

Alumni News

Richard W. Shoemaker (1881-1965)

Richard W. Shoemaker '03, died on October 19, in Grass Valley, California, where he had been retired since 1953. One of the oldest living Caltech alumni, he made significant contributions to the field of engineering during his lifetime. His family has established an R. W. Shoemaker Memorial Fund to be given to the California Institute of Technology.

When Richard Shoemaker was still a student at Caltech — then called Throop College — he sent the first wireless message to Catalina Island. Carrier pigeons flew messages the 28 miles from the mainland for the island's newspapers at that time. After graduation Shoemaker went with the Federal Lead Mines in Missouri, where he installed an electrical method of hauling out ore, this time replacing donkeys being used for the job.

Back in California, in 1914, with the Bowie Switch Company, he put in the country's first trackless trolley in Laurel Canyon near Hollywood. In 1917 he enlisted in the U.S. Navy and became the officer in charge of the building

of the first battleship, *Guinn*, in Seattle. After the war he went to Shanghai and Hong Kong to study electrical opportunities there, and to Manchuria to negotiate for the electrical railways in Harbin.

On his return to California, Shoemaker entered the hydroelectric field and was consulted regarding the power potential of Hoover Dam. He designed the drop for the All-American Canal in Imperial Valley and the power house at the Don Pedro Dam on the Tuolumne River near Turlock. He had more than 20 patents in his name. The most widely used is his bus bar, found in the Hoover and Grand Coulee dams.

In 1928 Shoemaker went to Brazil to centralize the electric companies in the state of Sao Paulo. Upon his return in 1934, he was engaged as a consulting engineer for the Chase Brass & Copper Company and the Kennebec Wire and Cable Company in Connecticut, and became an authority on radiant heating. His book on the subject was printed in French and Spanish.

Returning to California in 1946, Shoemaker was appointed consulting engineer for the Oakdale Irrigation District's Tri-Dam Project on the San Joaquin River and, in 1950, for the Nevada Irrigation District.

He was a fellow of the Institute of Electronics and Electrical Engineers and a member of the American Society of Mechanical Engineers and the American Society of Heating and Ventilating Engineers. In 1962 he was chosen by the Engineering Council of Sacramento Valley as the engineer who had contributed most to the growth and development of the electrical power industry and the engineering profession.

Shoemaker was a member of the Caltech Alumni Association and, in 1953, was honored by the Institute on the golden anniversary of his graduation from Throop College.

He is survived by his wife and a son, Richard, of Washington, D.C.

Freshman Event

A "Gentlemen's Tea" for freshmen entering Caltech this fall from the New York City area was held by the Caltech Alumni Association's New York chapter in September. Nineteen guests, including Caltech sophomores, juniors, and seniors from the Metropolitan area, were entertained at New York's Columbia University Club. Victor Wouk, MS '40, PhD '42, was unofficial host, and Bruno Pilorz '44, president of the alumni chapter, presided at a question-and-answer session. Harry J. Moore, Jr., '48, was in charge of arrangements.

The New York Chapter hopes the tea will become an annual event.

—Victor Wouk

Books . . . continued

Foundations of Solid Mechanics

by Y. C. Fung, MS '43, PhD '48

Prentice-Hall Inc. \$13.50

Y. C. Fung, professor of aeronautics at Caltech, intends this book to bridge the gap between elementary textbooks and more advanced literature; it is the only one available covering the entire field of solid mechanics. The book belongs in the Prentice-Hall International Series in Dynamics, of which Dr. Fung is also editor.

Ideas in Modern Biology

edited by John A. Moore

The Natural History Press \$8.00

Based on papers delivered at the XVI International Congress of Zoology, this book examines most of the major ideas in modern animal biology. Contributions include "The Duplication and Recombination of Genes," by Matthew S. Meselson, PhD '57, associate professor of biology at Harvard University.

The Architecture of Molecules

by Linus Pauling and Roger Hayward

W. H. Freeman and Co. \$10.00


This elegant book has a text by Dr. Pauling and 57 plates in full color by Roger Hayward, the scientific illustrator who also illustrated Pauling's widely used *General Chemistry* and *College Chemistry*. It is planned especially for young people who are just beginning to develop an interest in science. The discussions treat the subject of how atoms are arranged and interconnected in molecules and crystals, and the way in which the geometry of this organization accounts for some of the properties of substances.

Space Propulsion

by Donald L. Turcotte, '54, PhD '58

Blaisdell Publishing Co. \$2.50

Donald Turcotte, associate professor of aerospace engineering at Cornell University, wrote this for an introductory course in astronautics. It is not intended to show how to design a particular space vehicle or propulsion system, but to show how the fundamental physical and chemical laws place limitations on vehicle performance and influence the selection of propulsion systems for specific mission requirements. Topics include: requirements for a space propulsion system, chemical propulsion systems, nuclear propulsion systems, electrical propulsion devices combined with a nuclear reactor, and photon propulsion and solar sailing.



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