for Research in Dairying, has been appointed director of the bureau. W. G. Sutton, Massey Agricultural College, New Zealand, has been appointed deputy director and has now taken up his duties. The bureau is financed cooperatively by the governments of the British Empire in the same way as the other Imperial Agricultural Bureaux.

The functions of the bureau are to index research work in dairy science, whether carried out in the Empire or elsewhere; to collect, abstract and collate information bearing on dairy science and to distribute such information both by publication and by private communication to research workers, officials and advisory officers throughout the Empire. In addition the bureau is charged with the duty of establishing and maintaining contact between research workers with common interests, promoting conferences of workers and visits to research centers, and in general encouraging the circulation of information ideas, material and personnel.

The field of dairy science to be covered by the bureau was defined by the conference when recommending its establishment. This field includes the microbiology, chemistry and physics of milk and its products; animal diseases in so far as they affect milk and its products; the technology of processing milk and manufacturing dairy products; the physiology of milk secretion as affecting quality and quantity of milk and dairy products; standards for the composition and quality of milk and its products.

The routine work of the bureau, such as indexing and abstracting, will already be familiar to many dairy workers from the activities of the bureaus already established in other subjects. An aspect of bureau work which may not be so well known and understood is the more informal service which can be given to research workers, teachers and field officers. The bureau aims to be the friend of these dairy workers. It will deal directly with the individual workers in dairy science, who are invited to write to the bureau for information which is not obtainable in their own countries. It may be able to supply the information or to put the inquirer in touch with some one who can do so more effectively.

SCHOLARSHIPS OF THE WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY AT THE CARNEGIE INSTITUTE OF TECHNOLOGY

THE cooperative engineering educational plan of the Carnegie Institute of Technology, in cooperation with the Westinghouse Electric and Manufacturing Company, which enables a student to obtain practical experience in Westinghouse plants during five summer vacations and two college semesters as well as to complete eight semesters of college class work, was made possible by the appropriation of $200,000 by the Westinghouse Company in 1937. Last summer the first ten scholarship students were elected.

When in complete operation, the scholarship course will include fifty students, with ten scholarships becoming vacant each summer. A scholarship has a value of $3,000 and is awarded to a student of exceptional ability, final selection being based on results of competitive examinations, character and personality. Applications for the second scholarship class must be received before April 1.

D. F. Miner, George Westinghouse professor of engineering at the institute, who as coordinator of the cooperative program supervises the scholarship holders, points out that the plan affords an unusual opportunity for combining theoretical training with practical experience. At the age of twenty-two to twenty-four, the participants will have completed a four-year formal engineering course and, at the same time, will have acquired a substantial background of two years' industrial experience.

W. G. Marshall, vice-president of the Westinghouse Company, states that through this opportunity in engineering education the Westinghouse Company "confidently expects to guide the development of a group of young men who will become industrial engineering and business leaders of the future. The first year of operation of the plan has met with wide success, and it is anticipated that even greater accomplishments by the students will be evidenced during the coming year."

Last year the scholarships were awarded to the ten highest ranking students among 293 applicants. The successful students came from states as widely separated as Montana, Pennsylvania, Washington, Ohio and New Jersey.

GRANTS OF THE COMMONWEALTH FUND IN AID OF MEDICAL RESEARCH

THE twentieth annual report of the Commonwealth Fund states that in trying to advance public health the fund has found no better way than "to help schools to teach and doctors to learn the best contemporary medicine." Appropriations for this purpose through various channels reached the sum of approximately $375,000 in 1938. As a new element in this program, the ten fellowships were awarded to junior instructors in medical schools, on nomination of their department chiefs, not only to give promising young men an opportunity for professional growth but to strengthen the teaching resources of the schools where they are at work. This offer, it was announced, will be continued. Similar fellowships were given to four junior staff men interested in the teaching of pediatrics to enable them to study psychiatry as an aid to the better handling of children.

Other new awards of the year included subsidies to the departments of preventive medicine at New York University and the Long Island College of Medicine. At each of these schools fourth-year students will work in district health centers of the New York City Health Department. Grants to Tulane, Vanderbilt and Tufts, also for the teaching of preventive medicine, were continued from previous years, together with a subsidy to the department of psychiatry at the University of Louisville. The fund assisted in the postgraduate teaching of medicine at Harvard, Vanderbilt, Tulane and the University of Minnesota, and offered fellowships to men in country practice in seven states.

