HISTORY OF SIGNALLING IN 100 OBJECTS
WHEATSTONE SINGLE NEEDLE TELEGRAPH AND MORSE PERFORATOR

Samuel Morse and his assistant, Alfred Vail, demonstrated in 1838 a code that enabled complex messages to be sent by electronic telegraph. This was called the Morse Code. Messages were sent by tapping out the code for each letter in the form of short signals, called dots, and long signals referred to as dashes. These dots and dashes were converted into electrical impulses and sent over telegraph wires. A receiver at the far end of the wire converted the impulses back into dots and dashes and thereby decoded the message.

We have here two examples of early mechanical devices that were used to interpret these electrical impulses sent over wire. The picture on the right was invented in 1837 by William Cooke and Charles Wheatstone, who produced the first practical telegraph system in Britain. It was called the Single Needle Telegraph. The electric current travelled down a wire to the far end and thus allowed a message to be sent. Later the deflection of the needle to the left and right could be used to pass the morse code. It was also designed to make a distinctly different click and clack noise to differentiate between dots and dashes.

The Wheatstone Morse Perforator (picture above) had a transmitter and receiver. The transmitter could read the dots and dashes on the tape and convert them into electrical pulses. It also had an extra switch that enabled the operator to use a Morse key (see right of the top picture). The receiver received the impulses and wrote these to tape. It had a clockwork motor that moved the paper tape and controlled the ink supply. Later models had an electric motor. Once the tape had been received in Morse code, the message was typed up into the required language as a formal message, the paper tape being stored in the drawer beneath as shown.