

THE OLD TELEGRAPH FROM LONDON TO THE COAST OF KENT.

BY MISS A. G. HARDY.

THE device of conveying messages by a chain of visible signals is probably nearly as old as time, and the origins of it, like the origins of most things, can certainly be traced back to the Greeks. So far as Kent is concerned, however, the earliest system of which we have definite information is the network of beacons extending over the whole of the shire, described, with a plan of the stations, by Lambarde in his *Perambulation of Kent* (1576); but it was no novelty then, for he himself remarks that it had been reorganised as far back as 1338 :¹

I find that before the time of King Edward the third they [the signals] were made of great stacks of wood (of which sort I my self have seen some in Wiltshire) but about the eleventh yeer of his reign it was ordeined that in our Shire they should be high Standards with their Pitch-pots.

Lambarde also tells us how,

for the more speedie spreading of the knowledge of the enemies comming, they were assisted with some Horsemen (anciently called of their Hobies or Nags Hobeliers) that besides the fire (which in a bright shining day is not so well descried) might also run from Beacon to Beacon, and supply that notice of the danger at hand.²

¹ Mr. S. E. Winbolt conjectures that these very beacons may well have been established on the same hills that had served the Romans fifteen centuries earlier.

² Lists of "Hobilliers" are included in the memorandum of the Wards of Kent in the *Textus Roffensis* (Hearn's edition, 1720, pp. 236 *et seq.*) under the date 1338.

It is well known that beacon signals of this sort were used to spread the news of the defeat of the Armada. But this primitive system served only to attract attention, and was incapable of conveying actual messages. During the seventeenth century several projects were set afoot, one by the Marquis of Worcester in 1663, and one by a Dr. Hooke in 1684, for establishing a regular code of flag signals, the one ultimately adopted, however, being that originated by James II when Duke of York, and systematised by Kempenfeldt in 1780.

The credit for the invention of the telegraph proper is generally attributed to a Frenchman, Claude Chappe, who devised a machine which he wished to call the "Tachygraphe", and on it the first real "telegram" was spelt out from Montmartre, Paris, on August 15th, 1794, informing the French Government of an important recapture from the Austrians. It took the form of a beam pivoted at the top of a mast and having extensions on swivels at its ends.

In the following year—1795—a telegraph system on a different principle was devised in England almost simultaneously by two independent investigators—Gamble and Lord George Murray. Both their machines were submitted to the Lords of the Admiralty, who decided to adopt Murray's, regarding it as the better machine, as it had six shutters giving sixty-three changes, as against Gamble's five shutters giving thirty-one. Figure I gives some idea of the method of working the machine; the six shutters were revolved on pulleys worked from inside the cabin.

That same year Mr. George Roebuck, a surveyor, was given a contract to erect twelve stations from London to Deal, with a branch to Sheerness. The stations were as follows: *Admiralty*; *St. George's Fields*; *New Cross*; *Shooter's Hill*; *Swanscombe*; *Gad's Hill*; *Beacon Hill*; *Shottenden Hill*; *Barham Downs*; *Betteshanger*; *Deal*. The branch line ran from *Beacon Hill* to the Battery at *Sheerness* via *Tong* and *Furze Hill*. He was to receive £215 for each of the stations, which were to consist of two small

rooms, and to contain, in addition to the telegraph apparatus, a stove, an eight-guinea clock and two twelve-guinea telescopes. By June, 1796, this line was finished, the yearly cost of operating it being estimated at £2,950.

