dentistry and pharmacy. The club has enjoyed a continuous and vigorous existence. It is recognized as a regional chapter by the Association of Physics Teachers and as an associated society by the American Institute of Physics.

During 1918 Professor Richards served as visiting physicist at the National Bureau of Standards, working on problems of internal ballistics.

At the University of Pennsylvania he was the leader for thirty years in carrying on advanced instruction in physics, both at the graduate and the undergraduate levels. It was a heavy load, but he carried it joyously. His graduate courses on radiation and on the constitution of matter were masterpieces. He developed them early in the century and kept them up to date for more than two decades. His "Introduction to Mathematical Physics" attracted large numbers of students until the end of his teaching career. For a quarter of a century he always had students at work on optical problems. A series of studies of the optical properties of certain metallic elements and alloys was conducted under his supervision. His standards of scholarship were high and his influence upon his pupils was stimulating and lasting. All his associates developed a wholesome respect for his ideals and standards.

Professor Richards was a devoted alumnus of his college. He was keenly interested in the education of the undergraduates. He offered a series of courses for upper classmen that covered the whole field of classical physics. He gave one of these courses each semester with a thoroughness and a fidelity that won him the enduring gratitude of his pupils. He was not a lantern-slide and blackboard lecturer. His lectures were illustrated with demonstrations that required hours of preparation. He gave nature a chance to speak for herself and his pupils a chance to hear her voice.

Over a period of years Professor Richards encouraged teachers in the Philadelphia area to continue the study of physics and to work for graduate degrees in the field. The cumulative effect of his policy has been to create in the schools of the area a considerable group of teachers who hold advanced degrees in physics. To this group of people he was philosopher, guide and, above all, friend. They continued to visit him during the years of his retirement, and the hour of his funeral was set late in the afternoon to permit this group to be present.

In 1931 Professor Richards was invited to assume the directorship of the Randal Morgan Laboratory of Physics. It was not an easy assignment, for he was then in his sixty-fourth year, a depression reigned in the land, and the unrest and bewilderment abroad in the world expressed itself on his campus in cravings for "academic recognition" and in yearnings for "academic prestige." Professor Richards gave little heed to the stirrings around him, for he held with Russell Conwell that "acres of diamonds sparkle at every man's doorstep," and with S. Weir Mitchell that "the jewel Fame is found unsought along Duty's pathways." He was a modest, unassuming scholar and teacher and he had seen great honors worn with humility and dignity by some very near to him.

Professor Richards served as director of the laboratory for seven years, until he reached the age of retirement. During his last year of service pupils and other friends engaged John R. Pierce to paint his portrait. It was presented to the university at a testimonial dinner given during June, 1938. Professor Richards's response at this dinner brought editorial comment from Philadelphia's *Evening Public Ledger*. Under the title "Teacher's Secret" the *Ledger* said editorially:

> The guest of honor revealed with modest brevity his formula for successful teaching. "I always talked," he said, "as if somebody were listening." This is refreshing philosophy. . . . The teacher who talks "as if somebody were listening" is likely to have listeners and will be honored when his work is done.

This testimonial is submitted by pupils of Professor Richards.

R. DEWEES SUMMERS
WESTERN MARYLAND COLLEGE
THEODORE S. ROWLAND
NORTHEAST HIGH SCHOOL, PHILADELPHIA
E. A. ECKHARDT
GULF RESEARCH AND DEVELOPMENT COMPANY
R. C. DUNCAN
NAVAL ORDNANCE LABORATORY
THOMAS D. COPE
UNIVERSITY OF PENNSYLVANIA

DEATHS AND MEMORIALS

DR. DAVID LINN EDSALL, dean emeritus of the Harvard Medical School and of the Harvard School of Public Health, died on August 12 at the age of seventy years.

DR. HUGH CABOT, of the Mayo Clinic at Rochester, Minn., from 1930 to 1939 professor of surgery in the Graduate School of the University of Minnesota, died on August 14 at the age of seventy-three years.

