gation for deck officers or airplane pilots under the act appropriating funds for the ESMWT program.

On the other hand, a course in navigation requested for engineers in the Engineers' Corps of the Army has been considered acceptable. Likewise, courses in sanitation may be given for engineers but not for health officers. The act authorizes us to approve courses that are needed for the training of engineers, chemists, physicists and production supervisors, but this authorization does not include the same courses for persons engaged in other activities.

Courses to train teachers for teaching in this program have never been questioned, but the legality of courses in mathematics and physics for high-school teachers was not clear and no steps were taken in this direction until a legal ruling in their favor had been obtained. This favorable ruling was based upon the need for this training to meet teacher shortages which would affect adversely the qualifications of high-school graduates to take courses in engineering and physics. During the past summer, such courses were approved as an aid in providing high-school students with the foundation necessary for engineering training and thus being a step towards meeting the shortage of engineers. These courses will be continued on a part-time basis to upgrade high-school teachers where institutions find it feasible.

For high-school teachers in the more remote areas where the need is most acute, the correspondence method of instruction has been adopted after some study. This correspondence method will be limited to one standard course in physics and one in mathematics. The outlines and lesson materials for these are being prepared by a committee of experienced correspondence method teachers, headed by Dean F. O. Holt, of the University of Wisconsin. The courses will be made conveniently available to all sections of the country through about 20 institutions with long experience in conducting correspondence courses.

These borderline cases have been mentioned to indicate the type of questions that must be answered one way or the other. The institutions have accepted in a cooperative spirit the decisions that were reached, even though they may have had difficulty in agreeing with some of them.

There have been newspaper reports of overhead reorganizations in Washington affecting this program, and many here present may have questions whether this will affect the program. So far, no direct effect on the working of the program has been apparent.

This program operates in the Office of Education through powers and responsibilities delegated to the director by the commissioner of education. The Office of Education until recently has been entirely within the Federal Security Agency, of which Paul V. McNutt is the administrator. A recent order by the President transferred the functions relating to war training in the Office of Education from the Federal Security Agency to the War Manpower Commission, of which Mr. McNutt is chairman. The effect of this order is to change the organization under which the program operates. In the War Manpower Commission, President Edward C. Elliott, of Purdue University, as the chief of the Professional and Technical Personnel Division, has general direction of this program as well as that of the National Roster of Scientific Personnel, and the Procurement and Assignment Service for Physicians, Dentists and Veterinarians.

The War Manpower Commission operates many designated activities through 12 regional directors who have authority throughout their regions. These designated activities include the training programs below college level, but not the college-level training.

In general, then, it appears that so long as Dr. Elliott is satisfied with the conduct of the program, and so long as the War Manpower Commission system of regional directors is not imposed on this program, this change in overhead organization will not materially affect the conduct of the program.

In conclusion, it is hoped that this progress report has been of interest and that it will be of assistance to the colleges in answering the question proposed as the topic of this paper.

OBITUARY

HARRISON ESTELL HOWE

HARRISON ESTELL HOWE, editor of *Industrial and Engineering Chemistry,* died from a heart ailment, at his Washington home on December 10, 1942. He was sixty years old and had been editor of the publication for twenty-one years. His demise brought to a close a remarkable life devoted to the service of the chemical profession. Under his editorship *Industrial and Engineering Chemistry* rose to the foremost publication in its field and exerted great influence during the years of rapid expansion of industrial chemistry.

Dr. Howe was born in Georgetown, Ky., in 1881, a son of William James and Mary (Scott) Howe. He was educated at Earlham College, Richmond, Ind., where he received a B.S. degree in 1901. He did post-graduate work in chemistry at the University of Michigan and at the University of Rochester, receiving the M.S. degree from the latter institution in 1913.

What was to be a long and profitable association with chemical industry began for Dr. Howe in 1902 when he became chemist for the Sanilac Sugar Refin-

ing Company in Croswell, Michigan. In 1904 he joined the staff of Bausch and Lomb Optical Company, Rochester, N. Y., where he was in turn chemist, office manager, and editor. He married, in 1905, Miss May McCaren. He joined Arthur D. Little, Inc., and Arthur D. Little, Ltd., in Boston and Montreal. In 1916–17 he was chemical engineer and assistant to the president of the Canadian branch of the Little firm. During World War I, Dr. Howe was consultant to the Nitrate Division of Army Ordnance.

