



WORLDS of SCIENCE FICTION

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All Stories New and Complete

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Personalities in Science

A Bell Rang 30 Feet Away, and Wireless Was Born

WHEN Guglielmo Marconi was born, a servant in his parents' home in Bologna exclaimed, "What big ears he has!" His mother answered, with an almost unbelievably prophetic pride, "With such ears he will be able to hear the still small voice of the air."

Marconi's father was a prosperous business man; his mother, Anna Jameson, was the daughter of a well-known Dublin distiller's family. She was a staunch Scotch-Irish Protestant and an exceedingly fine musician; she taught young Guglielmo to be an accomplished pianist, a student of the Bible, and to be both tenacious and persevering.

Marconi was absorbed in science by the time he was twelve. The only thing that seemed able to tear him away from his experiments was his fondness for an old blind man, and this one small leisure was explained when his parents discovered that the old man was a former telegrapher and was teaching young Guglielmo Morse code.

At twenty he read an obituary of the German Heinrich Hertz which described Hertz's experiments with electro-magnetic waves and became possessed with the idea that



Guglielmo Marconi

signals could be transmitted through the air without wires, just as Hertz had transmitted the spark. His first experiment with the idea succeeded that same year. After months of heartbreaking failure he pressed a switch one night—and a bell rang in a room 30 feet away. This first success was followed by others with distances constantly increasing. But when Marconi offered the Italian government the invention, it was decided after a brief discussion that the machine was not worthy of attention and his offer was refused.

His mother encouraged him to try her country, and in 1896 he arrived in London with two trunks full of instruments. The instru-

ments had suffered mightily at the hands of the customs inspectors, and Marconi's first heartbreaking task was to replace them. Fortunately, the British Government realized that he had a revolutionary invention which might one day make it possible to communicate with ships at sea. Less than one year later a corporation was formed to exploit wireless telegraphy, and the first sending station was built on the Isle of Wight. And this young inventor of twenty-three found himself an immensely wealthy man.

Despite occasional fiascos, the success of wireless received world-wide publicity; stations were built on the Continent and in England, and wireless equipment was installed in all British and Italian ships. But Marconi was not content; his dream was to unite Europe and America by wireless. He had been warned that the curvature of the Earth would interfere with the waves; people scolded him for not being content with what he had already wrought, and the cost of establishing the trans-oceanic stations was prohibitive in the face of possible failure—yet he was determined to try.

Faced with disaster at the very outset when the station at the Southwest tip of England was destroyed in a storm, Marconi stubbornly spent a year rebuilding it, and then proceeded to Newfoundland which had been chosen as the American point for the trans-Atlantic effort. Weather conditions and technical difficulties that were almost insurmountable battled against him, but in 1901 the first

signal—three clicks like the three dots of Morse code—came through to the English station and Guglielmo Marconi's dream was a reality.

THE TREMENDOUS news was received with large doses of scepticism, and to still forever the doubting voices Marconi decided to build a regular station for permanent transmission at the site of the experimental station in Newfoundland. But more than scepticism had to be overcome. The cable company that owned the trans-Atlantic cable threatened legal action if the wireless experiments didn't stop, and Marconi saw the dream fade.

Canada, spurred by the faith of Mother England in the experiments, offered 16,000 pounds and land in Nova Scotia for the American station. It took two long years of effort, disappointment and experiment to complete the station—and more heartbreak was in store for Marconi before success was achieved. Then the twenty-eight-year-old genius returned to Europe and a hero's triumphs.

Honors and titles were showered on him, and these served to spur him on to newer heights. After two years of unceasing work he decided to take a vacation, and typically chose one of the remote wireless stations as the perfect spot. Here at Pool he met nineteen-year-old Beatrice O'Brien, and after a whirlwind courtship they were married. The honeymoon spot was, again characteristically, the station at Nova Scotia.

While still on the honeymoon Marconi was recalled to London. The company's funds had run out and London banks refused new credit to further research and experiment. A frantic trip to Italy to seek further financing was fruitless; the Italian banks didn't think he was a good risk either. Marconi's only hope seemed to lie in reorganizing the company himself. He was able to do it—but it took everything that he had. Instead of better times, things just got blacker. His first son was stricken and died at three months; German and American cable companies were infringing on his patents, and the Glace Bay station which had cost so much in time, money, and effort was completely destroyed by fire.

The indomitable spirit of perseverance and tenacity that was the mark of this man was scarcely dented by these disasters; instead they seemed to spur him on. He rolled up his sleeves and proceeded to fight the patent infringements with everything he could muster, began the rebuilding of the Glace Bay station, and did all in his power to convince the world that wireless had commercial possibilities.

In less than a year the station had been rebuilt, the first lawsuit won, and Marconi was riding the crest of the wave again. The honor of receiving the Nobel Prize for physics in 1909 merely interrupted the steamroller for a brief time. Having exploited all the possibilities of long radio waves, he started work with short waves and by 1927 had transmitted the human voice from England to Australia. Then came work with reflected radio waves which were to produce our present day radar, and experiments with ultra-short waves which were to be the key to television.

Those who lived and worked with him admired his simplicity, patience, and warmheartedness; and perhaps the greatest tribute was paid to this self-taught man who had never been to a university by the London Times in an editorial written at the time of his death.

"When the early twentieth century comes to be surveyed by historians yet unborn, Guglielmo Marconi may be regarded as the supremely significant character of the epoch, the name by which our age is called." —epw