the north and south polar regions within the next two years for the inclusion of physicists in the parties, to make still further cosmic ray measurements.

PRESENTATION OF THE PERKIN MEDAL TO DR. BURGESS

THE Perkin Medal, bestowed annually on "the American chemist who has most distinguished himself by his services to applied chemistry," has been awarded for 1932 to Dr. Charles Frederick Burgess, president of C. F. Burgess Laboratories, Inc., for "a lifetime of accomplishment" in this field.

The medal will be presented at a joint meeting of the Society of Chemical Industry, the American Chemical Society, the Electrochemical Society, and the Société de Chimie Industrielle at 8:30 P. M. on January 8, at the Hotel New Yorker.

Dr. Burgess will speak on "Research 'for Pleasure or for Gold.'" Howard F. Weiss, of New York, will describe the achievement of the medalist, and Professor Marston T. Bogert, of Columbia University, will present the medal. Dr. Allen Rogers, of Pratt Institute, Brooklyn, chairman of the American Section of the Society of Chemical Industry, which awards the medal, will preside.

The work of Dr. Burgess in applied chemistry and electrochemistry, done chiefly at Madison, Wisconsin, embraces for the most part the fields of electrolysis, electrolytic iron and its alloys, the metallurgy of zinc, the corrosion of iron and other metals, and the development of the dry cell.

He devised a method and apparatus for sterilizing liquids with nascent chlorine which has been used in Madison hospitals to treat badly infected wounds and gangrene, and by explorers for sterilizing drinking water. This method bears some relation to the successful chlorine sterilization treatments later used during the war.

Dr. Burgess was born June 5, 1873, in Oshkosh, Wisconsin. In 1895 he was graduated in electrical engineering from the University of Wisconsin, where he served as instructor and assistant professor for five years following his graduation. There he established a course in applied electrochemistry, the first in the United States and later he established the chemical engineering course. In this academic atmosphere he demonstrated that scientific research was of the highest value to industry. In 1910 he established the C. F. Burgess Laboratories to demonstrate the marketability of chemical research.

Dr. Burgess's early work in applied electrochemistry became of industrial importance. He devised a simple electrochemical method for removing the surplus brazing metal from the brazed iron bicycle frame. He demonstrated the commercial utility of the electrolytic cleaner, universally adopted for cleaning metals preparatory to electroplating, and perfected the fused salt aluminum electrolytic rectifier, since manufactured extensively.

In 1904 Burgess and Hambuechen presented their paper on "Electrolytic Iron" which has been the basis for the commercial production of electrolytic iron both in the United States and France. Shortly afterward Dr. Burgess was given a grant of $10,000 by the Carnegie Institution to continue this work. This grant resulted in an extensive research on electrolytic iron and its alloys, several thousand of which were made and investigated.

The work of Dr. Burgess in corrosion has been of importance in its commercial aspects. He applied the principle of over-voltage to dry cell construction when the price of zinc mounted rapidly during the war. He substituted terne and tin plate for the zinc bottoms in dry cells at a considerable saving in cost.

He did a large amount of work on stray current electrolysis and made surveys in many cities in the United States. Dr. Burgess has done a considerable amount of work in improving hot galvanizing and electrogalvanizing. He was granted a patent in 1908 for separating articles in the electric furnace to prevent their fritting together in the intense heat of the reaction zone. This method is now used extensively in electric furnace practice.

Other achievements of Dr. Burgess are the electrochemical production of white lead and chrome yellow, electroplating on aluminum, and a method for soldering aluminum. He devised methods of roasting zinc ores and then concentrating magnetically. He succeeded in having gas put on a heating value basis in Wisconsin, the first state to adopt this standard. During the war, he was instrumental in devising on a large scale successful methods for producing and purifying silicon and titanium tetrachlorides. In the dry battery field he has made many contributions.

Dr. Burgess is also president of the Burgess Battery Company, the Burgess Building Company, the Burgess-Parr Company and the Burgess Dry Cells, Limited, of Winnipeg. The five companies of which he is the head are the outgrowth of his effort to carry chemical engineering research to industry. They employ more than 1,000 workers and turn out about $6,000,000 of products annually.

The Perkin Medal was founded in 1906 at the time of the Perkin semi-centennial celebration of the coal-tar discoveries, the first medal being awarded to Sir William H. Perkin himself.

