

## Obituaries

### Robert Richter

Robert Richter, managing partner of Arnold & Richter KG, died June 18, 1972, in Munich, Germany, at the age of 73.

The firm of Arnold & Richter was founded in 1917 by Robert Richter and his schoolmate, August Arnold. The lifelong friendship of the two had begun in 1913 when they were students at the Altes Realgymnasium in Munich. After school they repaired bicycles and did electrical installation work for a local electrical firm. In 1915, the two friends became interested in filmmaking through their acquaintance with Martin Kopp, a cameraman for Messter Newsreels.

In 1916, Richter and Arnold designed and built a film printing machine for which they used the sprockets and various drive parts of an old film projector acquired in the Auer Dult, the Munich market for secondhand goods. The machine is now in the Deutsches Museum in Munich. In 1917, they set up a small shop, which still stands, in Munich's Türkenstrasse. The shop was named ARRI from the first two letters of each name, and the extensive plant of Arnold & Richter is still located on the Türkenstrasse. In April of the



year the firm was founded, the partners were "called to the colors." The next year the firm was formally registered with the consent of the parents of the owners, who were still minors.

In 1925, Robert Richter came to the United States where motion-picture technology was advancing at a faster pace than in his native Germany. Supporting himself by working as a waiter, machinist and locksmith, he made his way to Hollywood where he worked in many areas of

film production, including cameraman for Universal Films. He returned to Germany to complete his formal education and was graduated from the Munich Technological University as Dipl. Ing. (Graduated Engineer) and as a Doctor of Political Economy.

In 1936, Arnold & Richter introduced the Arriflex 35, a revolutionary camera based on their invention of a rotating mirror shutter, a device now used in many professional motion-picture cameras.

Dr. Richter received many tangible expressions of appreciation during his life. Among the honors presented to him are the Grand Cross First Class of the Order of Merit of the Federal Republic of Germany, the Bavarian Order of Merit, the Oskar Messter Memorial Medal, the Diesel Medal and the Laterna Magica Medal. In 1967, an Academy Award was presented to Dr. Richter for the Arriflex Camera. Coincidentally, 1967 marked the 50th anniversary of the founding of Arnold & Richter and Dr. Richter flew from Munich to accept the Academy Award as well as to attend anniversary receptions in New York and Hollywood.

Dr. Richter joined the Society in 1956 and was made a Fellow in 1968.

### Ira F. Jacobsen

Ira F. Jacobsen died May 14, 1972, at the age of 63. He was Sound and Projection Supervisor for ABC-Great States, Inc. (formerly Balaban & Katz Corp.). At the time of his death he was serving as President of Chicago Moving Picture Machine Operators Union, Local 110, a post he had held since 1965.

Following Mr. Jacobsen's graduation in 1929 from the Armour Institute (now Illinois Institute of Technology) with a degree in Engineering, he joined the projection department of the Balaban & Katz circuit and was assigned to lighting the Paul Ash stage shows at Chicago's Oriental Theatre. Shortly thereafter the screen found its voice and with the advent of sound he teamed up with the circuit's chief projectionist, Robert Burns. (Mr. Burns died early in the 1950s.)

Together, the two men made notable technical contributions during the 1930s with innovative installations of sound



equipment and large screens for Cinema-Scope projection.

At the outbreak of World War II, Mr.

Jacobsen enlisted in the U.S. Navy and was assigned as Executive officer to Commander William Eddy who had transformed Balaban & Katz's experimental television station, WBKB (now WLS-TV Channel 7), into a radar school for the Navy. Later, Mr. Jacobsen went to sea on a small aircraft carrier, the USS Hoggett Bay and saw action in the South Pacific. He was in Tokyo at the time of the formal surrender ceremonies.

After the armistice, he returned to Balaban & Katz and rejoined Mr. Burns in the Sound and Projection Dept. They gained national attention for their work as a team, especially in the development of instant-replay techniques for closed-circuit theater telecasts. Mr. Jacobsen was frequently sought as a consultant by outdoor theater operators.

Mr. Jacobsen joined the Society in 1936. His many services to the Society will be long remembered, in particular the active help he contributed to the Society's Conferences.

## Edward C. Wente

Edward C. Wente died June 9, 1972, in New Providence, N.J., at the age of 82.

