

# THE HISTORY OF SEMAPHORE

(author unknown)

The closing years of the eighteenth century were remarkable for the introduction of the telegraph in various forms. On the continent of Europe the French system, invented and perfected by Citizen Claude Chappe in 1792, had in a few years become widespread and stretched in all directions. It consisted of an upright post having a pivoted beam at the top, and at the ends of the beam two further smaller pivoted arms, so that both the beam and the arms could be turned in various directions at the same time. It was called the "T" telegraph, as when it was at rest it resembled the letter T, the two smaller arms forming the top serifs. Chappe became almost a national hero, and a statue was afterwards put up to his memory in Paris at the Rue de Bac, This distinguished monument was removed and sent to be melted down by the Germans in 1942.

Although the "T" telegraph could hardly be considered a maritime development, it doubtless inspired English telegraphers to turn their attention to the possibilities of imitating Chappe. In England the Rev Lord George Murray, son of the Duke of Atholl and Bishop of St. David's, was the first inventor to attain any real success. His plan was to have a large vertical frame in which were pivoted six shutters, louvers, or "valves". The shutters were poised open, and pulled shut by the operation of chains or ropes, much after the style of bell-ringing. Between 1796 and 1808 sixty-four stations had been built and all were in working order, keeping Plymouth up communications from the Admiralty in London to Portsmouth, Chatham, Sheerness, Deal, and Yarmouth. These stations were given up in 1814, as telegraphs were considered entirely unnecessary. However, a few years later it was decided that similar lines to Portsmouth and Plymouth would be an advantage for speedy communication with the admirals of those two Home Ports, even in

days of peace. This time the semaphore of Sir Home Popham was chosen, a tall machine having two arms on separate pivots, one at the top of the 30-foot post, the other 12 feet below it. The shutter telegraph frames had been mounted on the roofs of primitive huts or cottages but the new semaphores were erected on costly and substantial buildings of one storey, two stories or towers of five stories, according to the elevation of the place with respect to its neighbouring stations. Of the tower type only two were built, at Chatley Heath at Cobham and Worplesdon in Surrey. The tower at Chatley Heath is still standing, and eight of the other houses in Surrey, Sussex and Hampshire still survive in a good state of preservation. The new Portsmouth line was in full working order in 1822 and was only given up in favour of the electric telegraph on the last day of 1847. The projected line to Plymouth never reached beyond the borders of Hampshire and Dorset and was abandoned, and so did not function. The complement of a semaphore station was only a lieutenant and one man; both had probably been incapacitated in war and thought themselves lucky to have the berth. It is obvious that the stations could not be constantly working, and there was no provision for night signalling.

An equally successful telegraph ran between Holyhead "Mountain" and Liverpool and did valuable work in reporting the movements of merchant ships from 1827 to 1861, long after the electric telegraph had been installed in other parts of the country. The first manager was Lieutenant B.L. Watson R.N., and the first apparatus consisted of three pairs of semaphore arms on a single mast. In 1851 Watson bettered himself by organising other telegraph lines in other parts of the country on a commercial basis; then the Holyhead line devolved upon another naval officer, Lieutenant William Lord, who much improved it, the stations now being more numerous and equipped with two lattice masts side by side each carrying two pairs of semaphore arms. The line ran right across Anglesey and spanned Beumaris Bay, the estuary of the Dee, and the River Mersey, and last station but one being on Bidston Hill

near Birkenhead. Four of the stations are still standing in good preservation, four others are more or less ruinous, and of three more there is not trace today.

The term "semaphore" for a telegraph station has been very loosely and unintelligently used in the past, but it is as well to remember that the word was first coined by the French in 1801 to describe the apparatus that they set up all along the coasts of France and her dependencies. It was not until the year 1810 that semaphores were definitely introduced into England, when the various stations along the east coast were first converted from the old system of signalling with flags and balls, into semaphores consisting of a single post with three separate arms.

At a period when so many different inventors were striving to produce a telegraph that could be easily operated, it is strange that the semaphore introduced by Colonel Pasley of the Royal Engineers was received so reservedly, for its simplicity made it far more valuable than any of the other complicated methods. After several experiments his machine finally ended up in 1822 in the well-known form adopted nearly all over the world.

It was only in 1943 that mechanical semaphores on Pasley's plan were abolished in sea-going ships of the Royal Navy owing to the need to reduce top weight. Although recognised in 1827, this machine was really intended as a telegraph and confined to shore stations and harbour flagships, and spelling out a message was of secondary interest partly because some of the letters were not complete, for instance, the setting "13" indicated either I or J, "25" indicated Q or X, and "35" indicated U, V or W. This explains why the letters, J, V, W and X are today not in their right order. It was not till 1874 that Pasley's machine was adopted at sea as a method of conversational signalling, and it was not till about 1880 that anybody thought of adapting the arms of the human body to imitate the arms of Pasley's machine, for, incredible though it may seem, where a

small replica of the machine was used, the operator stood behind it and actually grasped its arms with his hands and moved them into position. However, the manual version soon spread and was often in use as the mechanical, and had the advantage that it could be employed wherever a man could stand up.

Meanwhile, after some other experiments with machines on the masts, the true semaphore was introduced in 1895 by Captain (afterwards made Admiral of The Fleet) Arthur Wilson. It was fitted at the main masthead in all men-of-war from battleships to scouts, and consisted of two sheet-metal arms 12 feet long and 15 inches wide. It was capable of being trained round from beam to beam and was worked by handles at deck level. It was supposed to be exercised daily but was rarely used in real earnest, although it had a horizon range. Wireless Telegraphy was beginning to make some headway in 1902, and at first flagships and cruisers were fitted with it. The vertical aerial was suspended from a sort of fishing-rod gaff at the main mast head and for some years shared the position with the truck semaphore, the visual apparatus being retained for the present "In case". Mast semaphores were abolished in 1907