as radio programs, publications and leaflets, and articles in newspapers and magazines.

The museum had ten expeditions in operation in the United States and foreign countries during 1939, and considerable field work on a smaller scale was also conducted. This extension of activity became possible only through the generosity of patrons who sponsored the most important expeditions. Without such assistance, the museum would have been unable to allocate adequate funds for this purpose.

The expeditions included one, sponsored by Stanley Field and led by Dr. Wilfred H. Osgood, chief curator of zoology, to collect specimens of the fauna of Peru, Bolivia, Chile and the shores of the Straits of Magellan; the Field Museum Archeological Expedition to the Southwest, also sponsored by Stanley Field, which excavated prehistoric American Indian sites in New Mexico under the direction of Dr. Paul S. Martin, chief curator of anthropology; botanical expeditions to Guatemala, the southwestern United States and Mexico; a zoological expedition to British Guiana; an ornithological expedition to the Yucatan Peninsula; paleontological expeditions to Colorado, South Dakota and Nebraska, and an expedition to collect and study the marine fauna along the Atlantic and Gulf coasts of Florida. A project for the making of photographs of type specimens of plants in the leading herbaria of Europe, conducted steadily since 1929 by J. Francis Macbride, associate curator of the herbarium, was continued through most of 1939.

Twenty-eight technical scientific publications, circulated internationally among museums, libraries, other institutions and individual scientists, were issued by Field Museum Press. The museum became a member of the University Broadcasting Council, to participate in educational work by radio; and, in cooperation with the Zenith Radio Corporation, presented experimental programs by television.

It is stated that the Works Progress Administration has taken an active part in the work of the museum. More than 262,000 hours of work were done by a force of from 125 to 219 persons.

THE STRUCTURAL STEEL WELDING RESEARCH COMMITTEE OF THE ENGINEERING FOUNDATION

THE formation of a Structural Steel Welding Research Committee to study problems of design and fabrication in the building field is announced by the Engineering Foundation.

Leon S. Moisseiff, New York consulting engineer and designer of the George Washington and Triboro bridges in New York and the Golden Gate and San Francisco-Oakland Bay bridges, has been chosen chairman. Other members are: F. H. Frankland, technical director of the American Institute of Steel Construction, New York; Jonathan Jones, chief engineer of Fabrication Division, Bethlehem Steel Corporation, Bethlehem, Pa.; C. H. Goodrich, chief engineer of the American Bridge Company, Pittsburgh, Pa.; A. S. Low, vice-president of the Austin Company, Cleveland, Ohio; Commander C. A. Trexel, design manager, Bureau of Yards and Docks, United States Navy, Washington, D. C.; La Motte Grover, engineer, Air Reduction Sales Company, New York; Professor Bruce Johnston, of Lehigh University. H. W. Lawson, engineer, Bethlehem Steel Corporation, and F. H. Dill, engineer, American Bridge Company, have been named alternates.

The program includes the establishment of research fellowships in American universities. The first fellowship goes to Lehigh University for a two-year period and carries with it an annual stipend of $1,100. Other fellowships will be established as soon as the committee maps a complete program of research projects. The investigations at Lehigh will be directed toward developing a satisfactory design procedure for beam-to-girder and beam-to-column connections for all kinds of welded building construction. The official statement points out:

> The work of the committee, in general, will be to secure basic data which will enable fabricators to apply welding in building with greater safety and with greater economy. By obtaining full information on the effects of varying loads on all classifications of welded connections, the committee hopes to perform a service for building engineers and aid them in setting up different formulas which will be applicable in each type of construction. At present there is a wide diversity of opinion regarding the best designs for various welded connections.
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> It is important that engineers have at least one continuing body from which the results of research in this field can be obtained. Formation of the committee will also assist the engineering profession in seeing to it that the development of structural welding is scientific and sound.

The Committee was organized by the Welding Research Committee of the Engineering Foundation, working in cooperation with the American Institute of Steel Construction. It is proposed that the research work of the new group should tie in with the studies in welding literature, the fundamental research investigations now underway in various universities, and the projects of the Industrial Research Division, all of which are sponsored by the Welding Research Committee.

The first Structural Steel Research Committee was established about fifteen years ago, but was discharged in 1938 after having exhausted its funds and completed the work originally outlined. The outstanding contribution of the body was the formulation of the Amer-

ican Welding Society Building Code, which now is in standard use in more than 200 municipalities, including New York City, Chicago and Pittsburgh.

