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Edward Leamington Nichols

EDWARD LEAMINGTON NICHOLS was born in Leamington, England, on September 14, 1854, of American parents. After his graduation at Cornell in 1875 he studied at the universities of Leipzig, Berlin and Göttingen, and from the latter university received the degree of doctor of philosophy in 1879. During the year 1879–80 he held a fellowship in the Johns Hopkins University and in the following year was one of the assistants of Edison in the famous Menlo Park Laboratory. His first teaching position was that of professor of physics and chemistry in Central University, Kentucky, where he remained for two years. In 1883 he went to the University of Kansas as professor of physics and astronomy. In 1887 he returned to Cornell, where he remained as head of the department of physics until his retirement from teaching in 1919. He died in West Palm Beach, Florida, on November 10, 1937.

Nichols' activity as an investigator began while he was still a student and extended to within only a few years of his death. Neither lack of facilities nor pressure of other duties could lessen his interest or greatly reduce his activity. A firm believer in the value of scientific research to humanity, he contributed through his experimental work to almost every branch of the physics of his day. His chief interest, however, was in problems connected with light. In the early years his work in the fields of physiological optics and of illumination was of especial importance. During the last thirty years he devoted

himself to the experimental study of the luminescence of solids and liquids. In recognition of his work in these fields, in each of which he was a pioneer, he was awarded the Elliot Cresson Medal of the Franklin Institute, the Ives Medal of the Optical Society, and the Rumford Medal of the American Academy and was made an honorary member of the Illuminating Engineering Society and of the Optical Society of America. In the case of the former society Nichols and Edison were for many years the only recipients of this honor.

Nichols' work as an investigator represents only one part of his service to American physics. In many other ways his stimulating influence has been important and far-reaching. Readers of this journal will think first of the influence he has exerted through the establishment of the *Physical Review*. It was Nichols who founded the Review in 1893 and it was he who served as its editor-in-chief during the difficult early years.

Previous to 1893 there was no journal in this country devoted exclusively—or even primarily—to physics and the need of more adequate provision for publication had been keenly felt. It was obvious that at that time a journal of physics could not be self-supporting; and the number of active physicists fifty years ago was too small to make any cooperative plan of publication practicable. Having convinced himself that the physicists of the country would welcome the establishment of a journal, and with the encouragement and understanding support

of the president of the university, Jacob Gould Schurman, Nichols made an appeal to the trustees of Cornell University for financial aid. This was granted and the first number of the *Physical Review* was published in July, 1893.

Nichols remained editor-in-chief for twenty years and during this period the growth of the *Review*, both in circulation and in size, was rapid and continuous. Even before the organization of the Physical Society the material to be published increased more rapidly than the income and it was not until 1910 that the journal became self-supporting. In 1913, after a balanced budget had been maintained for two years and when the American Physical Society, with six hundred members, had become strong enough to ensure its continued support, Nichols retired from his duties as editor and the *Review* was transferred to the Society.

To estimate the importance of Nichols' service to American physics we must recall the conditions in this country at the time he began his scientific career in 1880. There was no general interest in physics, or in science generally, and very little appreciation of the importance of scientific work. Very few universities were equipped for anything more than undergraduate instruction in the sciences; and in the minds of many there existed a feeling that scientific investigation was hardly a proper function of the college teacher. Not only was there no journal of physics for the publication of results but except for the annual meeting of the American Association for the Advancement of Science there was no opportunity for physicists to get together for discussion. Even when conditions otherwise were favorable it was

almost impossible to obtain financial support for scientific work.

Nichols was one of the small group of enthusiastic physicists who went ahead in spite of these conditions; and no member of this group was more active or more successful than he in stimulating research activity in physics and in developing a more general appreciation of its importance. At every gathering of physicists Nichols was present and contributed not only the results of his experimental work but the inspiration of his own enthusiasm. Through his students his influence was carried far and wide. Shortly before the time of his retirement the heads of the departments of physics in thirty-five colleges in this country and in Canada, fifteen of them state universities, were men who had received their physics training from him—and with it his firm belief in the value of scientific research and some measure of his enthusiasm. He was one of the small group that organized the American Physical Society in 1899 and later one of the society's most active members. As president of the Physical Society, of Sigma Xi, and of the American Association for the Advancement of Science he kept continually before the public the importance of scientific work and in this way also helped to prepare the way for the remarkable progress of recent years. American physicists can give no better testimony of their indebtedness to him than by striving to increase still further the usefulness of the journal which he founded and by keeping alive the enthusiasm and the high scientific ideals which were so characteristic of his life and work.

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