DR. WILLIAM CRAMER, pathologist of the Barnard Free Skin and Cancer Hospital in St. Louis, died on August 10 at the age of sixty-seven years.

DR. ROBERT H. GODDARD, chief of Navy research on jet-propelled planes, died on August 10 at the age of sixty-two years. Dr. Goddard was formerly professor of physics and director of the laboratories of physics at Clark University.

DR. JOHN J. B. MORGAN, professor of psychology at Northwestern University, died on August 16 at the age of fifty-six years.

RICHARD BLAIR EARLE, known for his work in the development of synthetic rubber, died on August 13 at the age of sixty-nine years.

THE death is announced at the age of eighty-six years of Alexei Favorsky, of Leningrad, the organic chemist, well known for researches in the production of synthetic rubber.

THE Rochester, New York, Section of the American Chemical Society announces the inauguration during the coming year of an annual lecture to be established as a memorial to the late Dr. Harrison E. Howe to be known as the Harrison Howe Lectures. Dr. Howe was active in founding the Rochester Section and was one of its charter members. From 1921 until his death in 1942 editor of *Industrial and Engineering Chemistry,* he was nationally known as a lecturer. The lectureship is designed to provide discussion of topics of current importance in chemistry by outstanding authorities in the field. They will be presented each year before the Rochester Section as a part of its program. Provision is made for some variation in the form of the lectureship from year to year, the annual plans and selection of the speaker being entrusted to a lecture committee appointed each year. Instead of a single lecture, a series of two or three lectures on consecutive days may be decided upon if the subject is of special importance. An alternative form may be a symposium on a timely topic to permit presentation of papers by several speakers.

SCIENTIFIC EVENTS

THE BRITISH IRON AND STEEL RESEARCH ASSOCIATION

THE plan of the British steel industry of spending £120,000,000 on re-equipment will be backed by the expenditure of £400,000 a year on a new central research association.

This organization, according to a report in *The Times,* London, will receive up to £250,000 a year from the industry and its total revenue will be in the neighborhood of £400,000 a year. Dr. C. F. Goodeve, F.R.S., at present assistant controller for research and development of the Admiralty, has been made director. It will be known as the British Iron and Steel Research Association. To some extent, cooperative research has already been fostered by the work of the Research Council of the British Iron and Steel Federation, while the technical research workers in the industry have maintained mutual contact individually through the Iron and Steel Institute. The present plan, however, is to extend the field of cooperative research and exchange of information and also to encourage central research on matters of common interest.

Dr. Goodeve, before the war, was reader in physical chemistry at University College, London, and was for many years consultant and technical adviser to a number of industrial companies. At the Admiralty, as senior executive covering research and development for the Navy, he took a leading part both as scientist and as organizer of the work of other scientists in the technical discoveries which played a leading part in defeating magnetic mines, U-boats and other lesser but equally difficult weapons.

According to the present plan, research centers of the industry will work in connection with those of the universities. Teams are already working in Sheffield, Cambridge, Swansea, Glasgow, London, Birmingham and Newcastle. Full-scale development work will take place in or alongside works of member firms. The headquarters of the Research Association will be in London. The association will, on behalf of the industry, work with technical bodies studying raw materials, such as coal and refractories and design of plant used in making iron and steel. It will also bring together for common study of problems the users, such as the railways, shipbuilders and construction engineers, and the makers of iron and steel.

A PERMANENT STANDARDS ORGANIZATION

THE Executive Committee of the United Nations Standards Coordinating Committee, after an extensive survey of present conditions in the field of international standards and the rapidly changing events on the international scene, has come to the conclusion that the time is now ripe for setting up a permanent standards organization. The Executive Committee consists of the British Standards Institution, the Canadian Standards Association and the American Standards Association.

Invitations to attend the meeting have been sent out to the national standardizing bodies comprising the United Nations Standards Coordinating Committee. These are:

The Standards Association of Australia, Associacao Brasileira de Normas Tecnicas, The Canadian Standards