liaison between the scientific organizations of Great Britain and France. The program arranged for the visitors included a reception at the Royal Society on January 29, when the guests were received on its behalf by Sir Albert Seward and Professor F. G. Donnan. Dr. E. V. Appleton then addressed the meeting, and described the organization of the scientific effort for defence in Great Britain. The French delegation was introduced by Dr. Montel, after which Professor Longchambon described the steps taken in France to mobilize scientific research. Professor Langevin also spoke. On January 30, the French delegation visited the National Physical Laboratory at Teddington, and on the following day went to Cambridge, where they visited the Cavendish Laboratory and the Colloid Science Laboratory.

A meeting of the Royal Society was arranged for February 1, at which Sir Arthur Eddington read a paper on "The Masses of the Proton, Neutron and Mesotron," and L. Jánossy and B. Rossi a paper on "Photon Component of Cosmic Radiation." Professor E. J. Williams gave an account of his experiments on the transformation of mesotrons into electrons, and Professor P. Auger and Professor P. M. S. Blackett took part in the discussion. On the same evening the French delegation was entertained at dinner by British men of science.

FELLOWSHIPS FOR BUSINESS EXECUTIVES OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

THE third competition for at least ten fellowships open to young business executives which will cover twelve months of advanced study and investigation in the fields of business administration and economics has been announced by the Massachusetts Institute of Technology.

It is planned that the fellows obtain leave of absence from their present employment in order to undertake a special one-year program of work aimed further to prepare them for positions of higher administrative responsibility. The program, which is under the direction of Professor Wyman B. Fiske, is made possible largely through a renewed grant of $32,500 from the Alfred P. Sloan Foundation. It meets the stated objective of the foundation—"the increase and diffusion of economic knowledge" by emphasis upon the broader economic and social aspects and responsibilities of industry. Stipends of $2,500 for fellows who are married are permitted. This brings the opportunity within the range of all who are competent to benefit from it. The competition will close on March 16.

Opportunity is provided for advanced study in a variety of professional subjects and for concentration in a chosen field in an attempt to give a broad understanding of the implications of each function and of its relation to the rest of the business. Each fellow will be required to undertake an individual investigation into some aspect of business administration. These investigations usually involve field work and ordinarily are in the same field as that selected for concentration.

There will be an organized series of evening conferences with approximately forty leading industrial executives, government representatives and labor leaders. Part of these conferences are held in connection with field trips in which the group combines visits to the industries of a particular location and is given opportunities for conferences with the executives of the plants visited. A wide range of industries and a broad geographic area are represented in the group that cooperates in this activity.

The selection of fellows is made upon the basis not only of certain minimum requirements, but also on evidence of ability and opportunity to benefit from the special nature of the program. Applicants should be between the ages of twenty-seven and thirty-four years and should have had a minimum of five years of industrial experience, part at least of a managerial type and in executive work, following the completion of their academic education. The academic background must have been in either science or engineering.

GRANTS OF THE COMMITTEE ON SCIENTIFIC RESEARCH OF THE AMERICAN MEDICAL ASSOCIATION

THE Committee on Scientific Research of the American Medical Association, under the chairmanship of Dr. Hektoen, has awarded the following grants:

To the Division of Neurology and Neurosurgery of the University of Chicago for the investigations of Drs. P. C. Bucy and Heinrich Klüver on the functions of the temporal lobes of the rhesus monkey, which will be extended by Dr. W. H. Sweet in an anatomical study of the projection from the temporal lobe in that species.

To Dr. A. G. Eaton, assistant professor of physiology at the School of Medicine of the Louisiana State University, for the continuation of his work on the absorption and metabolism of the amino acids.

To Dr. Louis N. Katz, director of cardiovascular research at the Michael Reese Hospital, Chicago, for a study of factors influencing the work of the heart.

To Dr. I. Davidsohn, pathologist of the Mount Sinai Hospital, Chicago, for work on the Thomsen Panagglutination Phenomenon in Serum.

To Dr. Robert S. Dow, of the Medical School of the University of Oregon, for the completion of study of the vascular architect and lesions of multiple sclerosis.

To Dr. Armand J. Quick, of the department of pharma-

cology of the School of Medicine of Marquette University, for a study of the problem of "the conversion of prothrombin to thrombin."

To the Medical School of the University of Minnesota, for an investigation to be made by Joseph T. King on the antagonistic effect of tissues on the action of sulfanilamide.

