the folly that has led us and other men to misuse them, let us not weakly question that the gifts of science hold potential good. Fairly regarded, the record of engineering is not such that we need feel ashamed of our calling. Again, to quote Sir Henry Tizard (1938):

> There is nothing new in the fact that experiment and invention are transforming the habits of men and are adding to their problems. What is new is that we are all more aware of it, because the rate of change has been steadily increasing. . . . Bad news is, as a rule, better copy than good news. But can it seriously be argued that any section of society is worse off and living under worse conditions than a hundred years ago? Broadly speaking, the natural result of all scientific discovery has been greatly to improve the conditions of life and all our social relations, in spite of—or possibly even because of—the fact that scientific workers have been too busy doing their own jobs well to worry about other people's.

So Dr. Johnson to Mr. Boswell: "My dear friend, clear your *mind* of cant. . . . You may say, 'These are bad times; it is a melancholy thing to be reserved to such times.' . . . You may *talk* in this manner; it is a mode of talking in society: but don't *think* foolishly."

SCIENTIFIC EVENTS

SCHOLARSHIP AWARDS OF THE CANADIAN NATIONAL RESEARCH COUNCIL

THE National Research Council announces that forty-one awards of scholarships have been made for 1939–40. These scholarships form part of the means by which the council stimulates postgraduate training and scientific research in Canada. The successful candidates this year are drawn from fourteen Canadian universities. One of the candidates will study dairy bacteriology at the National Institute for Research in Dairying at Shinfield near Reading, England; all the others will carry on postgraduate research at Canadian universities. Three holders of special scholarships will be in training at the National Research Laboratories in Ottawa, where they will acquire experience in the study of industrial and commercial problems. Two of these scholarships have a value of $1,000 each and the other one is worth $750; four fellowships at $750 each and thirty-four studentships at $650 each are tenable at the universities.

Of the successful candidates for awards twenty will work in the field of chemistry, eight in physics, two in geology and one in engineering. In the biological sciences two will work in bacteriology, one in entomology, one in plant biochemistry, one in genetics and cytology, two in general biology and three in biochemistry.

In addition to the fellowships and studentships announced above provision has been made for a number of bursaries at $250 which are to be held under cooperative arrangements between the National Research Council and the universities in which the graduate students will be enrolled. Particulars of these further awards will be announced at a later date.

THE PERMANENT SCIENCE FUND OF THE AMERICAN ACADEMY OF ARTS AND SCIENCES

INCOME from the Permanent Science Fund, according to agreement and declaration of trust, shall be applied by the American Academy of Arts and Sciences to such scientific research as shall be selected ". . . in such sciences as mathematics, physics, chemistry, astronomy, geology and geography, zoology, botany, anthropology, psychology, sociology and economics, history and philology, engineering, medicine and surgery, agriculture, manufacturing and commerce, education and any other science of any nature or description, whether or not now known or now recognized as scientific, and may be applied to or through public or private associations, societies, or institutions, whether incorporated or not, or through one or more individuals."

Applications for grants under this indenture are considered by a committee of this academy on stated dates only. The next meeting to consider applications will be held on October 1. Applications should be made on special forms furnished by the committee. Correspondence, including requests for application blanks, should be addressed to the chairman of the Committee on the Permanent Science Fund, Professor John W. M. Bunker, Massachusetts Institute of Technology, Cambridge, Mass.

Grants-in-aid from this fund were voted by the academy on April 12, 1939, as follows:

To Professor Emil Bozler, of the department of physiology, the Ohio State University, for the purchase of apparatus to be used in a study of action potentials of smooth muscle, $250.

To Dr. Donald E. Cameron, professor of neurology and psychiatry, Albany Medical College, for the purchase or construction of apparatus, as specified, to study the change in response to repetition of an unpleasant situation in psychotic patients, $200.

To Professor William H. Cole, department of physiology and biochemistry, Rutgers University, for technical assistance, materials and special apparatus for the determination of the chemical composition of the bloods of invertebrates, $500.

To Professor Robert S. Harris, department of biology, Massachusetts Institute of Technology, for the purchase of a newly developed instrument for optical quantitation of vitamin B_1, for a study of the daily requirement of

young and adult individuals in respect to this vitamin, $400.

To Dr. Caryl P. Haskins, Union College, Schenectady, N. Y., to aid in the construction of apparatus for studying the effects of proton bombardment of spores, $500.

To Professor Charles E. Lane, University of Wichita, Kansas, for technical assistance and materials in a study in the relationship between the pituitary, the ovary and the estrous cycle in rats, $300.

