

The obverse shows the head of Archimedes facing right. As there are no authentic portraits of this perhaps greatest of all mathematicians, recourse was had to the fine collection of over thirty pictures collected by Professor David Eugene Smith, and placed by him in Columbia University. They show the ideas of as many artists, ancient and modern, of what his appearance may have been.

#### AWARD OF THE EDISON MEDAL TO PROFESSOR ARTHUR E. KENNELLY

THE Edison Medal for 1933 has been awarded by the American Institute of Electrical Engineers to Dr. Arthur E. Kennelly, "for meritorious achievements in electrical science, electrical engineering and the electrical arts as exemplified by his contributions to the theory of electrical transmission and to the development of international electrical standards."

The Edison Medal was founded by associates and friends of Thomas A. Edison, and is awarded annually for "meritorious achievement in electrical science, electrical engineering or the electrical arts" by a committee consisting of twenty-four members of the American Institute of Electrical Engineers.

The following eminent engineers and scientific men have been recipients of the medal: Elihu Thomson, Frank J. Sprague, George Westinghouse, William Stanley, Charles F. Brush, Alexander Graham Bell, Nikola Tesla, John J. Carty, Benjamin G. Lamme, W. L. R. Emmet, Michael I. Pupin, Cummings C. Chesney, Robert A. Millikan, John W. Lieb, John White Howell, Harris J. Ryan, William D. Coolidge, Frank B. Jewett, Charles F. Scott, Frank Conrad, Edwin W. Rice, Jr., and Bancroft Gherardi.

Arthur Edwin Kennelly was born near Bombay, India, December 17, 1861. Coming to the United States in 1887, he was engaged as principal electrical assistant to Thomas A. Edison until 1894, when he became associated with Edwin J. Houston in the firm of Houston and Kennelly, consulting electrical engineers.

He was appointed professor of electrical engineering at Harvard University in 1902 and continued in that position until the close of the academic year 1929-30, when he retired from active service. In addition to his work at Harvard, he served as professor of electrical engineering at the Massachusetts Institute of Technology from 1913 to 1924 and was for some years director of electrical engineering research there, as well as chairman of the faculty. During the year 1921-22, he represented seven cooperating American universities as first exchange professor in engineering and applied science at several French universities.

Dr. Kennelly has published about twenty-eight books, of which he is sole author of ten, including: "Theoretical Elements of Electro-Dynamic Ma-

chinery," "Wireless Telegraphy," "Electrical Vibration Instruments," "Electrical Lines and Nets" and several on hyperbolic and other complex functions. He is the author of more than 350 papers, many of which were presented before leading technical and scientific organizations in the United States and abroad, and have been widely distributed in technical publications.

One of his chief contributions to applied science is a paper on "Impedance" presented in 1893 before the American Institute of Electrical Engineers, containing the first use of complex numbers as applied to Ohm's Law in alternating-current engineering. He has also presented numerous other papers on the same general subject, many of which contain the first applications of complex hyperbolic angles to the problems of power and communication engineering and to artificial networks. Dr. Kennelly, in 1902, expounded a theory on the influence of a conducting layer in the atmosphere on long-distance radio transmission, which has since been verified experimentally and has resulted in the naming of the so-called ionized layer of reflection the Kennelly-Heaviside layer.

#### ENGINEERING AT THE BOSTON MEETING

THE program of Section M at the December meeting of the association will be of unusual interest and particularly appropriate in view of the current of national affairs at the present time and the attention which is being focussed on the farm problem. The first of the two most important features of the program is an evening lecture on Friday, December 29, by the Honorable Henry A. Wallace, Secretary of Agriculture, on "What Can Engineers Do for Agriculture?" On the following morning there will be a symposium on the general subject for which Secretary Wallace's address on the previous evening will serve as an introduction. Dr. Charles F. Kettering, chairman of Section M, will preside at this symposium, which will be a joint session of Sections M, K and O. It will be opened by the address of Professor D. C. Jackson as retiring chairman of Section M.

Because of the prominent part which the agricultural problem is occupying in the Administration's Recovery Program, it is particularly appropriate at this time to consider the engineer's part in the farm problem. A discussion of the ideas which are put forth at this symposium should result in an increasing recognition on the part of engineers of their responsibility in connection with our national problems generally and our agricultural problem in particular. The arousing of interest and active consideration of such a problem should tend to bring about a greater sympathy and understanding between the engineer and the farmer.