OFFICERS OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

A FULL account of the New Orleans meeting of the American Association for the Advancement of Sci-

ence and the scientific societies associated with it, edited by the permanent secretary, will be published in the issue of SCIENCE for February 5. Officers of the association were elected on December 31 as follows:

PRESIDENT

Dr. John J. Abel, professor of pharmacology, the Johns Hopkins University.

VICE-PRESIDENTS

A—*Mathematics.* Professor Howard H. Mitchell, University of Pennsylvania.

B—*Physics.* Professor David L. Webster, Stanford University.

C—*Chemistry.* Professor Frank C. Whitmore, Pennsylvania State College.

D—*Astronomy.* Dr. Paul W. Merrill, Mount Wilson Observatory.

E—*Geology and Geography.* Professor Wm. H. Hobbs, University of Michigan.

F—*Zoological Sciences.* Professor Charles Zeleny, University of Illinois.

G—*Botanical Sciences.* Dr. H. L. Shantz, University of Arizona.

H—*Anthropology and Archeology.* Professor C. H. Danforth, Stanford University.

I—*Psychology.* Dr. Walter S. Hunter, Clark University.

K—*Social and Economic Sciences.* Professor William F. Ogburn, University of Chicago.

L—*Historical and Philological Sciences.* Dr. Waldo G. Leland, permanent secretary and executive director of the American Council of Learned Societies.

M—*Engineering.* Professor Dugald C. Jackson, Massachusetts Institute of Technology.

N—*Medical Sciences.* Professor Wm. H. Park, University and Bellevue Hospital College Bureau of Laboratories; director of the New York City Health Department.

O—*Agriculture.* Professor J. H. Gourley, Ohio Experiment Station, Wooster.

Q—*Education.* Dr. S. A. Courtis, University of Michigan.

ELECTED MEMBERS OF THE COUNCIL

Professor Arthur H. Compton, University of Chicago.

Mr. Austin H. Clark, Smithsonian Institution.

EXECUTIVE COMMITTEE MEMBERS

Professor D. R. Curtiss, Northwestern University.

Professor Joel H. Hildebrand, University of California.

GRANTS COMMITTEE

Dr. Philip Fox, director of the Adler Planetarium and Astronomical Museum, Chicago.

Dr. William Crocker, director of the Boyce Thompson Institute for Plant Research, Yonkers, New York.

MEMBER OF THE FINANCE COMMITTEE

Dr. Arthur L. Day, director of the Geophysical Laboratory, Carnegie Institution, Washington.

REPRESENTATIVE ON BOARD OF TRUSTEES SCIENCE SERVICE

Professor Raymond Pearl, School of Hygiene and Public Health, the Johns Hopkins University.

SECRETARY OF SECTION C—CHEMISTRY

Dr. Reynold C. Fuson, University of Illinois.

SECRETARY OF SECTION H—ANTHROPOLOGY

Professor Carl E. Guthe, director of the Museum of Anthropology, University of Michigan.

SCIENTIFIC NOTES AND NEWS

THE thousand dollar prize given each year by the American Association for the Advancement of Science "for a notable contribution to science" was awarded at New Orleans to Dr. Carl Caskey Speidel, of the University of Virginia Medical School, for his paper concerned with the growth of nerve cells.

THE Astronomical Society of the Pacific has awarded its Catherine Wolfe Bruce Gold Medal "for distinguished services to astronomy" for the year 1932 to Dr. J. S. Plaskett, director of the Dominion Astrophysical Observatory, Victoria, British Columbia, who was recently elected Savilian professor of astronomy at the University of Oxford to succeed the late Professor H. H. Turner.

FRIENDS of Professor Chandler presented to the Trustees of Columbia University in 1910 a sum of money which constitutes the Charles Frederick Chandler Foundation. The income is used to provide a lecture by an eminent chemist and a medal for him. The lecturer this winter will be Professor James Bryant Conant, chairman of the division of chemistry, Harvard University. His research has included work on free radicals, hemoglobin, reduction and oxidation of organic compounds and quantitative studies of organic reactions. The lecture, entitled "Equilibria and Rates of Some Organic Reactions," will be given in Havemeyer Hall, Columbia University, on February 5, at 8:15 P. M.

DR. LOUIS B. WILSON, professor of pathology at the University of Minnesota and director of the Mayo Institute, was elected president of the Society of Sigma Xi at the New Orleans meeting, succeeding Dr. G. W. Stewart, head of the department of physics at the State University of Iowa.

AT the Andover meeting of the American Anthropological Association Dr. John R. Swanton, of the