plication of x-rays to their work. (b) To present as many case histories of successful applications as possible. (c) To compare the usefulness of x-ray methods with the usefulness of other methods which may be used alternatively. (d) To include the application of radiographic and diffraction methods to both metallics and non-metallics.

In the section for radiography the papers will cover such subjects as elements of radiography, foundry applications, applications to the welding art, gammaray radiography and its relation to x-ray radiography and the problems of specifications. The diffraction section comprises papers on equipment and methods, constitution of alloys, chemical analysis and particlesize determinations, non-metallic applications, and cold-work, recrystallization and preferred orientations. It is expected that four sessions of the meeting will be devoted to this symposium, which it is expected will be the most extensive of any that have been sponsored by the society.

## THE AMERICAN ACADEMY OF ARTS AND SCIENCES

AT the annual meeting of the American Academy of Arts and Sciences, held on May 13, at its house, 28 Newbury Street, Boston, thirty-four new fellows and six foreign honorary members were elected. The fellows in the exact and natural sciences are:

## Mathematical and Physical Sciences

Harold S. Booth, Western Reserve University.

Albert B. Hastings, Harvard University.

Murray P. Horwood, Massachusetts Institute of Technology.

Ernest H. Huntress, Massachusetts Institute of Technology.

Avery A. Morton, Massachusetts Institute of Technology.

## Natural and Physiological Sciences

Oswald T. Avery, Rockefeller Institute.

Charles S. Burwell, Harvard University.

Frederick L. Hisaw, Harvard University.

The following officers were elected for the ensuing year:

Roscoe Pound
James Flack Norris
Walter Bradford Cannon
Edwin Francis Gay
Arthur Stanley Pease
Tenney Lombard Davis
Walter Eugene Clark
Ingersoll Bowditch
Hervey Woodburn Shimer
William Chase Greene

The meeting was addressed by Professor Julius

Seelye Bixler, of Harvard University, who spoke on "The Skeptical Revolt."

## THE SEATTLE MEETING OF THE PACIFIC DIVISION OF THE AMERICAN ASSOCIA-TION FOR THE ADVANCEMENT OF SCIENCE

ARRANGEMENTS for the twentieth meeting of the Pacific Division of the American Association for the Advancement of Science, to be held at Seattle from June 16 to 20, are now complete. The final program, which is in press, announces the meetings of twentyfour affiliated and associated societies and the titles of some three hundred and eighty papers. The sessions of general interest to members and guests which have been organized under divisional auspices comprise a symposium on oceanography and reports on the progress of research in four selected fields. The symposium on oceanography will consist of four addresses as follows: Marine Biology, C. McLean Fraser; Chemical Oceanography, Erik G. Moberg; Fisheries, W. F. Thompson; Hydrographic Survey, O. W. Swainson. The session devoted to surveys of current research will focus attention upon a few of the most noteworthy achievements and will outline the problems of commanding interest. The subjects and speakers follow: Stellar Spectroscopy, W. E. Harper; Plant Nutrition, D. R. Hoagland; Chemistry of Growth Principles, Roger J. Williams; Paleontology, E. L. Packard. Addresses of general interest will be given on the evenings of Tuesday, Wednesday and Thursday. At the first of these, Dr. F. K. Kirsten, professor of aeronautical engineering at the University of Washington, will speak on "Lux Sit," an exposition of researches in the field of illumination with rare gases and metallic vapors under electrical stimulation. On Wednesday evening, Dr. Richard C. Tolman, professor of physical chemistry and mathematical physics at the California Institute of Technology and president of the Pacific Division, will deliver an address on "The Present Status of Cosmology." The Thursday evening address will be delivered by Dr. F. C. Mann, professor of experimental surgery in the University of Minnesota and director of the Institute of Experimental Medicine of the Mayo Foundation. The subject of Dr. Mann's address will be "Methods of Medical Progress."

The chairman of the local committee in charge of arrangements is Professor A. F. Carpenter, of the department of mathematics, University of Washington, to whom any inquiries regarding local facilities may be addressed.

All members of the American Association for the Advancement of Science resident in the territory of the Pacific Division will receive a copy of the program by mail in advance of the meeting.