

Medical Association (1928-29), and president of the Phi Beta Kappa (1929). He was a member of the board of overseers of Harvard University for two terms and was one of the trustees of the Carnegie Institution of Washington. He received many honorary degrees, including that of LL.D. from Washington College (1927), from Edinburgh University (1927) and from McGill University (1929), that of Doctor of the University of Paris (1928) and that of Sc.D. from the University of Chicago. In May, 1927, a group of his friends made a gift endowing in perpetuity the "William Sydney Thayer and Susan Read Thayer Lectureship in Clinical Medicine," the income to provide for one or more lectures annually in the medical school, the lecturer to be selected from men distinguished in clinical medicine, pediatrics, neurology or border line branches.

Though intensely devoted to medicine, Dr. Thayer knew the importance of rest, recreation and diversion. He was an ardent sportsman and spent many of his summer vacations with a few boon companions in the wilds, making use of rod and gun. He enjoyed the company of congenial persons in dinner clubs and other social groups. He spent much time in reading good literature and had an intimate acquaintance with

the works of the better writers, especially the French. He was fond of poetry, learned many favorite poems by heart and wrote some verse himself. He was known to his friends as a lover of books, of people and of nature.

In the portrait of Dr. Thayer, painted by Leopold Seyffert, he appears in the U. S. uniform that he wore in France. A bronze tablet by J. Maxwell Miller (1912) is also much admired by those who knew him well.

A rare man, of unique personality—simple, courteous, attractive, high-minded, of unalterable integrity, just, tolerant and lovable—a cultivated man of many talents and of excellent qualities! In his death, Dr. Thayer's colleagues and friends and all who were fortunate enough to have the privilege of actual association with him experience a profound sense of sorrow and of personal loss; and internal medicine in the world at large laments the passing of a truly distinguished representative. The new generation, to which falls the task of finding the right way to further progress in clinical medicine, can not fail to be helped by a study of the life of, and by emulation of the example set by, Dr. William Sydney Thayer.

LEWELLYS F. BARKER

SCIENTIFIC EVENTS

SCIENTIFIC WORK UNDER THE GOVERNMENT

THE *Scientific Monthly* in its January number begins a series of articles on the scientific work of the government. President Hoover contributes an introduction and the Department of Agriculture is taken up first with articles by Secretary Arthur M. Hyde and Dr. A. F. Woods, director of scientific work. The introduction by President Hoover reads as follows:

The insatiable curiosity of the human mind to probe the mysteries of Nature through scientific research into the operation of natural laws has resulted in such wealth of new inventions and new products, so satisfying to material needs of the people, that the world is irrevocably committed to an eternal quest of further truth, with certainty of endless and ever more rapid change as new knowledge is translated into new conveniences and comforts. The social relations of mankind have already been altered by these changes beyond the utmost imagination of our forefathers. Further and more revolutionary changes will be wrought.

As government is the art of social relations under recognized authorities set up by the will of the people, any change wrought by scientific advance quickly produces new problems of government. The Federal Government itself long ago sensed the potentialities of science when it gave official status to the Smithsonian

Institution. From that pioneer body has flowed a stimulation to scientific research of the most valuable character, both directly in its own discoveries and indirectly through its leadership and inspiration of private institutions. Science is also recognized and encouraged by the Federal Government in the researches of the Department of Agriculture in biology, entomology and other fields; and similarly in other Departments which promote research. Thus the Government still does, and increasingly should, lead the way by example toward the discovery of new knowledge to free mankind from ignorance, superstition, needless fears and poverty. Nor should it be unremarked that a spiritual value accrues in all this labor, for science requires a degree of unselfishness and devotion which calls out the finest qualities of the human spirit, and, since its goal is truth, the noblest aspirations of mankind.

THE NEW REFRACTING TELESCOPE OF THE FRANKLIN INSTITUTE

ANNOUNCEMENT is made by the Franklin Institute in Philadelphia, of the completing in Germany of the 10-inch refracting telescope with the "Urania" type of mounting, for installation in the new Benjamin Franklin Memorial and the Franklin Institute, now under construction on the Parkway.

The telescope will be the first of its kind in the country, the mounting being planned to overcome the

necessity of the observer climbing up ladders to look through the eyepiece. It is called the "Urania" type having been designed for the Urania Observatory of Zurich, Switzerland. Another like it has been installed in the Deutsches Museum, Munich.

