now proposed to direct the attention of all industrial concerns throughout the state to the fact that such facilities are available and to emphasize as strongly as possible the benefits to be derived from research.

The main features of the plan include provisions for research; use of the university library facilities; employment of scientifically and technically trained Yale graduates; the training of specially qualified young men sent by manufacturers to the graduate school of the university; the loan of equipment to the university for use in training students; and the inspection of factories, summer employment of students and cooperative education, as a part of technical and semi-technical courses at the university.

The provision for research will be worked out under the plan as follows: a member of the Manufacturers Association desiring the investigation of a problem may send his inquiry to the association headquarters at Hartford. At the discretion of the research committee of the association the problem will be submitted to a committee acting for the university, and arrangements will be made to carry out the investigation either at the university or at the plant of the party proposing it. The research work, under the direction of well-known experts in a variety of fields, will include economics and finance, administration and management, transportation, applied psychology, public health, bacteriology, chemistry and chemical engineering, physics, mining and metallurgy, and civil, electrical and mechanical engineering.

Under the plan industrial concerns are to have access to the library facilities of the university for obtaining statistics and information concerning technical processes that usually can not be obtained in public libraries.

The attention of manufacturers is to be directed to the possibility of securing scientifically and technically trained young men through the university Bureau of Appointments, which assists in placing Yale graduates in positions for which their training fits them.

In order that the university may train students in the designing and use of special machinery and apparatus, arrangements will be made through the committee for the loan of equipment to the university. Tests will be made of such equipment, and the results will be available to the company furnishing it.

The cooperation of manufacturers with the committee will be sought in developing plans for summer employment and cooperative education. The advantages which will accrue to industry through such cooperation are believed to be great.

Students will be given the opportunity to visit plants throughout the state as a part of technical and semi-technical courses.

CHEMICAL INDUSTRY

THE progress of industry in the United States is more and more being bound up with the progress of chemical science, and "it is absolutely necessary for both the banker and the manufacturer to appreciate this if they are to avoid stagnation," according to Dr. John E. Teeple, of New York, treasurer of the American Chemical Society.

Addressing the Delaware Bankers' Association recently Dr. Teeple said that more than one half of the manufacturers of this country, with a total value exceeding $62,000,000,000, were dependent upon chemistry. So rapidly was chemistry's invasion of industry spreading, he added, that this proportion was constantly becoming larger.

He named six groups—textiles, iron and steel, leather, paper, ceramics and glass, metals and metal products—with a production valued at more than $33,000,000,000 which have a definite chemical basis. Chemical and allied products, he said, have risen in value from $750,000,000 in 1899 to more than $6,000,000,000 in 1924.

The chemical industry now ranks fourth, being outranked only by food, iron and steel and their products, and textiles, in all of which chemistry is an increasingly important factor.

Stressing the importance of research in any industry, Dr. Teeple said:

> Given any chemical industry to-day, I would rather judge its future by its fixed attitude toward research than by its fixed assets, its working capital or its past earning power.
>
> In 1915 there was no potash industry here. We wanted one suddenly and the price of potash was high. In 1918, forty-four plants were actually producing potash as a main product, not as a by-product of some other operation. Just one of these forty-four plants deliberately organized a research department and kept it constantly at work making a complete and fundamental study of its problems.
>
> To-day potash is back to pre-war prices or lower, and only one of the forty-four plants is operating in competition with French and German potash. This one plant had no particular advantage of location, raw materials, patented process, or knowledge of the industry over many others, but its directors had the foresight and its financial backers had the nerve to organize research and put up the money for it month after month in good times and in bad ones.

THE HISTORY OF SCIENCE SOCIETY

THE History of Science Society, to which reference has already been made in SCIENCE, has been definitely organized with an initial membership of about three hundred. The officers for the current year are as follows:

President, L. J. Henderson, Cambridge.

Vice-presidents, James H. Breasted, Chicago; Florian Cajori, Berkeley, Calif.

Secretary, David Eugene Smith, New York.

Treasurer and Assistant Secretary, Frederick E. Brasch, Washington, D. C.

Chairman of the Committee on Publications, George Sarton, Cambridge, Mass.

