

ALL AMERICA HEARS MARCONI IN LONDON

Millions Listen as Inventor
Broadcasts Story of First
Transoceanic Signal.

PREDICTS POWER BY RADIO

He Says Transmission Over
Moderate Distances Is
Likely Soon.

REVIEWS HIS EXPERIMENTS

Beset by Series of Misfortunes Be-
fore His Triumph Was Gained
28 Years Ago.

Guglielmo Marconi, the inventor of wireless, spoke before a microphone in London yesterday and all America was within sound of his voice. His words crossed the Atlantic on short waves, to be picked up for rebroadcasting by the National Broadcasting Company's coast-to-coast network of fifty-nine stations. Marconi came on the air at 1:45 P. M., New York Time, after a brief introduction by an English announcer whose accent gave sufficient clue that America was in tune with London.

The broadcast marked the twenty-eighth anniversary of the first transatlantic signal, the letter "S" flashed across the sea from Poldhu, on the southwest tip of England, to Marconi and his assistants listening in at the receiving station set up for the occasion in Newfoundland.

"I wonder," said a listener yesterday, "if twenty-eight years ago Marconi dreamed that some day his voice would cross the sea to be picked up by millions as clear as if he were present in the room with the loud-speaker."

Marconi assured his listeners that he not only dreamed that the human voice would span long distances but that he is still dreaming of more triumphs for wireless, including the transmission of power through the ether. He called radio today child's play compared with wireless in 1901, when with crude, cumbersome and insensitive instruments he picked up the first transoceanic wireless signal intercepted by an antenna held aloft by a kite. He used a coherer for a detector. The crystal detector and vacuum tube were later achievements.

Tells of His Difficulties.

"From the time of my earliest experiments I had always held the belief, almost amounting to an intuition, that radio signals would some day be regularly sent across the greatest distances on earth, and I felt convinced that transatlantic radio telegraphy would be feasible," said Marconi. "Very naturally I realized that my first endeavor must be directed to prove that an electric wave could be sent right across the Atlantic and detected at the other side.

"What was at that time a most powerful wireless station was built at Poldhu in England for this purpose and an antenna system was constructed, supported by a ring of twenty wooden masts, each about 200 feet high. In the design and construction of this English station I was assisted by Sir Ambrose Fleming, R. N. Vyvyan and W. S. Entwistle.

"Another similar station was erected at Cape Cod in Massachusetts. By the end of August, 1901, the erection of the masts was nearly completed when a terrific gale swept the English coasts, with the result that the masts were blown down and the whole construction wrecked. I was naturally extremely disappointed at this unforeseen accident and for some days had visions of my test having to be postponed for several months or longer, but eventually de-

ecided that it might be possible to make a preliminary trial with a simpler aerial attached to a stay stretched between two masts 170 feet high and consisting of sixty almost vertical wires.

"By the time this aerial was erected another unfortunate accident, also caused by a gale, occurred in America, destroying the antenna system of the Cape Cod station.

"I then decided, notwithstanding this further setback, to carry out experiments in Newfoundland with a seasoned aerial supported by a balloon or kite, as it was clearly impossible at that time of the year, owing to the wintry conditions and to the shortness of the time at our disposal, to erect high masts to support the receiving aerial. On Nov. 26, 1901, I sailed from Liverpool, accompanied by two technical assistants, G. S. Kemp and P. W. Paget.

Experiments in Newfoundland.

"We landed at St. John's, N. F., on Friday, Dec. 6. On the morning of Thursday, Dec. 12, the critical moment for which I had been working so long at last arrived, and in spite of the raging gale we managed to fly a kite carrying an antenna wire some 400 feet long.

"I was at last on the point of putting the correctness of my belief to the test. Up to then I had nearly always used a receiving arrangement including a coherer, which recorded automatically signals through a relay and a Morse instrument. I decided in this instance to use also a telephone connected to a self-restoring coherer, the human ear being far more sensitive than the recorder.

"Suddenly, at about half past twelve, a succession of three faint clicks on the telephone, corresponding to the three dots of the letter S, sounded several times in my ear beyond the possibility of a doubt.

"I asked my assistant, Mr. Kemp, for corroboration if he had heard anything. He had, in fact, heard the same signals.

"I then knew that I had been justified in my anticipations and that the very enormous distance for radio of 1,700 miles had been bridged. The electric waves which were being sent out into space from Poldhu had traversed the Atlantic unimpeded by the curvature of the earth, which so many considered to be a fatal obstacle and they were now audible in my receiver in Newfoundland!"

Repeats Famous Signal.

At this point Marconi touched a wireless key that repeated the three dots that comprise the "S" so that listeners in Europe and America could hear the signal that he picked up twenty-eight years ago. He said that the Institute of Electrical Engineers was the only technical and scientific body that "first believed in me and my statement of having received signals across the Atlantic."

"The spanning of great distances is now child's play compared with what it was then," said Marconi. "The l-beam projector and other commercial radio telegraph and telephone stations are exchanging daily hundreds of thousands of words between distant parts of the earth. Wireless telephony over world-wide distances is a reality, together with transmission of pictures, and the day is perhaps approaching when television will also be a commonplace. It may even be that the transmission of power over moderate distances may be developed in the not far distant future. I must leave to your imagination the uses which can be made of these new powers. They will probably be as wonderful as anything which we have experienced today.

"I am glad to think that my friends Mr. Kemp and Mr. Paget, who were with me at St. John's, N. F., twenty-eight years ago, are with me at the microphone now while I am addressing you, and I wish to send my most cordial greetings to all those interested in radio in America (I feel sure they form the majority of the American people), and to all my friends at the other side of the Atlantic."

Several cablegrams were dispatched from this country to Marconi following the reception of his address. M. H. Aylesworth, president of the National Broadcasting Company, sent the following:

Heartiest congratulations. Reception of your address was excellent—every word understood. It was rebroadcast throughout the United States over fifty-nine stations.

Mr. Aylesworth's cablegram to Sir John Reith, managing director of the British Broadcasting Company, follows:

Congratulations on Marconi transmission received from G5SW (Chelmsford, England, short-wave station). Rebroadcast throughout the United States over fifty-nine stations.

David Sarnoff, executive vice presi-

dent of the Radio Corporation of America, sent the following cablegram from Washington to Marconi:

American scientists twenty-eight years ago were proud and glad to recognize your achievement. Today they were thrilled to hear your personal description of the momentous event. Congratulations.

A radiogram was sent to Marconi from New York by the American Society of Electrical Engineers, which entertained the wireless inventor at a dinner here in 1902 following his achievement. The communication follows:

Your statement today regarding the recognition given your first transmission of radio signals across the Atlantic are deeply appreciated. We are pleased to know that the 1902 dinner remains in your mind as a memorable occasion. Sincere congratulations upon your many important achievements in radio communication.