electro-chemistry, and Dr. Richard Goldschmidt, who is now professor of zoology at the University of California.

A FRAUDULENT ACADEMY OF SCIENCES

THE following communication, signed by Dr. Stephen Duggan, director of the Institute of International Education, appears in SCHOOL AND SOCIETY for last Saturday:

A letter signed by Professor Arsenio des Santos Barboza, secretary director of the Academia de Sciencias e Artes at Rio de Janeiro, has been sent to a number of scientific men and scholars in the United States inviting them to become members of the society. The letter addressed to a chemist follows:

As homage to your great technical merits and in gratitude to the services you have contributed to teaching in America, the Congregation of this Academy resolved to confere you a Diploma of Doctor in Chemistry, in *Honoris-Causa.*

We know that the United States is to-day the world's largest producer of chemical commodities and without boasting, the United States now can lay claim to a greater chemical industry than that possessed by any other country. I would be very happy to see you among us and I would also appreciated picture of yourself.

This Directions has confirmed this acts of high justice and has confered you the Gold Medal of Merit.

Any further reply you may care to send, it will be warmly appreciated and I want to thank you for the kind attention given to this letter.

The communication given below was enclosed in the letter.

Just a few lines to let you know that the cost of graduation with a Diploma, credential and the Gold Medal of Merit is $10.00 (ten dollars) minimum.

If you can to send some donatif and books written by you for the patrimony of this academy have the kindness to satisfy, I will be very thankful.

No Bill payable on order: SEND AMERICAN BANK NOTES, BY RETURN OF POST.

ANNUAL REPORT OF THE CHIEF OF THE WEATHER BUREAU

DR. W. R. GREGG, chief of the Weather Bureau, in his annual report for the year ending June 30, points out that an unusually cold winter over most of the country, followed by unprecedented floods in the East, severe drought between the Appalachian and Rocky Mountains, bad dust storms in the Midwest, and destructive tornadoes in the Southeast, brought heavy demands for extra service to the U. S. Weather Bureau. These demands were met with special surveys, forecasts and warnings. The hurricane warning system along the South Atlantic and Gulf coasts was strengthened and the meteorological service for airways was somewhat expanded. At the same time further research work was planned to "enable it to contribute its full share to the development of the nation's economic and social life."

Despite its restricted facilities, the Weather Bureau advanced its air-mass analysis investigations and the application of the results to daily forecasting. In response to public demand, it is studying and appraising the possibilities of all known methods of long-range forecasting. Without a knowledge of general weather trends that have existed over a great many years, Mr. Gregg explains, it is impossible to draw a pattern that will show the forecaster what may be expected within a month, a week, or even a few days. To this end, weather conditions in the United States and in foreign countries have been surveyed in an attempt to discover relationships between the weather abroad and that at home.

The increasing need for accurate information on conditions in the upper air has inspired the invention of several recording instruments. Those showing most promise of being immediately available are one for getting to the ground radio signals of temperature, humidity and pressure; one for finding and indicating the position of the abnormally warm layer of air several thousand feet above the earth that precedes by several hours the formation of fog; and a better ceiling light projector for ascertaining the height of a cloud layer. Further tests are necessary, however, to prove the trustworthiness of these devices.

The compilation and summarizing of more than 5,000,000 marine weather observations made in all parts of the oceans from 1880 to 1933, and never worked up before because of lack of tabulators, went forward this year as a WPA project. The information obtained will be valuable to navigators of the seas and of the air. It will serve also as the basis for studies of world weather in connection with crop weather and with weather preceding floods. This, in turn, will aid the bureau in improving its forecasts for farmers and its flood warning service.

Of interest to mariners also is the study of mirage at sea, completed this year. The findings—to be printed in the Pilot Charts of the Hydrographic Office—show that refraction phenomena occur not only in local regions where the atmosphere is undisturbed, but over larger areas along the boundary lines of oceanic cyclones and anticyclones. They show further that atmospheric conditions producing fog may produce mirage as well.

THE SUMATRA EXPEDITION OF THE NATIONAL GEOGRAPHIC SOCIETY AND THE SMITHSONIAN INSTITUTION

AN expedition, under the joint auspices of the National Geographic Society and the Smithsonian Institution, to the jungles of Sumatra, to collect alive wild animals of the Far East for the National Zoological Park in Washington and to a make a collection of geo-

graphic and natural history information and photographs, has been announced by Dr. Gilbert Grosvenor, president of the society. Dr. William M. Mann, director of the National Zoological Park, is head of the expedition.