Constructed by the Carl Zeiss Works in Jena, the new telescope has been tested and approved in performance and will be shipped during 1933. The 10-inch lens is made for insertion in a 14-foot tube. An electric drive will turn the telescope around the polar axis, to compensate for the motion of the earth.

In order to prevent vibrations from disturbing the observations from the new telescope, it will be specially installed in the museum building with mountings which are independent of the flooring of the building. Supported by a concrete pier, resting on two large beams which reach from wall to wall, the telescope will be practically vibrationless.

A 24-inch reflecting telescope is also under construction in the memorial, by J. W. Fecker, Pittsburgh. Both instruments will be housed on the top floor of the building, a section of the roof being constructed so as to roll back when the telescopes are in use. In addition, a number of smaller telescopes on portable mountings will be used on the roof.

It is expected that the museum, which will include the Fels Planetarium and other departments, will be open in the autumn of 1933.

THE AWARD OF MEDALS OF THE ROYAL SOCIETY TO DR. HALE AND PROFESSOR HABER

THE Royal Society, at its recent annual meeting, as already noted in *SCIENCE*, awarded the Copley Medal to Dr. George E. Hale and the Rumford Medal to Professor Fritz Haber.

Nature gives extracts from the remarks of the president of the Royal Society, Sir Frederick Gowland Hopkins, who conferred the medals. Concerning Dr. Hale he said:

Dr. Hale's first notable achievement was in 1892, when he brought the spectroheliograph to success. This instrument gives a picture of the sun by the light of one spectrum line, and allows the bright clouds of hydrogen and calcium in the upper regions of the sun's atmosphere to be photographed as projected on the disc. The idea had been suggested and tried much earlier, but Hale was the first to make a workable automatic instrument of this kind. About the year 1895 Hale organized the building of the Yerkes Observatory and of the great refracting telescope there, to which an improved spectroheliograph was adapted. To this period belongs also a masterly investigation of the spectra of certain faint red stars. This was the precursor of a much larger enterprise, the Mount Wilson Observatory, with many unique

instruments, such as the 150 ft. tower telescope and the 100 in. diameter reflector.

At the Mount Wilson observatory Dr. Hale made his great discovery of the Zeeman effect in sun-spots by observing the circular polarization of the edges of the broadened spectrum lines, where they cross the spot. Regions of thousands of miles across were thus shown to be the seat of intense magnetic forces, comparable in strength with those used in the dynamo machine. This discovery has been developed in many important directions.

In recent years Dr. Hale has developed the spectroheliograph, an instrument depending on the persistence of vision, which allows us to observe transient phenomena scarcely accessible to the spectroheliograph. We may confidently expect that it will contribute to clearing up the mysterious relations between terrestrial magnetism and solar phenomena.

In referring to Professor Haber, the president said:

Alike at Karlsruhe, where he went in 1894, and at Dahlem from 1911 to the present time, Haber has inspired schools of great and highly productive activity. His own early studies of the oxidation and reduction of organic substances by electrochemical methods, and the numerous electrochemical studies which followed this important work, such as his researches on gas cells, on the rate of ionic reactions, on the electrolysis of solid salts, on the velocity of reaction at electrodes, and on the use of the glass electrode, have enormously advanced progress in this branch of science.

Haber's profound study of the thermodynamics of gas reactions culminated the synthetic production of ammonia. With van Oort, he carried out a preliminary investigation on the ammonia equilibrium, but owing partly to discrepancy with figures obtained by application of the Nernst theorem, further experiments were made with le Rossignol in 1906. In 1908 satisfactory catalysts had been found and the synthesis of ammonia achieved. The far-reaching technical results of these careful thermodynamical studies are in themselves a monument to Fritz Haber; one of the German factories alone can produce more than 1,000 tons of ammonia daily. The influence of this on the food supply of the world is of the highest importance.

Haber's wide interest, combined with his insight and grasp, made possible the application of modern physical principles to a wide range of problems of physical chemistry, such as the determination of molecular structure and calculation of lattice energies, the nature of the amorphous state, chemiluminescence, reaction kinetics and electron emission during chemical reaction. During the past few years, Haber has been successfully making manifest the rôle of the hydrogen atom in combustion processes.

AWARD OF THE PHILIP A. CONNE MEDAL TO PROFESSOR ABEL

THE Philip A. Conné Medal of the New York Chemists' Club was presented on December 28 to Professor