The executive body consists of the officers and a council of fifteen members, as follows: Isaiah Bowman, New York; E. W. Brown, New Haven; Henry Crew, Evanston; David Starr Jordan, Stanford University; George Ellery Hale, Pasadena; Berthold Laufer, Chicago; Duncan B. Macdonald, Hartford; J. Playfair McMurrich, Toronto; John C. Merriam, Washington; George F. Moore, Cambridge; Edgar F. Smith, Philadelphia; M. Rostovtsev, Madison; Lynn Thorndike, Cleveland; William H. Welch, Baltimore; Frederick J. E. Woodbridge, New York.

The membership dues are five dollars a year, which includes subscription to *Isis,* the official journal of the society. Applications for membership should be sent to Professor David Eugene Smith, 525 West 120th St., New York City.

SCIENTIFIC NOTES AND NEWS

A PORTRAIT of Edward C. Pickering, director of the Harvard College Observatory from 1877 until his death in 1919, is given as a frontispiece to the fourth volume of the Publications of the American Astronomical Society, which contains the collected papers read at the annual meetings from 1918 to 1922.

PROFESSOR ALBERT EINSTEIN has been awarded by the assembly of Amsterdam University the gold medal of the Holland Society for the Progress of Natural Science.

MME. CURIE in honor of her work with radium has been granted the freedom of the city of Warsaw.

THE following official announcement has been made by the trustees of the University of Pennsylvania in regards to the statues of former provosts to be erected on the campus.

The campus of the University of Pennsylvania will be made more interesting and attractive in the near future by the erection of statues of former Provost Charles C. Harrison and of his immediate successor in office, former Provost Edgar F. Smith. At a recent meeting of the board of trustees of the university, the Hon. John C. Bell, who has for many years been a member of the board, and closely identified with the development of the interests of the university, under the administration of these provosts, requested permission of the board to erect the statues at his own expense.

It is appropriate that the memory of men who have distinguished themselves by unselfish service to a great university, and by qualities of leadership that have resulted in the development of the institution into a wider usefulness should be perpetuated not only in the hearts of the men who know them, but also by the visible, tangible presentment of statues, upon which generations that knew them not in flesh may look for inspiration. The precise location of these memorials has not yet been determined, but the fact that they are to be erected is of interest to all who respect the achievements of men, whose contributions to the life of the community, and particularly to the University of Pennsylvania, have marked them out as those who have served faithfully and well in their day, and have left the institution enriched by their presence in it.

AT a recent meeting of the American Psychological Association the following resolution was passed:

Whereas, Professor Joseph Jastrow, the first secretary of the American Psychological Association and its president in 1900, was appointed to a chair in psychology in the University of Wisconsin in 1888, and has occupied this position for an unbroken period of thirty-five years, a record unique in the history of our science, therefore,

Resolved, That the American Psychological Association, meeting at Madison, presents its sincere congratulations to the University of Wisconsin on the long and distinguished service rendered by Professor Jastrow to it and for the advancement of psychology.

THE HONORABLE WILLIAM KELLY, for many years chairman of the Board of Control of the Michigan College of Mines, is the newly installed president of the American Institute of Mining and Metallurgical Engineers. Mr. Kelly is also one of the councilors appointed by the institute to represent it in advising the Board of Investigation and Coordination created by the society for the Promotion of Engineering Education. The work of this board was recently financed through a grant by the Carnegie Corporation.

AT the annual meeting of the Philadelphia Pathological Society, Dr. Edward B. Krumbhaar was elected president; Dr. Eugene L. Opie, vice-president, and Dr. Baldwin H. E. W. Lucke, secretary-treasurer.

CAPTAIN C. J. P. CARE has been elected president of the Royal Meteorological Society. The vice-presidents are Dr. C. Chree, Mr. J. S. Dines, Dr. A. Crichton Mitchell and Dr. G. T. Walker.

SIR MALCOLM MORRIS has been appointed chairman of the Radium Institute, London, in succession to the late Sir Frederick Treves. Sir Humphry Rolleston has accepted a seat on the committee of the institute.

THE following advisory committee has been appointed to administer the funds of the British Empire Cancer Campaign: Sir John Bland-Sutton, Dr. H. H. Dale, Sir Richard Garton, Dr. F. Gowland Hopkins, Dr. Robert Knox, Sir William Leishman, Professor C. J. Martin, Dr. Robert Muir and Sir Humphry Rolleston.