

Harold C. Perkins

October 29, 1891 — October 24, 1986

Harold C. Perkins was born on October 29, 1891, in Forest Home, New York. He entered Cornell and graduated with a mechanical engineering degree in 1915, and after gaining practical experience as an apprentice engineer at the Remington Arms Company, he returned to Cornell in 1916 as an instructor in mechanics. Apart from a year at the University of Wisconsin—also as instructor in mechanics—his whole career was spent at his alma mater, from which he retired in 1959 as professor in the Department of Engineering Mechanics and Materials. He died on October 24, 1986, in Syracuse, New York, where he had made his home since 1975.

The above are the bare facts, and they shed little light on Harold's very real and varied accomplishments. First and foremost he was a dedicated teacher with a real enthusiasm for imparting a love of his subject to his students. The undergraduates passing through his classes in mechanics will never forget his passion for the drawing of the all-important "free-body" diagrams. So great was his enthusiasm for this subject that the students quickly gave Harold the affectionate name of "Free-Body Perkins," a title that he wore with justly deserved pride.

Despite the heavy undergraduate teaching loads that were typical in his day, he nevertheless found time for research. In 1947 it was decided to reactivate Cornell's laboratory of photoelasticity, an important tool in the experimental study of stress analysis. Perkins not only completely reorganized the laboratory but he was the first researcher to extend photoelastic measurements from the static into the dynamic range. The results of that considerable and important achievement were published in 1953 in the *Journal of Applied Mechanics* of the American Society of Mechanical Engineers. Firmly believing that the simplest possible experiments were frequently the best, Harold found that the liquid that best supported his dynamic loading specimens was a well-known brand of hair-setting lotion!

But that was by no means Perkins's only foray into original research. Other studies in which he extended the knowledge of the subject were in investigations of helical springs, high-velocity impact, welding design, and the calculation of the distribution of loads on the threads of screws. A particularly interesting investigation culminated in a graphical analysis for solving problems of torsion, which he published in the *Proceedings of the Fifth International Congress of Applied Mechanics*, which cover the meeting held in Cambridge, Massachusetts, in 1938. The above work was stamped with the characteristic simplicity and originality that marked all Perkins's researches.

Harold Perkins was a kindly, modest man with a dry sense of humor that enlivened his classes and his conversations with his colleagues and friends. He was completely enamored of his field of study and of the teaching of it and remained so until his retirement in 1959. The older members of the faculty will remember with nostalgia the picnics that Harold and his wife frequently gave for the members of the Department of Engineering Mechanics and Materials at their cottage on Cayuga Lake off Taughannock Boulevard. Colleagues, wives, children, students, and friends were all invited and made to feel that they were at home and that they were members of the same family.

Professor Perkins is survived by a daughter, Martha Melfi of Syracuse; fifteen grandchildren; and twelve great-grandchildren. He enriched the lives of his friends and students and will be remembered with affection by all who knew him.

Arthur L. Ruoff, Yih-Hsing Pao, Harry Conway