

## The Poulsen Wireless

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### THE POULSEN "WIRELESS"

Mr. Valdemar Poulsen has suddenly sprung into fame as the inventor of a new system of wireless telegraphy possessing, he claims, the following advantages: Extreme accuracy of tuning, thus avoiding interference between different lines of communication, and increased freedom from interference due to atmospheric electricity. The fundamental difference between Mr. Poulsen's system of producing electric waves and those in use by Marconi, De Forest, and Lodge Muirhead is that they produce theirs by spark telegraphy, while he employs the electric arc, and he compares the electric waves hitherto employed in wireless telegraphy with the sound waves produced by a pistol shot, while the continuous electric waves generated by his apparatus are likened by him to the waves of sound produced by a tuning-fork maintained in continuous vibration. It was while conducting experiments in wireless telegraphy that Mr. Poulsen stumbled upon this invention. He immersed his arc in hydrogen, and discovered that in this way he could obtain a million or more vibrations a second. These waves are called "undamped" waves for the reason that they do not lose in amplitude as they recede from the transmitting point, and among the advantages they possess is the power to "tune" the transmitting and receiving instruments to a common pitch; in other words, so to isolate the messages that two messages cannot confuse the operator who receives them by arriving on his instrument together.

Mr. Poulsen first submitted his system to a practical test about eighteen months ago, when he installed a sending station at Lyngby, near Copenhagen, beginning with transmitting messages some nine miles. He soon increased the distance to twenty-seven miles, and later on he established another station at Esbjerg, and experimented across the whole of Denmark, a distance of 180 miles. Recently, with a power of one kilowatt, perfect communication has been established between Copenhagen and Newcastle, a distance of 530 miles, with a mast only 100 feet in height, and Mr. Poulsen is convinced that with ten kilowatts he could transmit messages across the Atlantic. Mr. Poulsen's patents have been acquired by the Amalgamated Radio-Telegraph Company, Limited, who also own the De Forest system of wireless telegraphy.