To Karl O. Lange, research meteorologist, Blue Hill Observatory, to aid in the construction and testing of automatic radio transmission of meteorological records to a central station, $300.

To Professor Willem J. Luyten, department of astronomy, University of Minnesota, as an aid in securing a supervisor for student measurements in his study of the proper motions of stars in the southern hemisphere, $500.

To Professor Hugh M. Raup, Harvard University, as a contribution toward general field expenses of a botanical survey of the southwestern part of the District of Mackenzie, contingent upon his securing necessary funds to assure the trip in the summer of 1939, $400.

To Professor Kenneth A. Siler, department of physiology and pharmacology, University of Arkansas School of Medicine, for the purchase or construction of necessary instruments in an investigation of the blood flow of the coronary system, $250.

AWARDS FROM THE MILTON FUND OF HARVARD UNIVERSITY

AWARDS in the sciences from the Milton Fund have been made as follows to instructors in Harvard University, to enable them to conduct research or prepare publications in the fields mentioned after their names:

Henry Asbury Christian, Hersey professor of the theory and practice of physics, for a study of the clinical medical records of the Peter Bent Brigham Hospital accumulated in the period 1913–39 under his direction as physician-in-chief.

William Dameshek, instructor in medicine, to extend previous investigations and make new ones on the etiology and treatment of certain hemolytic syndromes, with particular reference to the rôle of the spleen.

Ralph Eigil Fadum, instructor in civil engineering, for research on the stress-deformation characteristics of clays.

Knox Henderson Finley, instructor in psychiatry, for experimental studies with insulin and metrozol used in the treatment of dementia praecox, and to continue a study of the capillary beds of the hypothalamus with the aid of a cerebral blood vascular injection technique.

Alden Buchannon Greninger, assistant professor of metallurgy, for the purchase of optical equipment to aid in studies of martensite transformation in alloy systems.

Frederick Vinton Hunt, assistant professor of physics and communication engineering, to extend the results of an earlier investigation of auditorium acoustics by means of steady-state measurements.

Arthur Edwin Norton, Gordon McKay professor of applied mechanics, to continue a study of certain lubricants at or near the condition known as "apparent solidification" due to high local pressure.

John Rock, assistant in gynecology and research associate in obstetrics, and Austin Moore Brues, associate in medicine and instructor in biochemical sciences, for a study of ovulation, fertilization, nidation and electrical potentials associated with ovulation.

Reinhold Rüdenberg, Gordon McKay professor of electrical engineering, to investigate the extinction of electric alternating-current arcs by influencing the external circuit.

Karl Sax, professor of botany, for research on the effect of x-rays and neutrons on chromosomes.

Theodore Eugene Sterne, lecturer on astrophysics, for a spare moving system for a Paschen galvanometer and for repairs to the old system.

Theodore James Blanchard Stier, assistant professor of physiology, to continue the study of carbohydrate and lipid assimilation in yeast.

Paul Anthony Vestal, instructor in botany, to obtain information and specimens of the important plants (both cultivated and native) used by the Ramah-Atarque Navajo Indians.

Robert Weston Vose, instructor in applied mechanics, for a study of the aeolotropy of elasticity accompanying shear strain.

Ralph Hartley Wetmore, associate professor of botany, for studies in development and differentiation in the angiosperms.

George Bernays Wislocki, Parkman professor of anatomy, for a study of the anatomy of the manatee.

WINTER SCHOOL IN SOIL SCIENCE AT THE WAITE INSTITUTE

ACCORDING to *The Australian Journal of Science*, arrangements have been made for a Winter School for Soil Workers to be held at the Waite Agricultural Research Institute for ten days during the month of August. The school will be held under the auspices of the University of Adelaide and of the Council for Scientific and Industrial Research, and will open on August 14. Fees will not be charged, but all those attending must be accredited by their respective state departments, universities or other organizations.

It is believed that the school will be of value to soil workers, not only in the personal contacts that will be made and ideas interchanged, but that methods and procedures of established value will be brought to the notice of every one. These ends will be served by a series of lectures and demonstrations following a definite plan rather than by a conference of disconnected papers.

The lecturers and demonstrators will include Professor J. A. Prescott, C. S. Piper, Dr. A. Walkley, T. J. Marshall, C. G. Stephens, R. J. Best, T. H. Strong, J. S. Hosking and A. C. Oertel.

The following subjects have been chosen as likely to be of general interest. In most cases an introductory lecture will be followed by a practical demonstration: