

THE BIRTH OF AN INDUSTRY

IN ALMOST everybody's life story can be traced some particular occurrence, some choice or decision, which proves, though apparently unimportant at the time, to have been of vital influence on the chapters which follow.

But the ice which most of us cut in this world, if any, soon melts when we are gone and a man whose work leads to the birth of a new industry and who lives to see that industry spread through the world to influence for ever the life of the whole human race is rare indeed.

Marconi was such a man. It would of course be idle to contend that, had he not lived, there could have been no radio industry or that, had he not been helped and encouraged by the Engineer-in-Chief of the British General Post Office, he would not have been able to convince those who were to give him their financial backing and experience. But he did live and he was thus aided. Whatever the alternatives might have been, those were vital threads in the pattern of events which in fact brought the industry into being.

To those of us in that industry, therefore, the letter which is the subject of our illustration and which today rests among the archives of the G.P.O., is of particular interest as physical evidence of a vital moment in the story in which we are so closely concerned.

This letter, shown on the opposite page, was given to Marconi for presentation on his first visit to the man who later became Sir William Preece and who had, in his official capacity, been experimenting for some years with inductive methods

of signalling without wires. To his lasting credit he recognised at once that the youth who came to him had in his hands a better clue to the problem than his own efforts had afforded, and generously offered the much needed facilities for further experiments and technical assistance which his department was well equipped to provide. This help was sustained until, with the formation of The Wireless Telegraph and Signal Company (as it was first named) the official assistance of a Government Department had perforce to be withdrawn.

The letter of introduction is dated 30 March 1896, less than three months after Marconi had come to this country with his "impossible" dream at the age of twenty-two.

He had been born in Italy on 25 April 1874, to an Irish lady Annie, the younger daughter of Andrew Jameson, Esq., of Daphne Castle, County Wexford, who was of Scottish descent. She was the wife of an Italian country gentleman Giuseppe Marconi, of Bologna, a man of considerable fortune.

Guglielmo Marconi was the younger of their two sons. He was twice brought to this country during his early childhood and received his first lessons in English here. His general education, however, was chiefly under tutors on his father's estate near Pontecchio where, at the Villa Griffone, his earliest experiments were carried out.

From early childhood he had displayed remarkable intelligence. He never much cared for his normal lessons but would ransack the extensive paternal



Guglielmo Marconi when a child (left) with his mother and elder brother Alphonso

library whenever he could and read voraciously of the subjects which interested him, especially of Greek history and mythology and of the voyages of Captain Cook. A love of the sea and the open air was in his blood—in later life he indulged it to the full—but soon his restless search for mental food was brought to a focus. By the time he was fifteen electricity and physics, which certainly had had no place in his official studies at this time, absorbed his waking thoughts. He studied the work of the pioneers, of Ampère, Volta, Faraday, Henry, Clerk-Maxwell, and the rest. He attended a course of lectures on Physics at the Lyceum at Livorno.

By the time he was twenty and with little enough encouragement from his puzzled father he had become familiar with the published results of most of the scientists who had occupied themselves with the study of electric waves, such as

A view of the Villa Griffone, in Italy, Marconi's early home





The young Marconi with the original apparatus he brought to this country from Italy in 1896

Hertz, Branly, Lodge, Righi, and many others.

In the spring of 1895 an idea dawned. If Hertz could show the effect of electromagnetic waves at the other side of a room, why not control those effects to convey an intelligible signal such as those used in the telegraph? If the Hertzian waves travel across a room, could they not be made to travel across a field, an estate, a whole province perhaps?

Marconi experimented. He brought together the Ruhmkorff induction coil, the Hertz oscillator, the Righi spark gap, the telegraph key, the Branly and Lodge coherers and built them into sending and receiving apparatus on his father's estate. Always he had in view, not the mere demonstration of the already proved existence of electro-magnetic waves but their control and detection in the form of intelligible signals and the extension of the range to distances of

practical use to civilisation. He started where the laboratory scientists till then

The Villa Griffone estate



had stood. It is doubtful whether there has ever been a case of a useful invention in which all the theory, all the practical applications, and all the apparatus were the work of one man. He availed himself of existing knowledge and apparatus, improved on it and discovered the essential factors, the elevated aerial and the earth connection, which brought within reasonable reach the realisation of the goal which he alone had set out deliberately to achieve.

His father, now awake to the significance of these developments, gave him financial support and encouragement but approaches to the Italian Government at this time had a very lukewarm reception.

Marconi turned his thoughts to Great Britain as the leading maritime power at the summit of its financial and industrial development, for it was on the sea that he believed the most immediate and unrivalled use for his system would be found. He had many relatives and friends here and on arriving in this coun-

try in the first weeks of 1896 he brought his system to the notice of his cousin, Mr. Henry Jameson-Davis and, with his assistance, immediately took steps to protect the invention.

Among the influential people to whom he was introduced was a then well-known electrical expert, Mr. A. A. Campbell Swinton who; knowing the interest the Engineer-in-Chief of the Post Office had in the problem of wireless communication, promptly gave him the letter of introduction which, by courtesy of the Postmaster General, we are able to reproduce.

As a direct outcome of the interview there followed the historic series of demonstrations and experiments watched by engineers of the Post Office, the Navy and the Army and others which proved to a somewhat incredulous world that this young man had indeed "got considerably beyond what other people had done in this line", as Campbell Swinton put it.

Not Marconi himself nor even the most optimistic visionary of the time could completely have foreseen the full impact on the world which the new art of telegraphy without wires was destined to produce within a few short years. The immediate possibilities of benefit to every nation, particularly its application to safety at sea were, however, evident enough, and these possibilities could only be fully realised in the freedom of commercial enterprise.

This was a source of considerable heartburning for the young inventor, as revealed in his correspondence with Mr. Preece, who had so staunchly and unselfishly supported his début. But the decision, which had to end their official association, was inevitable. Unfettered commercial and technical interests were now pressing for the doors to open and The Wireless Telegraph and Signal Company was launched on 20 July 1897, the birth date, as it proved, of the worldwide industry in which we serve.

W. H. Preece, later Sir William Preece