In 1919 he became chairman of the Division of Research Extension of the National Research Council during which term he raised a considerable portion of the money necessary to build and furnish the Marine Biological Laboratories at Woods Hole, Mass., one of the largest and most important laboratories in the country devoted to study of ocean life. This position he terminated in 1921 when he assumed the editorship of *Industrial and Engineering Chemistry,* his title and position at the time of his death.

During his busy life, Dr. Howe's services to the chemical profession were recognized in many ways. Honorary degrees were conferred upon him by the University of Rochester, Sc.D. (1927); Southern College, LL.D. (1934); Rose Polytechnic Institute, Eng.D. (1936); South Dakota State School of Mines, D.Chem. (1939). Decorated in 1926 by Italy as an Officer of the Crown, Dr. Howe also received another outstanding honor on November 6, 1942, when the American Section of the Society of Chemical Industry awarded him the Chemical Industry Medal. This honor is granted yearly to outstanding scientists responsible for the application of research to industrial processes. He was also a fellow of the American Association for the Advancement of Science.

In 1922, Dr. Howe was chairman of the committee on work periods of the American Engineering Council of the Federated Engineering Societies, and he took a leading part in reducing the hours of labor in industry. A survey made by his committee showed that the tendency throughout the world was toward the eight-hour day and abolition of the prevalent twelve-hour day.

He was a trustee of Science Service and a member of the Purdue Research Foundation. Strongly in favor of scientists sharing in the wealth created through their discoveries, Dr. Howe was an advocate of action for devising a plan under which the legitimate claims of scientists to remuneration could be recognized. He was a member of the advisory board of the Lalor Foundation and general conference leader in the Institute of Politics, Williamstown, Mass., in 1926–29.

Dr. Howe was a colonel in the Chemical Warfare Reserve of the U. S. Army and a member of the A.C.S. advisory committee to that service. He was chairman of the Chemicals Group of the Chemical Priorities Committee of the Office of Production Management. Later he became chairman of the advisory committee of the Chemical Section of the War Production Board.

A member of many organizations, Dr. Howe brought to all of them his enormous capacity for work. He served two terms as director of the American Institute of Chemical Engineers and was their representative for ten years on the American Engineering Council of which he was treasurer for eight years. His work for the American Chemical Society, in addition to his editorship, entailed many committees and responsibilities too numerous to list. Suffice to say that he always had time to advise and labor in his chosen field and to him chemistry paid tribute by continually asking for his helping hand. His clubs included, among others, the Cosmos Club, the Torch Club and the Chemists' Club.

He had a deep and abiding interest in Rotary International. Their unselfish aims and desires for service to mankind appealed to him and gave him still another opportunity to serve. He was president of the Washington, D. C., club, governor of the 34th district, member of its magazine committee, and a director in 1936–37.

Throughout his life, Dr. Howe had been constantly in touch with the application of science, particularly in chemistry, to the problems of everyday life. He wrote and edited many volumes for the public, and among his works are "The New Stone Age"; "Profitable Science in Industry"; "Chemistry in the World's Work"; "Chemistry in the Home" and a series of six Nature and Science Readers for School Children (with E. M. Patch). He edited two volumes of chemistry in industry, 1924–25, prepared especially for use in connection with the American Chemical Society Prize Essay Contest. He was also author of numerous articles in scientific and lay publications.

Each activity and interest of Dr. Howe's was investigated and worked with remarkable thoroughness. He became one of the best public speakers on chemistry in the United States. No one hearing him speak about the many wonders he brought up from his "magic grab bag" will soon forget the intensely interesting and lucid comments which accompanied each showing. His principal hobbies were gardening and photography and to each he gave his full energies. Thus at his homes in Washington and Woods Hole, he grew many prize winning flowers and planned gardens extensive and excellent. He had an enormous collection of colored transparencies and motion pictures which were remarkable for their variety. He practiced scientific farming at his farm in Richmond, Indiana.

