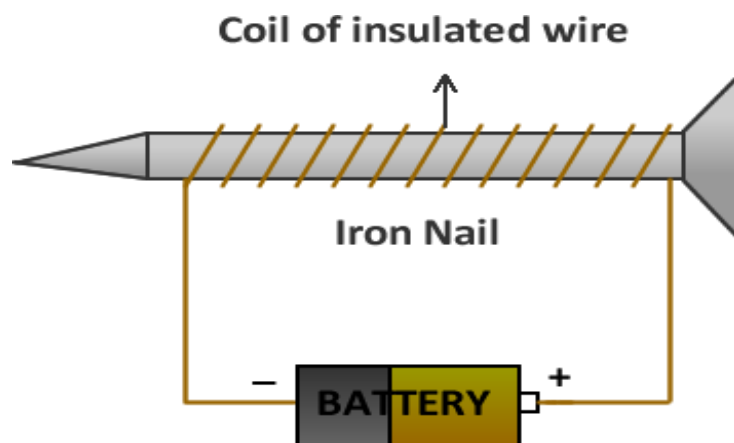


CHAPTER 2. (MAGNETIC EFFECTS OF AN ELECTRIC CURRENT) (BASED ON NCERT PATTERN)

Electromagnet

It is a substance which starts behaving as a magnet when a current is passed through it but as the current is switched off, magnetism is lost.

- It consists of a long coil of copper wire wound on a soft iron core. The ends of the copper wire are connected to a battery.



SIMPLE ELECTROMAGNET

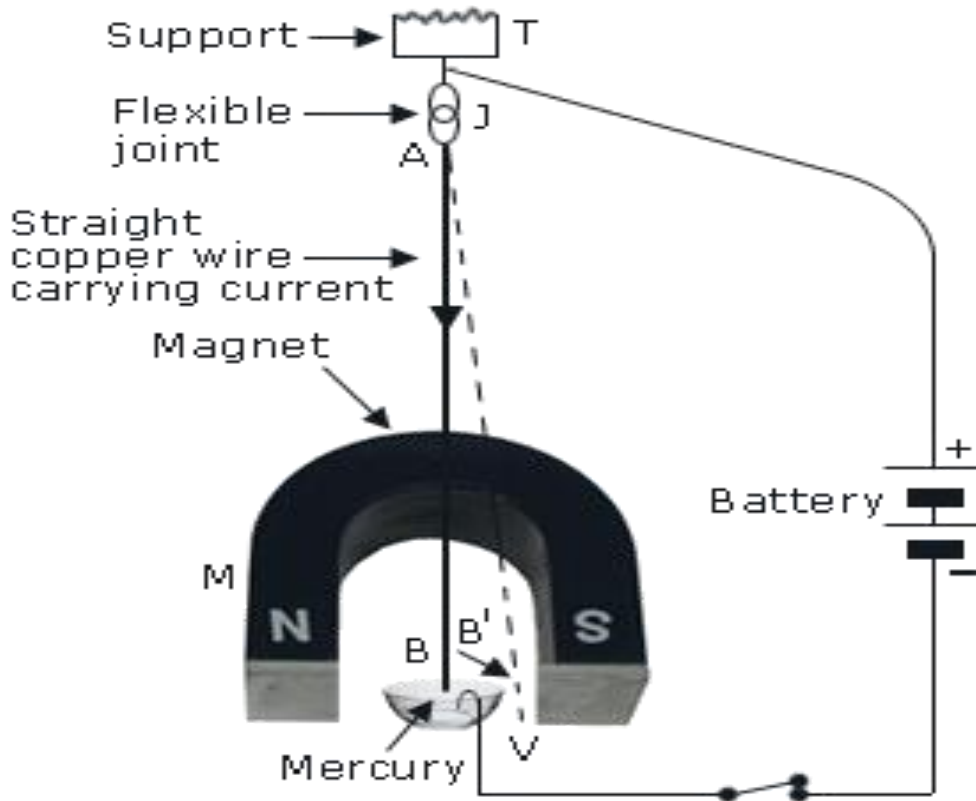
Factors affecting the strength of an electromagnet are as follows:-

- Number of turns in the coil.

- Current flowing in the coil.
- Length of gap between the poles.

Steel is not used for making electromagnet as it does not lose its magnetism even if the current is switched off i.e., it forms a permanent magnet.

Kicking wire Experiment:-



On pressing the switch, current flows in the wire in the downward direction as it is placed between the poles of the magnet because force acts on it and wire gets displaced from its original position. As it gets displaced, the circuit breaks and the flow of current stops due to which no force acts on the wire and it returns to its original position. Again, the circuit gets completed, force acts and the wire get displaced. This is how it goes on repeating.