

scribes the series of steps by which the scales of measurement of resistance, direct and alternating current, and voltage are determined experimentally. An extensive bibliography lists papers explaining the measurement procedures in greater detail and serves as a historical report of this phase of the Bureau's work during its first fifty years. (*Extension and Dissemination of the Electrical and Magnetic Units by the National Bureau of Standards*. By Francis B. Silsbee, NBS Circular 531; 1952. \$0.25. Order from Government Printing Office, Washington 25, D. C.)

### Books Received

IMPERFECTIONS IN NEARLY PERFECT CRYSTALS. Symposium Held at Pocono Manor, Oct. 12-14, 1950. Editorial Committee: W. Shockley, Chairman, J. H. Hollomon, R. Maurer, and F. Seitz. 490 pp. John Wiley and Sons, Inc., New York, 1952. \$7.50.

THE MECHANICAL PROPERTIES OF CHEESE AND BUTTER. By Margaret Baron. 106 pp. Dairy Industries Ltd., London, England, 1952. 15s.

ANUARIO DEL OBSERVATORIO ASTRONÓMICO DE MADRID, PARA 1952. 397 pp. Instituto Geográfico Y Catastral, Madrid, Spain, 1951. 40 pesetas.

L'HOMME MICROSCOPIQUE. Essai de Monadologie. By Pierre Auger. 234 pp. Bibliothèque de Philosophie scientifique, Flammarion, Editeur, Paris, France, 1952.

A SURVEY OF THE THEORETICAL ASPECTS OF THE LUMINESCENCE OF INORGANIC CRYSTALLINE SOLIDS. By L. R. Furlong. 36 pp. (including diagrams and graphs). Naval Research Laboratory, Washington, D. C., 1950. Paperbound, \$1.00.

FERNSEHTECHNIK. By F. Kirschstein and G. Krawinkel. 288 pp. S. Hirzel Verlag, Stuttgart, Germany, 1952. DM 25.

PHILOSOPHIC PROBLEMS OF NUCLEAR SCIENCE. By Werner Heisenberg. 126 pp. Pantheon Books, Inc., New York, 1952. \$2.75.

ASTRONOMY (Second Edition). By W. M. Smart. 160 pp. Oxford University Press (Children's Book Department), London, England, 1952. 9s.6.

TEXTBOOK ON SOUND. By J. W. Winstanley. 239 pp. Longmans, Green and Co., Inc., New York, 1952. \$2.60.

PHYSICAL ASPECTS OF AIR PHOTOGRAPHY. By G. C. Brock. 267 pp., 32 plates. Longmans, Green and Co., Inc., New York, 1952. \$11.00.

POLARIZED LIGHT IN METALLOGRAPHY. Edited by G. K. T. Conn and F. J. Bradshaw. 130 pp. Academic Press Inc., New York, 1952. \$3.80.

OPTICS. By Sir Isaac Newton (Based on the Fourth Edition, London, 1730). 406 pp. Dover Publications, Inc., New York, 1952. Paperbound, \$1.90.

COLLEGE PHYSICS (Complete Second Edition). By Francis Weston Sears and Mark W. Zemansky. 912 pp. Addison-Wesley Press, Inc., Cambridge, Massachusetts, 1952. \$8.50.

PHYSICS AND MEDICINE OF THE UPPER ATMOSPHERE. A Study of the Aeropause. Edited by Clayton S. White and Otis O. Benson, Jr. 611 pp. The University of New Mexico Press, Albuquerque, New Mexico, 1952. \$10.00.

ELECTRODYNAMICS. Lectures on Theoretical Physics. Volume III. By Arnold Sommerfeld. 371 pp. Academic Press Inc., New York, 1952. \$6.80.

## News and views

### Scientific Manpower

#### A Federal Policy is Born

One of the summer's more important but almost unnoticed events occurred on September 6th, when Manpower Policy No. 8 was issued by Acting Secretary John R. Steelman of the Office of Defense Mobilization to define the government's position regarding the training and use of scientific and engineering manpower. This over-all policy, recommended by the interagency Manpower Policy Committee, its Committee on Specialized Personnel, and the national Labor-Management Manpower Policy Committee of the Office of Defense Mobilization, assigned to government agencies the responsibility for making specific contributions to the program for the utilization and training of scientists and engineers. While the policy recognized that many of its recommended activities were already under way in individual industrial firms, educational institutions, professional organizations, and in government, it is also clear that much remains to be done before solutions can be found for the underlying problems which have made such a policy statement necessary.

Much of the pessimism concerning the threatening shortage of scientific manpower has been based on evidence that the numbers of scientists are not increasing nearly as fast as is the need for their services. At the same time there is a growing recognition that the immediate situation might seem less gloomy if more attention could be given to the efficient employment of scientists and to improving the avenues of scientific communication and liaison so that unnecessary duplication of research effort might be reduced to as low a level as possible. Several federal agencies have taken steps in these directions. The Atomic Energy Commission, the Department of Defense, and the National Advisory Committee for Aeronautics, for example, have for some time collaborated in a review of the research and development programs of the three agencies, which together account for the great bulk of all research and development work performed by or sponsored by the government, with a view toward reducing the demands on scientific manpower to the minimum level consistent with the national security.

Present minimum requirements of the long-term national defense program call for the production and improvement of military equipment for an armed force of 3.7 million, provision of a reserve supply of key equipment sufficient to meet the first year's need of any full