called "the skyhook," a light, strong contrivance, easy to operate, and well adapted to protecting the sterile glass slides from contamination except for the time they were exposed. Mr. Meier prepared the slides and has examined and photographed them. He credits Colonel Lindbergh with careful and painstaking work and says that "Colonel Lindbergh's knowledge of pure-culture technic made him thoroughly aware of the necessity of developing a trap that could be used with minimum danger of error resulting from contact with dust in the cockpit."

In his flights between the American mainland and Denmark, by way of Greenland and Iceland, Colonel Lindbergh exposed 26 slides and returned them with field notes and free-hand maps indicating exactly where and for how long, and under what conditions each slide had been exposed. Mr. Meier has taken care of the preservation of the slides and has examined and photographed representative sections. He has been able to identify the genus and in some cases the species of many of the objects trapped in the petroleum jelly which covered the slides. More complete identifications will in many cases have to await the assistance of botanists familiar with the characteristics which identify various kinds of pollen, and of scientific workers who are specialists in different groups of fungi, mosses and lichens. On one slide, exposed far north of the Arctic Circle, Mr. Meier was able to discover under the microscope more than 40 different types of objects in a space five centimeters square. This was on a slide exposed 3,000 feet above sea level along the northeastern coast of Greenland.

Mr. Meier and other Department of Agriculture workers, assisted by Army, Navy and Coast Guard flyers, have done a considerable amount of aerial work in trapping spores and other micro-organisms, but this has been overland and in places where it was to be expected that the catch would be abundant. "This Lindbergh collection," according to Mr. Meier, "is the first of its kind to give concrete evidence of the part played by air currents in the distribution of fungi between northern lands." He points out the possibility that a single living spore which is transferred by the air currents and dropped in a spot favorable for reproduction might create a center for rapid spread of infection.

GRANTS IN AID OF RESEARCH ADMINISTERED BY THE NATIONAL RESEARCH COUNCIL

THE National Research Council has been informed that the Rockefeller Foundation has appropriated $80,000 to the council to be used for individual grants in aid of research in the natural, medical and mathematical sciences during the ensuing three-year period, 1935–37. This fund is available for use in grants of moderate size (usually less than $1,000) for the purchase of apparatus, materials and supplies, for employing technical assistance, and for field expenses. In general grants will not be made for personal services or fellowship stipends, for expenses of publication, for the purchase of books, for travel to attend scientific meetings, or for the research work of students under instruction. In the awarding of grants preference is ordinarily given to the support of investigations (a) in which the problem itself and the methods to be employed are clearly stated and in which definite results can be expected with the aid of a single grant and (b) toward the prosecution of which the university or other institution also contributes financially or through other special support. The fund is administered by a special committee of the Research Council composed of the chairman and the treasurer of the council, together with the chairmen of the council's seven divisions of science and technology.

Applications for grants to be made this spring should be submitted before April 1, 1935. Correspondence should be addressed to Dr. C. J. West, secretary, Committee on Grants-in-Aid, National Research Council, 2101 Constitution Avenue, Washington, D. C.

During the past five years the Rockefeller Foundation has appropriated to the National Research Council sums for individual grants and for conferences totaling $370,000. From these sums 638 grants have been made for the support of individual investigations and for conferences for the construction of research programs or for the coordination of research on special subjects.

ISAIAH BOWMAN,
Chairman

ANNUAL MEETING OF THE METALLURGICAL ADVISORY BOARD

REPORTS on metallurgical investigations made at the Carnegie Institute of Technology during the past year will be given by a group of investigators at the eighth annual open meeting of the Metallurgical Advisory Board to be held at the institute on Friday, February 8. Approximately 400 metallurgists are expected to attend the meeting.

Dr. John Johnston, director of the department of research and technology of the U. S. Steel Corporation, will preside at the morning session, and Dr. Frank N. Speller, chairman of the Advisory Board, will give the address of welcome.

Progress made by the Metals Research Laboratory in theoretical investigations will be reported by the director, Dr. R. F. Mehl. The various projects now being studied in the laboratory are classified under four major heads, namely, plastic deformation of metals, precipitation from solid solution, oxidation of

metals and diffusion in metallic alloys. Dr. F. M. Walters, Jr., formerly of the staff, will offer a final report on the alloys of iron, manganese and carbon, which he investigated for a period of several years at the institute.