Dr. Howe is survived by his wife, Mrs. May McCaren Howe, two daughters, Mrs. Oscar A. Provost, Mrs. Frank B. Clinton, five grandchildren, and a sister, Mrs. Jeanette Wilson.

American chemistry has lost an outstanding figure in the death of Harrison Estell Howe. His abilities and willingness to apply them for the good of mankind are attributes too seldom found. His passing is sorely mourned.

F. J. VAN ANTWERPEN

RECENT DEATHS

DR. CLINTON H. CURRIER, who retired in 1938 as associate professor of mathematics and astronomy at Brown University, died on January 5, at the age of sixty-seven years.

DR. MAX MELTSNER, associate professor of chemistry at the College of the City of New York, died on January 16. He was in his fifty-seventh year.

DR. SUSAN P. NICHOLS, professor emeritus of botany of Oberlin College since 1939, after having been a member of the faculty for 31 years, from 1933 to 1938 head of the department, died on December 7, at the age of sixty-nine years.

ARTHUR H. NORTON, curator of the Portland, Maine, Society of Natural History, died on January 5, at the age of seventy-two years.

CHARLES H. WARD, president of the Anatomical Laboratory of Charles H. Ward at Rochester, N. Y., died on January 18, at the age of eighty years.

SIR WILLIAM ARBUTHNOT LANE, the British surgeon, died on January 16, at the age of eighty-six years.

SCIENTIFIC EVENTS

JOINT COUNCIL OF SCIENTIFIC MEN IN GREAT BRITAIN

Nature states that a Joint Council of Professional Scientists, representing more than ten thousand qualified men of science, has been set up in Great Britain under the chairmanship of Sir Robert Pickard by the Institutes of Chemistry and Physics in association with representatives of professional botanists, geologists, mathematicians and zoologists. The council has been established to voice the collective opinion of scientific men on matters of public interest, to provide a liaison between professional organizations of scientific men for coordinated action in matters of common interest, and in particular to concern itself with (1) the utilization of men of science to the best advantage in the service of the community; (2) the education, training, supply and employment of scientific workers; (3) the better understanding of the place of men of science in the community; (4) the maintenance of adequate qualifications and ethical standards among professional men of science; (5) the supply of information and advice to public and other bodies on matters affecting men of science.

The members of the council are as follows: *Institute of Chemistry:* Dr. J. J. Fox, Professor Alexander Findlay, Dr. G. Roche Lynch, Sir Robert Pickard, Dr. H. A. Tempany, R. B. Pilcher; *Institute of Physics:* Sir Lawrence Bragg, Professor J. A. Crowther, E. R. Davies, Dr. B. A. Keen, Dr. H. Lowery, Dr. H. R. Lang; *Representing Botanists:* Professor W. Brown; *Representing Zoologists:* Professor D. Keilin; *Representing Mathematicians:* Professor S. Chapman; *Representing Geologists:* Professor H. H. Read. The joint council has been established for the period of the national emergency, but it may form the nucleus of some more permanent organization to facilitate the close collaboration between professional men and women practising in all branches of science. Communications to the council should be addressed to Dr. H. R. Lang, Honorary Secretary, Joint Council of Professional Scientists, care of Institute of Physics, at its temporary address, The University, Reading, Berks.

COMMITTEE ON SANITARY ENGINEERING OF THE NATIONAL RESEARCH COUNCIL[1]

A SANITARY engineering committee has been organized, at the request of the Surgeon General of the Army, by the National Research Council through the Division of Medical Sciences acting for the Committee on Medical Research of the Office of Scientific Research and Development. Through liaison officers, advice and assistance on sanitary engineering problems are also furnished to the Navy and the Public Health Service.

As epidemiologic and entomologic advice was deemed necessary, personnel representing these sciences was included. Close liaison with the Surgeon General's Office is maintained through the Sanitary Engineering Branch of the Division of Preventive Medicine. The committee consists of:

Abel Wolman, *chairman,* professor of sanitary engineering at the Johns Hopkins University.

Kenneth F. Maxcy, *secretary,* professor of epidemiology

[1] The *Journal* of the American Medical Association.