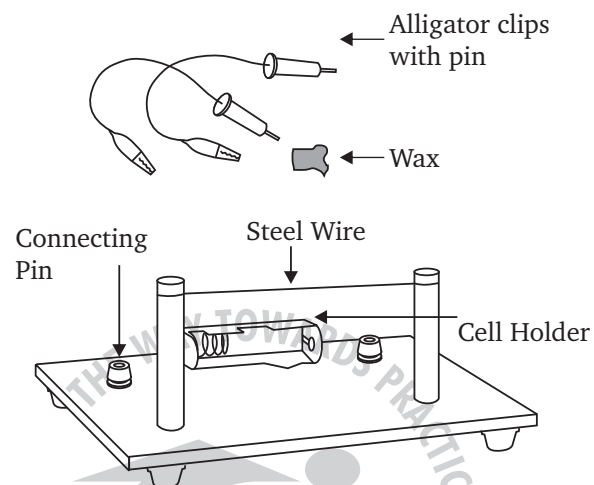


HEATING EFFECT OF CURRENT

Resistance in wire produces heat

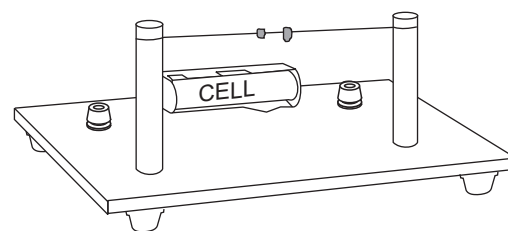
Assembly :



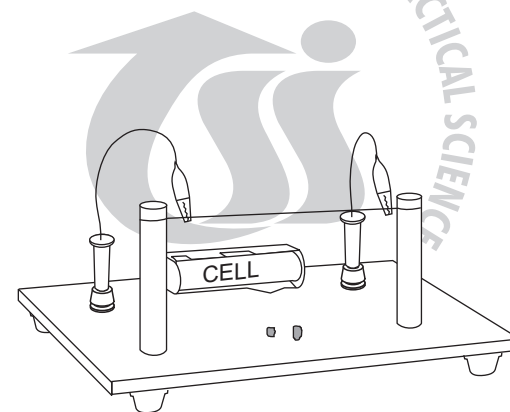
Consists of stainless steel wire (of 26G and 75mm in length). It is stretched between two poles of acrylic. These two poles are fixed at one side of a acrylic base. At the other side of the base a plastic two dry cells holder is fixed. The ends of this cell holder are connected to the two female pins which are on either side of the cell holder. These can be used for giving connection to the wire. Little wax and two aligator clips with connecting pins are provided with the kit.



To do and Observe



Step 1 : Paste 2 or 3 small pieces of wax to the wire as shown in diagram. Place two pencil cells in the cell holder with proper polarity.



Step 2 : Using the aligator clips make the connection from the cell to the wire as shown in diagram. 5 to 6 secs. after making connections you will observe that, the wax pieces melt and fall down.



What is going on :

When you connect clips to the wire, current flows through the wire. It develops heat in the wire and the temperature of the wire rises. The wax pieces melt and fall down because of this.

Application :

This is the principle on which many household gadgets like bulb, Electric heater, toaster, electric pressing iron, geyser etc work.





TARANG SCIENTIFIC INSTRUMENTS



James Prescott Joule

Born : December 24, 1818(1818-12-24)
Salford, Lancashire, England

Died : October 11, 1889 (aged 70)

Citizenship : English

Field : Physics

Known for : First Law of Thermodynamics

Found the relationship between the flow of current through a resistance and the heat dissipated, now called Joule's law.



TARANG SCIENTIFIC INSTRUMENTS



HEATING EFFECT OF CURRENT

TARANG SCIENTIFIC INSTRUMENTS

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