Working of a Telegraph

Key Idea:

The idea is to use electricity to communicate over distances. The key (at the source) when clicked completes the circuit. This electricity is used to convert the core (at the receiving end, very far away from the source) into an electromagnet which produces a meaningful signal. Hence communication is possible over large distances.

Apparatus:

A battery supplies the electricity or voltage, a key is used to complete or break the circuit, a metal armature, a nail, connecting wires, metal core to form electromagnet

Working:

When the key is pressed, the circuit is completed through ground which is a conductor. The electro magnet attracts the armature and it produces a sound 'click' on striking the rod. On releasing the key, the circuit breaks and the armature goes to its original position touching the rod. If the time of contact of the key is more it is called a line and if it is very short it is called dot. Every letter like A, B, C, D and so on is allotted a code of dots and lines. With the help of the code the message is transmitted at A and decoded at the station B to receive the message.

Applications:

Telegraph was initially used in wars to communicate tactical information. After the wars telegraphs came to be used commercially in offices and later also for personal uses to send and receive information.

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