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Frank Julian Sprague. ✓

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Frank Julian Sprague, born at Milford, Conn., July 25, 1857. Won competitive appointment from Western Massachusetts district to U. S. Naval Academy, graduating with honors in 1878 and leading both line and engineering corps in naval architecture. On tour around the world as midshipman on the flagship Richmond of the Asiatic Squadron, was in Japan at time of General Grant's visit, and also acted as correspondent for the Boston Herald. Early developed strong inventive tendencies, and on return in 1880 attempted to introduce the electric light into the Navy. Was ordered to the Crystal Palace Exposition of 1881-2, becoming a member of the Jury of Awards, and made a complete report to the Bureau of Intelligence.

To take up electrical work, he resigned from the service in 1883, with a year's leave, during which he was an assistant to Mr. Edison in the early electric light development, and devised a mathematical system for determining the characteristics of central station distribution. Separating from Mr. Edison, because of his own developments in electric motors, he founded in 1884 the Sprague Electric Railway Motor Company, and actively began the application of electric motors to all kinds of stationary work, equipping the first electrically trained gun on the U. S. S. Chicago. There followed the building, under Sprague's direction, of the first typical electric trolley railways in the United States, Italy and Germany, the installation at Richmond being the forerunner of the modern electric railway, and stamping him as an active pioneer in this art.

Later he founded the Sprague Electric Elevator and Sprague Electric Companies, introducing the electric high speed and house elevators in competition with hydraulic elevators. In 1895 he invented the multiple-unit system of electric train control, for increasing traffic capacity, now used on all elevated and subway roads here and abroad and all electric train operation where two or more locomotive units are under a common control. He has been one of active advocates of underground rapid transit during the whole period of development in New York.

Is consulting engineer of Sprague, Otis and General Electric Companies; was member of the Electric Commission, New York Central R. R., and consulting engineer Southern Pacific Company on its proposed Sierra Nevada electrification.

Is inventor of a system of control for automatic braking of trains; and is also concerned in the development of high angle fire shrapnel.

Was awarded Gold Medal, Paris Exposition, 1889, Elliott Cresson Medal, Franklin Institute, 1904, and Grand Prize, St Louis Exposition, 1904, for inventions and developments in electric railways and the Edison Gold Medal awarded by the American Institute of Electrical Engineers, 1911, for meritorious achievements in the electric arts.

Is Past-President, American Institute Electrical Engineers, American Institute Consulting Engineers and New York Electrical Society and Vice-President of Inventors Guild;

Also member American Society of Civil Engineers and the English
Institute of Electrical Engineers and Civil Engineers, and Associate
Member, Society of Naval Architects.