon. It is hoped that it will be completed for unveiling on January 5 at the Alumni Dinner.

PROGRESS on the new dormitories is startlingly evident. Nothing yet seems to have interfered with the well-laid plans of the constructors. When the last issue of the Review appeared, the excavation was complete and a pile driver was busily at work laying the foundation for the structure. Now, as this is written, the concrete beams and girders are complete to the level of the fourth floor.



ECLIPSES THEN AND NOW: THEN

Here is the party, organized by Dean Burton, which, in Sumatra, observed the eclipse of May 18, 1901. The standing figures are from left to right, Gerard H. Matthes, '95, Dean Burton, George L. Hosmer, and Harrison W. Smith, '97