Dr. Cyril Wells, also of the metals laboratory, will explain the preparation and properties of high purity iron and will report on a study of the constitution and properties of a pure sample. The final report of the morning session will be read by B. N. Daniloff, research fellow, on "The Effect of Deoxidation on the Aging of Mild Steels."

At the afternoon session at which H. W. Graham, general metallurgist of the Jones and Laughlin Steel Corporation, will preside, Dr. Charles H. Herty, Jr., formerly director of research for the Metallurgical Advisory Board, will report on the studies which were made under his direction.

These reports will conclude the program of research on the physical chemistry of steel-making which has been carried out for the past eight years by the Metallurgical Advisory Board. A group of prominent metallurgists from the industry will discuss the findings.

An informal dinner at the University Club will conclude the meeting. The speaker on this occasion will be J. Steele Gow, director of the Falk Foundation, who will speak on "Research in the Economic Field." The laboratories of the Carnegie Institute of Technology will be open for inspection for visitors on Saturday morning.

THE DIRECTORSHIP OF THE AMERICAN MUSEUM OF NATURAL HISTORY

AT a meeting of the Board of Trustees of the American Museum of Natural History on January 7, Dr. George H. Sherwood resigned as director to give his entire time to the School Service Section as curator-in-chief of education. Dr. Sherwood will remain honorary director of the museum. Dr. Roy Chapman Andrews, explorer and naturalist, will succeed Dr. Sherwood as the active head of the museum.

In reference to these appointments a correspondent writes:

Dr. Sherwood has been connected with the American Museum since 1902 when he became assistant curator of invertebrate zoology. From 1906 to 1911 he was assistant secretary of the museum; from 1911 to 1921, executive secretary; from 1924 to 1926, acting director. He became director in 1927.

During the years of his directorship, the museum has undergone rapid expansion. Akeley African Hall and the Whitney Hall of Oceanic Birds are well on their way to completion. A new Reptile Hall, with all the most recent methods of mounting and groupings, was opened in 1929 and the Hall of South Asiatic Mammals. Collections for the African Hall have gone steadily forward. Of the twenty-eight groups planned, half are finished or nearing completion. Last fall work was started on the new Hayden Planetarium, which will be ready in the spring. The Department of Education was conducted wholly within the museum up to 1904 when the first outside contacts were made through the distribution of nature-study collections to the schools. Since then, the school work has rapidly expanded. Last year, more than 30,000,000 contacts were made with New York school children through lectures, films, lantern slides and circulating collections. During the past few years, Dr. Sherwood has pushed the educational work further and established classes for teachers in museum instruction through cooperation with the College of the City of New York and New York University.

As leader of the Central Asiatic Expeditions of the American Museum of Natural History, Dr. Andrews took his first expedition into the field in 1916 to work in the territory of Thibet, Southwest China and Burma. His second expedition went into North China and Outer Mongolia in 1919, and the third expedition has worked in Central Asia, especially in Mongolia, since 1921, where it uncovered some of the richest fossil fields in the world. This was the largest and most completely equipped land expedition ever to be sent out up to that time.

In 1918, Dr. Andrews served in the Intelligence Service in China. He was awarded the Elisha Kent Kane Gold Medal of the Philadelphia Geographical Society previously given to only eight explorers. Brown University and Beloit College have both conferred on him the degree of honorary doctor of science. He has been given the Hubbard Medal of the National Geographic Society in recognition of his discoveries in Asia.

Dr. Andrews is well known as a lecturer and author of popular books and articles on the results of his various expeditions, including "On the Trail of Ancient Man," "Ends of the Earth," "Whale Hunting with Gun and Camera," "Camps and Trails in China," "Across Mongolian Plains," and a large volume covering his entire field work in Mongolia and China up to the present time, entitled "The New Conquest of Central Asia."

RECENT DEATHS

DR. OLIVER PEEBLES JENKINS, emeritus professor of physiology and histology at Stanford University, died on January 9. He was eighty-four years old.

PROFESSOR GEORGE LEONARD HOSMER, a member of the department of civil engineering at the Massachusetts Institute of Technology for thirty-seven years until his retirement last October, died on January 10. He was sixty years old.

DR. WILBUR GARLAND FOYE, professor of geology at Wesleyan University, died on January 8, at the age of forty-nine years.

DR. ALFRED OWRE, until his resignation in 1933 dean of the School of Dental and Oral Surgery at