Funds amounting to more than $345,000 were set aside for medical research at fifteen different medical schools and hospitals. Judging each appeal on its merits, the fund has nevertheless concentrated its subsidies to some extent in groups of related studies at different centers. Thus in the field of heart and kidney disease it reported grants to the University of Pennsylvania for the study of kidney function, to the Johns Hopkins for the study of essential hypertension, to Western Reserve University for work on chronic nephritis and the causes of heart failure, and to Yale for a general investigation of the causes of circulatory disease. A study of arthritis at the Massachusetts General Hospital, Boston, and three studies of rheumatic fever were aided, together with three on problems of growth and development in childhood. New appropriations in the field of the acute communicable diseases included two to the University of Pennsylvania for the study of air-borne infections and the chemical structure of the streptococcus.

GRANTS OF THE GEOLOGICAL SOCIETY OF AMERICA

THE Geological Society of America announces that the following grants in support of special research problems have been authorized by the council:

W. H. Twenhofel, Madison, Wis., $1,440. Professor Twenhofel will return to Newfoundland this coming field season. With an assistant he will extend studies begun in 1935 along the coast and islands of Notre Dame Bay and along the Exploits River, and continued in 1936 in the White Bay region. Plans for the new work call for examination of the interior, the more inaccessible parts of which will be reached by airplane. Professor Twenhofel has been assured of the active cooperation of Dr. A. K. Snelgrove, government geologist of Newfoundland. The studies will include not only the stratigraphy but the physiography and glacial geology as well.

R. Dana Russell, Baton Rouge, La., $1,800. Professor Russell will study sediments off the mouth of the Mississippi River in the Gulf of Mexico. The Bureau of Fisheries will cooperate by furnishing the use of the ship *Pelican*, and the Geological Society is financing the construction of 2 Piggot "Guns," the original of which was developed in 1935 with the aid of a grant from the society. Dr. C. S. Piggot, of the Geophysical Laboratory, will join the expedition.

V. Tanner, Helsingfors, Finland, $2,500. Dr. Tanner has for a quarter of a century been studying the late Quaternary changes in level in Fennoscandia and related areas in Europe. In the summer of 1937 he visited Newfoundland and Labrador and became convinced of the possibility of correlating changes of level in Labrador with those in Fennoscandia through a detailed study of raised beaches and other phenomena. The grant from the Geological Society will enable him to extend his investigations to the coast of Labrador.

Randolph W. Chapman, Huntington, W. Va., $540. Dr. Chapman and his brother, Dr. Carleton A. Chapman, of the University of Illinois, will make a detailed petrographic and structural study of Mt. Starr King and the surrounding region in northern New Hampshire. The two Chapmans have taken an active part in the detailed mapping and study of the geology of New Hampshire conducted during recent years under the supervision of Professor Marland Billings. The White Mountain magma series, the question of cauldron subsidence, laccolithic intrusions and the Ammonoosuc thrust fault will be investigated.

Chester Stock, Los Angeles, Calif., $1,800. With the assistance of Dr. L. R. David, Dr. Stock will conduct a study of Tertiary fossil fish faunas of the Pacific Coast, involving taxonomy, comparison of morphological characters, distribution on the Pacific Coast of North America and the significance of fossil fishes in related geological problems, such as correlation of marine sediments and conditions of sedimentation in the area involved.

W. H. Newhouse, Cambridge, Mass., $1,160. Professor Newhouse will devote the coming summer to field studies of selected mineral deposits with view to following out evidence already in hand that the direction of flow of the ore-bearing solutions can be determined from mineral symmetry. Whether the deposit is a filled vein or a replacement body, the criteria already developed appear to be useful in solving problems in ore deposition.

Robert T. Hill, Dallas, Texas, $1,800. Dr. Hill's studies cover the history of geologic investigation in the Southwest, including identification and interpretation of the routes of Cabeza de Vaca and Coronado. A volume is expected to result from these studies.

Roger Revelle, La Jolla, Calif., $900. Dr. Revelle, of the Scripps Institution of Oceanography, will continue his studies of recent marine sediments from various localities between Panama and Alaska that have been sampled by the Institution, by the U. S. Coast and Geodetic Survey and by the Navy. Many of the samples consist of cores taken with the Varney-Redwine coring instrument recently developed at the Scripps Institution. The mechanical analyses of sediments that pass a 230-mesh screen are to be made from a sodium carbonate suspension by taking pipette samples at intervals of time corresponding to the Wentworth size grades down to 0.5 microns in equivalent particle diameter. The results will give the particle size distribution and organic content, the relationship between size distribution and topography, and changes in environ-