He was graduated from the University of Michigan in 1911 with the B.A. degree. In 1914 he received the B.S. degree in Electrical Engineering from the Massachusetts Institute of Technology and in 1918 he received the Ph.D. degree from Yale. In 1914 he joined the Research Div. of the Engineering Dept. of Western Electric Co., the predecessor of Bell Telephone Laboratories, and he remained with Bell Telephone Laboratories until his retirement in 1954.

His death ended a career in acoustics and sound recording equalled by few in these fields. His fundamental work in the design of microphones, loudspeakers and the light valve contributed vitally to the rapid growth of sound pictures in the 1920s and 1930s. His many contributions to the practical working out of binaural and stereophonic sound systems made possible the first demonstrations of high-quality stereophonic sound.

One of Dr. Wente's first and most important inventions was the condenser microphone. This radical departure from the previously used carbon microphones made possible a considerable improvement in the quality of recorded sound. The microphone was widely used in early sound motion-picture studios. He received the John Price Wetherill Medal from the Franklin Institute for this development.

In the 1920s, Dr. Wente became actively engaged in the development of the light



valve and its use in recording sound on photographic film by the variable-density method. A large proportion of the sound motion pictures made in the 20 years following the *Jazz Singer* used this equipment and method. Another of his inventions, the 555 moving coil horn driver, was used with exponential horns in thousands of motion-picture theaters.

By 1931 he had developed a moving coil microphone which was the forerunner of most microphones used today. Later work included recording on steel tape and acoustic design of the anechoic chamber and auditorium at Murray Hill. During World War II he worked on acoustic gunlocating equipment and he designed an extremely efficient siren for air-raid use.

During his years with Bell Telephone Laboratories he was granted 36 patents.

He was the author of many scientific papers, a number of which were published by the Society, among them, "General Principles of Sound Recording" (Sept. 1928); "Modern Instruments for Acoustical Studies" (Nov. 1935); "Principles of Measurement of Room Acoustics" (Feb. 1936); "Contributions of Telephone Research to Sound Pictures" (Aug. 1936); (with R. Biddulph) "Light Valve for the Stereophonic Sound Film System"; and (with A. H. Müller) "Internally Damped Rollers" (these three papers appeared in the October 1941 *Journal*).

Dr. Wente became a member of the Society in 1930 and shortly thereafter was made a Fellow. In 1935 he was awarded the first SMPE Progress Medal for his work in sound recording and reproduction. Other honors included the gold plaque of the Academy of Motion Picture Arts and Sciences, the John Potts Memorial Medal of the Audio Engineering Society, the Modern Pioneer Award of the National Assn. of Manufacturers and the Gold Medal of the Acoustical Society of America.

Dr. Wente is probably best remembered by his associates as having a quiet, retiring personality, but as being always cheerful. His perennial quizzical smile invited cooperation and he was particularly capable in directing the work of a team of his co-workers. Although modest at all times, his logical and coherent methods demanded the respect of all who knew him.

—Clyde R. Keith

## Kenneth R. Coleman

Kenneth R. Coleman died June 17, 1972, after a long illness. He had an international reputation in optics and high-speed photography. For a number of years he was Superintendent of Optics at the United Kingdom Atomic Energy Authority, Atomic Weapons Research Establishment, Aldermaston, Berks, England.

He was a man of many parts, achieving much in a short life. He attended the University of Birmingham from 1943 until 1947 when he was graduated with the degree of Master of Science before he was 21 years old. He spent seven years with Taylor, Taylor and Hobson Ltd., during which time his name appeared on some 30 patents. At Aldermaston, he and his group have led in various projects in such phases of applied optics as ultra-high-speed cameras, image tubes, fiber optics and laser and holographic applications.



He presented papers at the Fourth and Fifth International Congresses on High-Speed Photography. Two papers, "The Photography of High Temperature

Events" and "Some Problems in the Design of Lenses for High-Speed Photography," appeared in the *Proceedings of the Fourth International Congress on High-Speed Photography*. A paper (with A. Skinner) presented at the Fifth International Congress, "Applications of the Type C5 Rotating Mirror Framing Camera," appeared in the July 1961 issue of the *Journal*.

He joined the Society in 1959. Other organizations of which he was a member included the Optical Society of America and the Institute of Physics, of which he was a Fellow. He served on three official research committees and he had been Chairman of the British National Committee for High-Speed Photography and of the Optics Committee of BSIRA.

He had humor and compassion and he had a strong sense of social service and personal involvement in local government and welfare work.—George H. Lunn