To Professor Edward S. West, of the Medical School of the University of Oregon, for an investigation of vesical calculi.

MONOGRAPHS OF THE IRON ALLOYS COMMITTEE OF THE ENGINEERING FOUNDATION

As the result of ten years of research by the Iron Alloys Committee of the Engineering Foundation and with the cooperation of eighty-eight manufacturers, research institutes, technical societies and federal bureaus, hitherto inaccessible information has been assembled from the scientific and technical literature of many nations. The cost of the investigation was $271,700.

This work is the first critical review of its kind ever attempted; approximately 10,000 papers have been read, and 20,000 abstracts have been prepared. Out of this mass of material, embracing international progress recorded since 1890, ten monographs containing 5,630 pages have been issued.

Of the 6,218 papers utilized in these publications, the United States contributed 2,708, or 43.5 per cent. Germany was second with 1,578, or 25.5 per cent.; England was third with 1,188, or 19.1 per cent.; France was fourth with 407, or 6.5 per cent., and Japan was fifth with 203, or 3.2 per cent. Sweden is credited with 71, or 1.1 per cent.; Russia with 24, or 0.4 per cent.; Italy with 23, or 0.4 per cent.; the Netherlands with 11, or 0.2 per cent. Five papers, or 0.1 per cent., originated in other countries.

There are nearly 2,000 publications in ten languages which contain frequent or occasional articles on ferrous metallurgy. Of these, approximately 150 contain important reports of metallurgical progress and research. All these journals have been searched completely from 1890 to date and have been abstracted in as much detail as necessary for the preparation of the monographs.

Four additional monographs are planned after the original program of the alloys of iron research is finished early in 1943. The committee recommends that thereafter an annual appropriation of about $15,000 be made so that the monographs may be revised and brought up to date at regular intervals.

The monographs were compiled under the direction of the twelve members of the Iron Alloys Committee, and of metallurgists and representatives of other technical fields. In addition, a large number of research workers supplied unpublished data. They include nearly two hundred Americans, eight Englishmen, seven Germans, two Czechs, two Japanese and two Swedes.

Monographs already available deal with alloys of iron and molybdenum, alloys of iron and silicon, alloys of iron and tungsten, alloys of iron and copper, principles of phase diagrams, the metal—iron, alloys of iron and carbon, alloys of iron and chromium, low-chromium alloys, alloys of iron and nickel, special-purpose alloys and high-chromium alloys.

Professor George B. Waterhouse, of the Massachusetts Institute of Technology, representing the American Institute of Mining and Metallurgical Engineers, is chairman and director of the committee. Other members are:

Lyman J. Briggs, director, National Bureau of Standards, represented by J. G. Thompson, senior metallurgist in the bureau; John W. Finch, director, United States Bureau of Mines, and R. S. Dean, chief engineer, Metallurgical Division, alternate; John Johnston, director of research, United States Steel Corporation, Kearney, N. J., representing the American Iron and Steel Institute; James T. Mackenzie, metallurgist and chief chemist, American Cast Iron Pipe Company, Birmingham, Ala., representing the American Foundrymen's Association; Dean Bradley Stoughton, of Lehigh University, representing the American Society for Metals; Jerome Strauss, vice-president of the Vanadium Corporation of America, Bridgeville, Pa., representing the American Society for Testing Materials; T. H. Wickenden, assistant manager, Development and Research, International Nickel Company, New York, representing the Society of Automotive Engineers; James H. Critchett, vice-president of the Union Carbide and Carbon Research Laboratories, New York, representing the American Electrochemical Society; Wilfred Sykes, director and assistant to the president of the Inland Steel Company, Chicago, member-at-large; Frank T. Sisco, metallurgist and editor; John S. Marsh, physical metallurgist and associate editor.

THE CINCINNATI MEETING OF THE AMERICAN CHEMICAL SOCIETY

THE American Chemical Soicety will meet in Cincinnati from April 2 to 12. With the exception of the Division of Fertilizer Chemistry all divisions plan to present programs, including eight symposia, several of which will be held jointly by two of the divisions.

The programs of the divisions, as reported in *Chemical and Chemical Engineering News,* follow:

The Division of Agricultural and Food Chemistry has organized a Symposium on the Utilization of Agricultural Wastes, to which two sessions probably will be devoted. The Division of Biological Chemistry is joining in a Symposium on Sterols and Lipoids. Papers on miscellaneous agricultural and food subjects will be offered.

The Division of Biological Chemistry is also joining