

# THE SEMAPHORE TELEGRAPH.

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## CHAPTER II.

Origin of the Semaphore Telegraph—Its Adoption by the French Government—Its Extension over Europe—A German Telegraph Station—Russian Telegraph.

### ORIGIN OF THE SEMAPHORE OR AERIAL TELEGRAPH.

THE visual telegraph system, of late in universal use over Europe and a part of Asia, has been superseded by the electric system. Notwithstanding it has passed away, yet a description of its beautiful mechanism must ever be of interest to the telegrapher. The most perfect aerial telegraph was that invented by the Messrs. Chappé, and first adopted in France.

There were three brothers Chappé, nephews of the celebrated traveler, Chappé d'Auteroche, who were students—one at the Seminary d'Angers, and the other two were at a private school about a half league from the town. Claude Chappé, the pupil of the seminary, wishing to alleviate the separation with his brothers, contrived the following means by which they might correspond one with the other.

He placed at the two ends of a bar of wood two wing pieces of wood, to be moved at pleasure, by means of which he was enabled to produce 192 signals, which were distinctly visible by means of a spy-glass. He conceived the idea of making words of these signals, and he communicated the same to his two brothers. This took place a few years before the French revolution in 1793. His invention was first tried in 1791, but, like all inventors, Chappé met with great opposition and discouragement. The people were opposed to the use of the telegraph at all, and his first telegraphs and the stations were destroyed by the populace. His second telegraph shared the same fate, and was burnt to the ground, and poor Chappé narrowly escaped with his life; the people threatened to burn him with his telegraph. Not daunted by these misfortunes he renewed his efforts for government aid, with increased zeal, until success crowned his efforts.

## ADOPTION OF THE SEMAPHORE TELEGRAPH IN FRANCE.

Continuing his efforts with the zeal common to great inventors, he finally succeeded in getting the government to favor his project, and a commissioner was appointed to examine into it. The commissioner reported favorably, and his system was adopted, and Chappé was honored with the appointment of telegraphic engineer to the French government.

Fortunately, before the presentation of the invention to the government, the Chappé brothers perfected the system entire, and in the preparation of the signals they had the aid of Leon Delaunay, who had formerly been consul, and who was well acquainted with the cipher language of diplomacy. In this perfect state it was presented to the convention, adopted and subsequently executed. Circumstances favored these inventors remarkably; for their telegraph, after it had been once adopted by the government, it was fortunately inaugurated by the announcement of a victory. The following was the first dispatch, having been transmitted by the telegraph from the frontier of France to Paris, viz.:

“CONDE IS TAKEN FROM THE AUSTRIANS.”

To which the convention, then in session, responded as follows, viz.:

“THE ARMY OF THE NORTH DESERVES THE GRATITUDE OF THE COUNTRY.”

These two dispatches ran like an electric shock through the convention, and soon thereafter throughout Paris. The Chappé telegraph was then the pride of the nation! The telegraph and the victory were rejoiced over as twin-sisters in French glory. From this time the telegraph spread with wonderful rapidity to all parts of France, and thence to the other governments of Europe. The line from Paris to Lille was constructed in 1794, and two minutes only were occupied in the transmission of a dispatch.

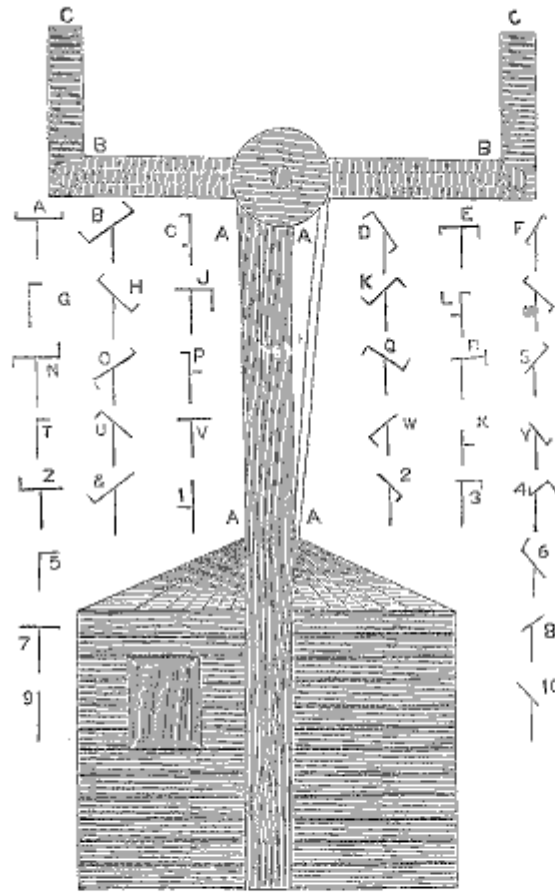
In the perfection of the beautiful mechanism for the production of the signals, Chappé had the invaluable assistance of that most ingenious mechanic, M. Breguet, whose fame as a watchmaker had spread throughout Europe.

