Eric A. Walker

1910-1995

By Charles L. Hosler

Eric A. Walker, electrical engineer, educator, patriot, former president of the Pennsylvania State University, and founding member of the National Academy of Engineering, died on February 17, 1995, at the age of eighty-four.

As an engineer and researcher, Dr. Walker earned distinction for his work in undersea acoustics and weaponry during and shortly after World War II, and in commercial power transmission and insulation, an area in which he held several patents for high-voltage devices.

As an educator, he served on the engineering faculty at three universities and, as a longtime force in the American Society of Engineering Education (ASEE), he had an important impact on shaping American technical training over a period of more than four decades.

As president of Penn State (1956 to 1970), he led that institution to become an internationally recognized academic center for scientific and engineering research. Its admission in 1958 to the Association of American Universities reflected his dynamic, visionary leadership. He provided the same caliber of leadership as a member (1958 to 1962) of the executive committee of the American Association of Land Grant Colleges and State Universities.
The life of Eric Arthur Walker was that of a self-made man. He was born in humble circumstances on April 29, 1910, in Long Eaton, England. His family sent him to Canada at age eleven and then to Wrightsville, Pennsylvania, where he settled with an aunt in 1923. He attended Harvard University, supported by an academic scholarship and many part-time jobs. He earned a bachelor’s degree in electrical engineering in 1932 and continued at Harvard for graduate work, receiving a master of science degree in business administration in 1933. By the time he received his doctorate in general science and engineering in 1935, he had been teaching mathematics at Tufts University for two years. Tufts named him head of its Department of Electrical Engineering in 1938, and in 1940 he accepted a similar headship at the University of Connecticut, Storrs.

In 1942 Dr. Walker was appointed associate director of Harvard's Underwater Sound Laboratory, where he helped to develop the acoustic homing torpedo for the U.S. Navy, an achievement for which he won a presidential certificate of merit. When Harvard closed the laboratory in 1945, Dr. Walker supervised the transfer of a portion of its Navy-supported work to Penn State, where it was re-created as the Ordnance Research Laboratory. Investigations there continued in such fields as cavitation and underwater shapes for torpedoes, submarine hulls, and guided missiles.

Dr. Walker was also named head of Penn State's Department of Electrical Engineering. In 1950 he took a leave of absence to serve as executive secretary of the Research and Development Board in the Defense Department. In 1951, however, he returned to Penn State as dean of the College of Engineering and Architecture. Two years later, he introduced the nation's first associate in engineering degree program. It came in response to the demand for skilled practitioners in fast-growing technologies and served as a model for similar programs at other colleges and universities nationwide. At the other end of the academic spectrum, he inaugurated one of the nation's first baccalaureate programs in engineering science. It gave students of exceptional abilities the opportunity
to participate in a more rigorous curriculum designed to prepare them for research, development, and other creative aspects of engineering. Finally, as dean, he oversaw the construction of a nuclear reactor to study the peaceful applications of atomic energy. In 1956 Penn State thus became the first university to operate a reactor under license from the Atomic Energy Commission.

That same year Dr. Walker was named Penn State's first vice-president for research. Within weeks, however, Milton Eisenhower, president of the university, suddenly resigned so that he could spend more time as adviser to his brother, President Dwight Eisenhower. Milton and Eric were close friends, and Milton persuaded the university's board of trustees to name Dr. Walker as his successor.

The next fourteen years witnessed significant advances in Penn State's influence and reputation as one of the nation's front-rank public universities. Dr. Walker listed his four greatest accomplishments as expanding the university's physical plant (which tripled in value) through nonpartisan support of Pennsylvania's governors and legislators; the creation of a College of Medicine and teaching hospital with a $50 million gift from the charitable trusts created by chocolate magnate Milton S. Hershey; recruitment of an internationally distinguished faculty; and the establishment of a series of seventeen "Commonwealth Campuses" that enabled many Pennsylvanians to receive the first two years of a Penn State education while living at home. The Commonwealth Campuses fulfilled much the same role as community colleges and were controversial in some political quarters of the state. But Dr. Walker rightly pointed out that the campuses enabled students to keep costs down and filled a void in Pennsylvania, which was slow to enter the community college arena. By 1970 nearly half of all Penn State freshman began their college careers at a Commonwealth Campus. The university's total enrollment at that time was 40,000, three times the number of 1956.

Leading Penn State during the period of student unrest in the 1960s, Dr. Walker in typical wry fashion commented that
he found himself in the ironic position of counseling moderation for student activities, while in the 1950s he had counseled activism for that generation of "apathetic" students.

While serving as dean of engineering and as university president, Dr. Walker continued to provide national leadership for engineering education. In addition to serving on many committees of the ASEE, he chaired the Engineering College Research Council (1952 to 1954), was vice-president (1952 to 1954), and president (1961 to 1962) of the ASEE, and chaired the society's task force on Goals of Engineering Education (1963 to 1968). He also chaired the National Science Board (1964 to 1966), was president of the Engineers Joint Council (1962 to 1963), and headed the Department of Defense's Naval Research Advisory Committee (1963 to 1965). He was a member of a special panel (1961 to 1963) of President John F. Kennedy's science advisory committee that provided the blueprint for federal support of technical manpower training programs well into the 1980s.

Serving in these prominent leadership posts convinced Dr. Walker that engineers needed a voice in national policy alongside that of their scientist brethren if the nation were to establish effective, comprehensive policies in such matters as weapons systems and space technologies. To that end, in 1964 he helped to found and became vice-president of the National Academy of Engineering (NAE). He became president of the Academy in 1966, serving in that position for four years, and served on seven NAE committees. He also worked as a consultant over a span of three decades to various units of the Department of Defense and was a long-term member of the National Research Council’s Division of Physical Sciences Committee on Undersea Warfare.

After retiring from Penn State as president emeritus in 1970, Dr. Walker became vice-president for science and technology at the Aluminum Company of America (ALCOA). Private industry was not unfamiliar territory for him. He had worked as a consultant to such firms as Colts Fire Arms Company and the Koppers Company and served on the board of directors of a half-dozen industrial and commercial firms. He retired from ALCOA in 1975 but remained a force in engineering
education, chairing the National Science Foundation's Committee on Centers of Engineering Excellence, and consulting in industry and higher education.

He authored or coauthored more than 300 publications and in 1989 published an autobiography, *Now It's My Turn: Engineering My Way*. The ASEE honored him with its Benjamin Garver Lamme Award in 1965. The National Science Foundation, through the U.S. Geological Survey, named a glacial ridge for him in Antarctica, and he received a multitude of other honors from groups as diverse as the Royal Society of the Arts, the American Society of Military Engineers, the Institute of Radio Engineers, and the American Academy of Arts and Sciences. In 1970 President Richard Nixon awarded him a White House Citation in recognition of his many career achievements, and the Department of Defense presented him with its Distinguished Public Service Medal. He received honorary degrees from the University of Pennsylvania, Hofstra University, the University of Notre Dame, and nearly a dozen other institutions. But of all his honors, Dr. Walker was especially proud of the Horatio Alger Award, accorded him by the American Schools and Colleges Association in 1959 for "enhancing the American tradition of overcoming obstacles to achieve success through diligence, industry, and perseverance."