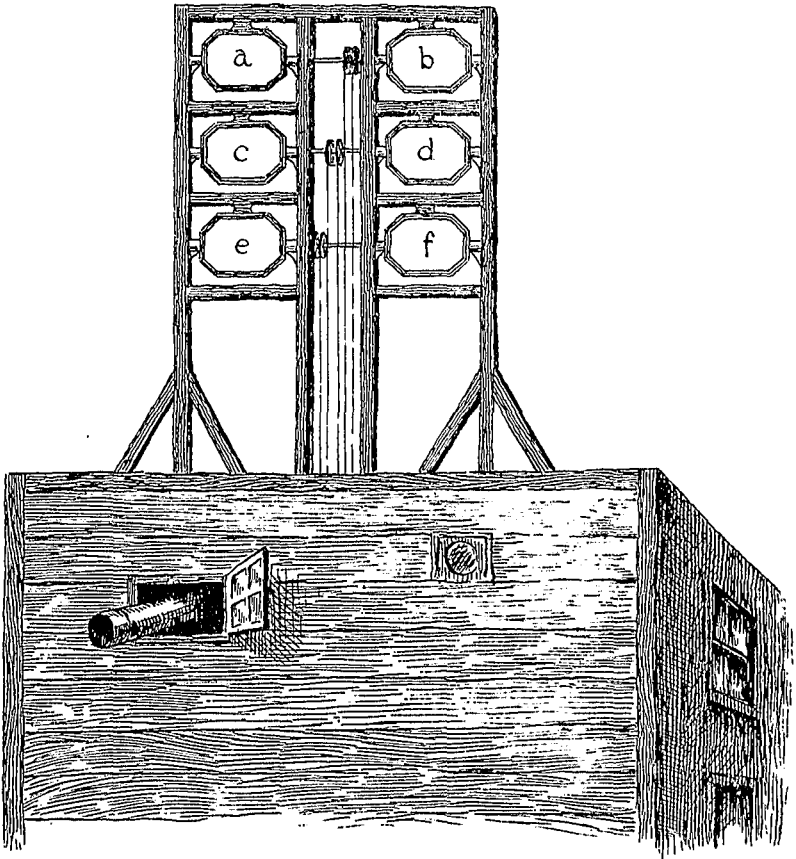


FIG. I.
TELEGRAPH ERECTED ON THE ADMIRALTY OFFICE,
CHARING CROSS, in February, 1796.

In the year 1804, Colonel Pasley, when enquiring into the subject of telegraphs, found that the shutter system was inferior to the naval system of flags and pennants, the latter being capable of exhibiting three letters or numbers at the same time, whereas the land telegraph could exhibit only

one. Whereupon Lord George Murray invented the two-armed telegraph, and was granted the management of the telegraph system at the various seaports. This system was

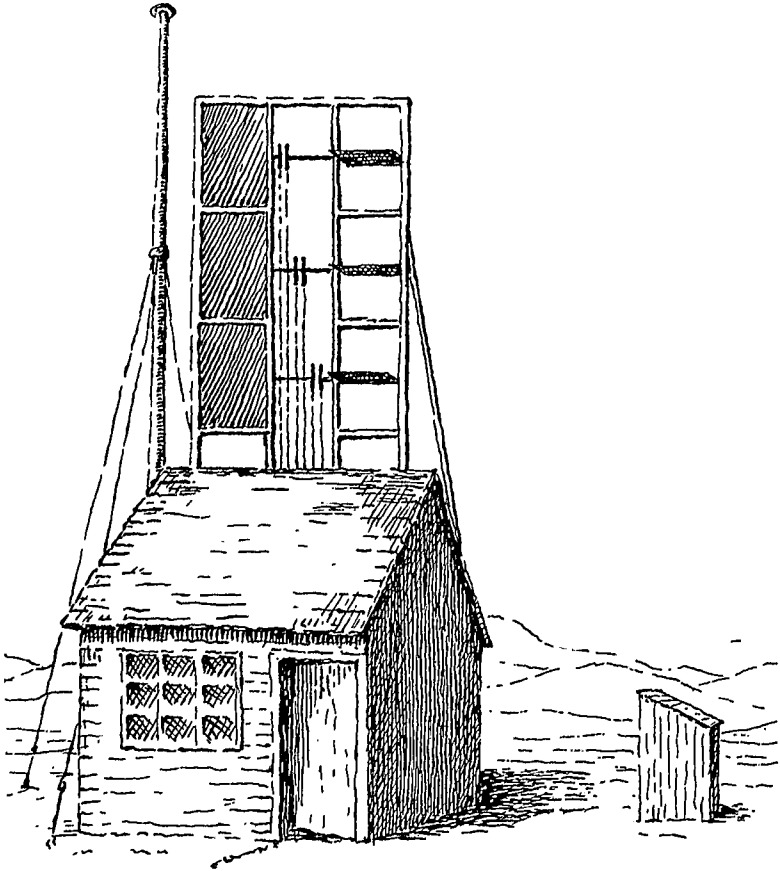


FIG. II.
TELEGRAPH AT NEW CROSS, 1796.
(Shooter's Hill in the background.)

improved upon by Colonel Pasley in the following year—1805.