## EXTENSION OF THE SEMAPHORE TELEGRAPH OVER EUROPE.

After the perfection of the semaphore telegraph in France, its usefulness was observed by the other governments of Europe. In 1802, a modified system was adopted in Denmark. About the same time it was adopted in Belgium. About 1795, it was

adopted in Sweden, with some improvements over the Chappé system of that time. Soon after the establishment of the lines in France, the telegraph was erected in some parts of Germany. But the mechanism of the stations of that day was not so perfect as it has since been made by the brothers Chappé, and as will be described hereafter. In 1823, the visual telegraph was established between Calcutta and the fortress of Chunore, in Asia. A year later it was erected between Alexandria and Cairo, in Egypt, by Mohammed Ali. In some form or other it has spread mostly over the inhabited globe.

Fig. 1.



German Telegraph Station, 1798.

## THE GERMAN TELEGRAPH STATION.

While at Frankfort on the Main, Germany, in 1854, I found a drawing of the ancient semaphore telegraph, used in that country more than a half century ago. The house or station was a plain hut, and the mechanism for manipulation very simple, as will be seen in figure 1. The ropes were drawn by the hand, moving the regulator *B B*, and the indicators *B C*, as desired. The position of the regulator and the indicators, in the figure above, forms the letter *A*. Suppose the indicators *A C* were let down so as to hang below *B B*, the position then would form the letter *E*. The different angles assumed by the regulator and the indicators form letters, as illustrated by the alphabet given in figure 1. *A A* is an upright post made permanent in the earth or to the house. The descending cords move *B B* and *B C* separately. The organization of the mechanism, and the mode of manipulation, will be more particularly described in the next chapter, in reference to the Chappé telegraph.

## THE SEMAPHORE TELEGRAPH IN RUSSIA.

It was not until the reign of the great Emperor Nicholas I., that Russia organized a complete telegraphic system, which was executed in the most gigantic style in the principal directions required by the government. From Warsaw to St. Petersburg, to Moscow, and on other routes, the towers and houses were constructed for permanency and beauty. They were neatly painted, and the grounds were beautifully ornamented with trees and flowers. I have seen these stations, situated on eminences along the routes mentioned, every five or six miles, and the towers were in height according to the face of the country, and sufficiently high to overlook the tall pine so common in Russia. The system employed was, like those of all the other governments of Europe, the Chappé telegraph.

The erection of these towers cost several millions of dollars, and the expense of maintaining them was very great. The line from the Austrian or Prussian frontier, through Warsaw to St. Petersburg, required about 220 stations, and at each of these stations were some six employés, making an aggregate of 1,320 men. Besides these, there were managing men at different localities having charge of the general administration.

That great Emperor Nicholas I.—ever watchful and progressive—at an early day inaugurated the semaphore telegraph in a manner commensurate with the vastness of his government and its wants; and, notwithstanding the immense cost that it had been to the government, as soon as he saw a superior tele-

graph he adopted it, and bade farewell to the visual signals which had served him so faithfully for a quarter of a century. It was a noble example to the fixedness of the bureau departments of other governments. These stations are now silent. No movements of the indicators are to be seen. They are still upon their high positions, fast yielding to the wasting hand of time. The electric wire, though less grand in its appearance, traverses the empire, and with burning flames inscribes in the distance the will of the emperor to sixty-six millions of human beings scattered over his wide-spread dominions.

Fig. 2.



Russian Telegraph Station, 1858.