M. I. Pupin

(A'90, F'15, member for life)

President 1925–26
Honorary Member 1928
Edison Medalist 1920
John Fritz Medalist 1932

THE career of Michael Idvorsky Pupin is one of the most unusual in the history of science, and it is indeed fortunate that because of his unusual ability as a writer, the story of this career has become known to thousands through his autobiography, "From Immigrant to Inventor."

Doctor Pupin was born at Idvor, Banat, Hungary, October 4, 1858. Displaying unusual talent at an early age, he was sent to Prague, Czecho-Slovakia, to prepare for higher education, but being attracted by America, ran away from Prague and came to New York in 1874. After having struggled to save sufficient funds, he entered Columbia College, graduating in 1883 with the degree of B.A. He afterward studied physics and mathematics at the University of Cambridge, England, and the University of Berlin, Germany, obtaining from the latter his Ph.D. in 1889.

Returning to America in the latter year, he became instructor of mathematical physics at Columbia University. In 1892, he became adjunct professor of mechanics, and in 1901 was appointed professor of electromechanics. He was appointed director of the Phoenix Research Laboratory of Columbia University in 1903, and retained this position as well as his professorship until 1929, when he retired from active service with the title of professor emeritus in active residence. Doctor Pupin now holds this latter position.

Doctor Pupin is widely known for his important inventions; his significant contributions to knowledge in a-c theory, the passage of electricity through gases, long distance communication, and many other scientific subjects; and his many publications.

Many of Doctor Pupin's inventions have proved to be commercially successful. Following several years' study, a patent for electrical tuning circuits was granted him, and sold to the Marconi Company in 1902. He was the first to produce an X-ray photograph in this country as a guide to surgical operations, and at that time, in 1896, he also invented a method of rapid X-ray photography. He also made the important discovery of secondary X-ray radiation.

One of his most outstanding contributions was the mathematical solution of electrical transmission over telephone wires with induction coils periodically recurring at specific points; this led to the construction of the so-called loaded telephone conductor now used for long-distance telephone communication. He made fundamental contributions in the rectification of waves.

His ability as a teacher is widely recognized, and many men who later became prominent were among his pupils.

In 1892–95, Doctor Pupin was a manager of the Institute, and a vice-president 1895–97, and 1901–03, and later president. He has served on many of its committees. He is a past-president of the Institute of Radio Engineers, past-chairman of The Engineering Foundation, and a member of many other societies. He has received the medal of honor of the Institute of Radio Engineers, 1924; Cresson Medal of the Franklin Institute, 1902; Prix Herbert, French Academy, 1916; Social Science Medal, 1920; Washington Award, 1928; as well as the John Fritz medal 1932, and the Institute's Edison medal, 1920. He has received some 18 honorary degrees.