In 1809, Colonel Pasley observed that the French Coast Telegraph, known by the name of the Semaphore, resembled very closely his method. It had three arms exhibiting

positions similar to his, but placed on separate pivots vertically over each other upon the same post.

A temporary check was put to the progress by the Peace of 1814, and Napoleon's banishment to Elba, which led to a reduction of the War Establishment and the optimistic order from the Admiralty that the line from London to Sheerness and Deal was to be discontinued. Five months later Napoleon escaped, and orders were promptly given for its re-establishment.

Meanwhile, Admiral Sir Home Popham had been working for more than thirty years at an alphabetical system of flag signals; his code was already in use in the fleet, and it was on it that Nelson's famous signal at Trafalgar had been made. In 1816, however, he appeared as the champion of the Semaphore, and proposed that this method of working should replace the balls and flag system between the North Foreland and Land's End. The Admiralty adopted his suggestion, and empowered him to choose the sites for a line of semaphores to be set up between the Admiralty and the dockyard at Chatham.

He did not follow Lord George Murray's route beyond his first station, the house (still in existence) numbered 34 *West Square, Southwark*. His next station was *Telegraph Hill, Nunhead*, near New Cross, where there is now an open space still remembered as its site. Thence the line ran slightly southwards to *Red Hill*, an elevation of some 260 feet just over a mile north-west of Chislehurst Church, and from there to *Row Hill*, or more correctly *Rue Hill*, near Wilmington, in the grounds of Leslie G. Wates, Esq., J.P. This hill, incidentally, and the adjacent *Green Hill*, were the two fortresses of Duromagus, the city of Cadwallon, and it was here that the British chieftain made his last stand against the Romans. The next station was at *Betsham*, and the last before Chatham itself was *Gad's Hill*, where there is an eminence still known as "Telegraph Hill".

This line began working on July 3rd, 1816. The new system was soon found to surpass the shutter telegraph in quickness and clearness of reading, and Sir Home Popham

was thanked for his invention and awarded £2,000 by the Admiralty.

Sir Home Popham's semaphores consisted of two metal arms, seven or eight feet long, playing in a groove at the top of the same upright post and worked by handles near its foot. Fig. III shows the arms in positions 1 and 2 of the

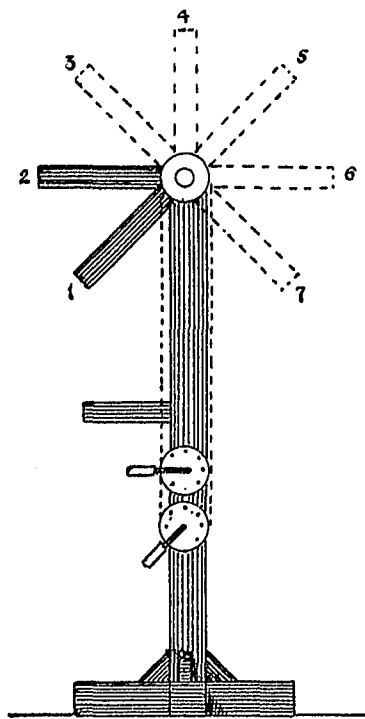


FIG. III.

seven possible, with the two indicators below standing in the corresponding positions.

It will be noticed that the stations are not more than six or eight miles apart, that being found to be the longest distance at which the arms could be seen, even through a telescope, under normal climatic conditions in this country.

In 1816 the Admiralty expressed their intention of building a permanent line of semaphores from London to

Sheerness, Deal and Dover. One Goddard surveyed the land in 1820, and the plans went so far as the purchase of sites from various owners. The sites were marked with boundary stones bearing the broad arrow, which, it may be, are there still, but nothing further was done.

The increasing density of the atmosphere in London made it only a question of time before the visual system of telegraph must come to a natural end, but it lingered on until the invention of the electric telegraph, the stations being finally closed at the end of the year 1847. In 1849 London was in electric communication with the Admiralty Office at Portsmouth.

I am indebted to the Librarians of the Admiralty and the War Office for affording me facilities for obtaining information and copying drawings; and to Instructor Captain Oswald T. Tuck, R.N., for information as to Chappe's machine; also to the Public Record Office for the study of manuscripts.

[The illustrations have very kindly been made by Eng.-Capt. J. B. Hewitt, R.N., from sketches by Miss Hardy.—ED.]