THE CHICAGO MEETING OF THE INSTITUTE OF FOOD TECHNOLOGISTS

FINAL plans for the first annual meeting of the Institute of Food Technologists are taking definite form. As announced early in January, the meeting is to be held in the Morrison Hotel, Chicago, from June 17 to 19, inclusive. Registration will begin at 3:00 P.M. on Sunday, June 16.

The technical sessions open at 9:30 A.M. on Monday, with a discussion of the "Process Engineering in Food Technology." Dr. L. V. Burton, editor of *Food Industries* and chairman of the session, will speak on "Engineering a Food Manufacturing Process"; W. L. Badger, of the Dow Chemical Company, on "Application of the Unit Operations of Chemical Engineering to the Food Industries"; G. T. Reich, of the Pennsylvania Sugar Company, on "Engineering a Continuous Evaporation and Hydrolysis Process," and Dr. N. E. Berry, of the General Foods Corporation, on "The Chemical Engineer Looks at a Food Process."

The Monday afternoon session will be presided over by the president of the institute, Professor Samuel C. Prescott, dean of science of the Massachusetts Institute of Technology, and will be devoted to a program of seven voluntary papers on food technology. Subjects ranging from mechanism of heat transfer, sanitary principles in dairy equipment design and germicidal efficiency of washing solutions for glass containers to moisture content of staple dietary foods, vitamin B_1 potency of malt and brewed beverages and securing food for an army complete the program for the session.

"The Effect of Processing on the Vitamin Content of Foods" will be discussed in a symposium under the chairmanship of Dr. George C. Supplee, of Borden and Company, when Dr. C. A. Elvehjem, of the University of Wisconsin, will discuss "The Nature of Vitamins with Particular Reference to the B Complex." Vitamins A, B_1, C, D and G will be taken up in turn and dealt with in respect to their stability under food-processing conditions.

Contrary to the procedure followed in the first three technical sessions, the Tuesday afternoon program will be presented in four divisions with each division having its own program of six or seven papers with meetings held concurrently. Division A will discuss problems and practices relative to the packaging of foods; Division B will deal with the technology of food preservation with emphasis on the chemical aspect of the subject; Division C, while spending some time on methods of analysis, will focus attention on the control of unit operations in food processing; Division D will emphasize the microbiology of foods with respect to flavor development and preservation factors.

A smoker is planned for Monday evening. All men registrants at the meeting will be guests of the Chicago group. The annual dinner will be given on Tuesday evening. The last day has been reserved for plant visits in the Chicago area.

EXHIBITION OF THE WORKS OF LEONARDO DA VINCI

THE exhibition of the works of Leonardo da Vinci, held for over a year in the Palace of Arts in Milan, Italy, is being brought to the United States. Eighteen large roomfuls of material pertaining to his life and work, including working models of his inventions and his works of art, were shipped on April 30 on the *Barberigo* from Genoa. The exhibition will first be shown to the American public at New York's Museum of Science and Industry in Radio City and will be opened to the public in the early part of June.

Three years were spent by the Italian Government in assembling the exhibition, many items of which, such as the fourteen volumes of Leonardo's original autograph writings and his studies for works of art lost or unfinished, have for centuries remained in private collections. Hundreds of thousands of dollars have been spent by the Italian Government in building models of one hundred and seventy of Leonardo's scientific inventions, which range from an apparatus for measuring the earth to a heat-operated roasting oven. All these inventions, including his plans for flying machines, his submarine, his differential gear for vehicles and other features of modern life, conceived 400 years ago, will be represented by full-size or scale models made from his own drawings and specifications, which will be exhibited together with the models themselves. The announcement points out:

> Most popularly known as the painter of the "Mona Lisa" and the "Last Supper," Leonardo da Vinci was centuries ahead of his age in every department of art and science he put his mind to. In the days when ships were propelled by wind and oars he understood the power of steam. He planned cities of the future with superimposed highways, and designed circular forts with underground passages that are not a far cry from France's Maginot Line or Germany's West Wall. A hundred years before Gutenberg was born he had invented a printing press; his anatomical studies with Antonio della Torre, of Pavia, revolutionized the world of medicine. He was a great biologist, physicist and musician. He even invented a diving apparatus, but refused to disclose his plans to any one because, as he said, man's "wickedness and ferocity" would enable him to walk on the bed of the ocean and do damage to ships and those sailing in them.

One of the features of the New York exhibition, ac-