Accompanying Dr. Mann will be Mrs. Mann, a member of the photographic staff of the National Geographic Society, and Roy Jenier and Malcolm Davis, of the park staff. The party will sail from Seattle and, after brief pauses in Japan, the Philippines and Singapore, will establish headquarters at some point on the Island of Sumatra, near the sea, and in easy reach of "wild country." Equipment will include a number of special "mercy traps" and a few special cases in which to carry small, delicate creatures. The heavy traps and cages needed for the larger jungle beasts will be built in the field. Dr. Mann states that the region to be visited is at present only poorly represented by animals in the National Zoological Park. He will confer with game officials and naturalists in the countries to be visited, and will collect whatever he can of the missing specimens. Mammals, reptiles, birds and a few fishes will be the primary objects of the collectors, but in spare time insects and a few botanical specimens will be collected.

The trip to the East Indies under joint Geographic and Smithsonian auspices has been planned for some time. The project was approved and organized with its complete personnel two years ago, but was delayed on account of the extensive building program at the Zoological Park, which has since held Dr. Mann in Washington.

After the work is completed in Sumatra, the expedition expects to visit the Island of Ceram, almost 2,000 miles to the east, and possibly some of the East Indies islands not under Netherlands jurisdiction. Before starting home, the party will also visit Bangkok, Siam. It will return through the Indian Ocean and the Mediterranean to England. There the collections will be shipped to America. If possible, it will be arranged to land at Baltimore in order to shorten the overland trip.

ANNUAL MEETING OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

AT the annual meeting of the American Society of Mechanical Engineers, which opened on December 1, the Hoover Medal was presented to Ambrose Swasey, of Cleveland, by Gano Dunn, of New York. Mr. Herbert Hoover spoke briefly after the presentation.

Other awards were made as follows:

An honorary membership to George A. Orrok "for his outstanding contributions to the engineering profession in the power field."

The American Society of Mechanical Engineers Medal to Edward Bausch, of the Bausch & Lomb Optical Company, Rochester, "for meritorious mechanical developments in the field of optics."

The Worcester Reed Warner Medal to Professor Charles M. Allen, of the Worcester Polytechnic Institute, Worcester, Mass., "for his early and continued hydraulic laboratory work and for the permanent value of the papers on his development of methods of testing large hydraulic turbine installations."

The Melville Medal to H. A. Stevens, of Philadelphia, for his paper on "The Loading and Friction of Thrust and Journal Bearings with Perfect Lubrication."

The Junior Award to Harwood F. Mullikin, Jr., of New York, for his paper on "Evaluation of Effective Radiant Heating Surface and Application of the Stefen-Boltzman Law to Heat Absorption in Boiler Furnaces."

The Undergraduate Student Award to Leon B. Stinson, of the Oklahoma Agricultural and Mechanical College, for his paper on "Polymerized Motor Fuels: Their Economic Significance."

The ninetieth anniversary of the birth of George Westinghouse, inventor of the airbrake and the steam turbine, was observed at the evening session, when the principal address was made by Dr. James Rowland Angell, president of Yale University.

The society elected the following officers for 1937: J. H. Herron, of Cleveland, *president;* J. M. Todd, of New Orleans, and R. J. S. Pigott, of Pittsburgh, *vice-presidents,* and E. W. Burbank, of Dallas, Tex.; K. H. Condit, of New York, and Dean S. W. Dudley, of the Yale University School of Engineering, *managers.*

FIRST ANNUAL SYMPOSIUM OF THE DIVISION OF PHYSICAL AND INORGANIC CHEMISTRY OF THE AMERICAN CHEMICAL SOCIETY

THE symposium is to be held at Princeton University on December 31 and January 1 and 2 on the general topic "Molecular Structure." The program, which includes contributions both from chemists and physicists active in the several branches of this field, is outlined below.

The program will be divided into half days as follows:

Thursday morning, December 31. General introduction to the symposium, H. L. Johnston, the Ohio State University. Five papers on "Spectra and Structure of Diatomic Molecules" and other topics, with R. S. Mulliken as discussion leader.

Thursday afternoon and Friday morning. There will be ten papers on "Spectra and Structure of Polyatomic Molecules," with W. A. Noyes, Jr., as discussion leader.

Friday afternoon. Five papers will be given on "Determinations of Structure by Methods which are Non-Spectroscopic," with G. B. Kistiakowsky as discussion leader.