



1. Draw in your notebook the symbols to represent the following components of electrical circuits: connecting wires, switch in the 'OFF' position, bulb, cell, switch in the 'ON' position and battery.

Answer:

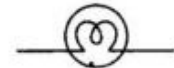
Connecting wires



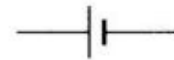
Switch in 'on' position



Bulb



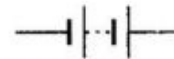
Cell



Switch in 'off' position



Battery



2. Draw the circuit diagram to represent the circuit shown in fig. 14.9.

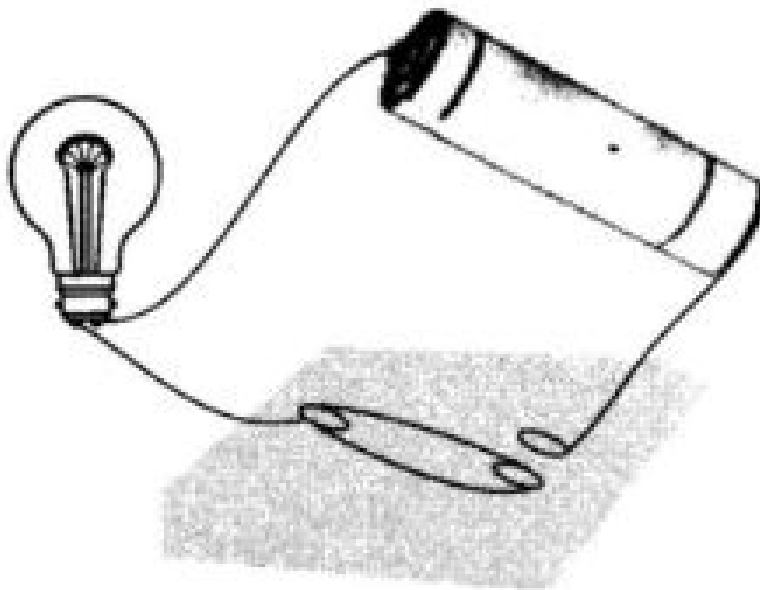


Fig. 14.9

Answer:

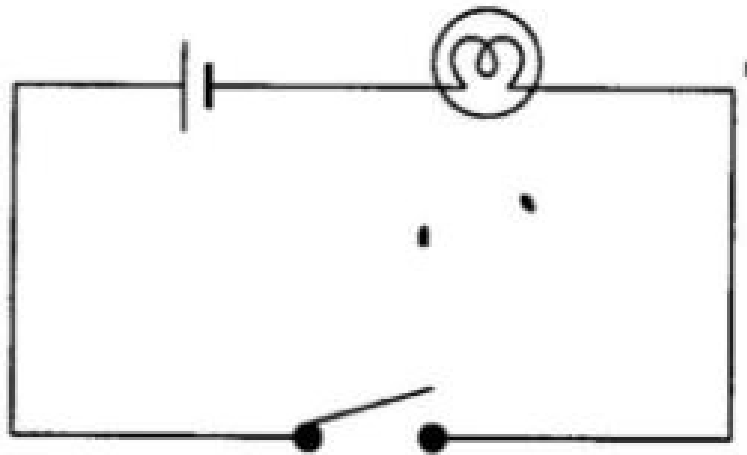


Fig. 14.10

3. Fig. 14.11 shows four cells fixed on a board. Draw lines to indicate how you will connect their terminals with wires to make a battery of four cells.

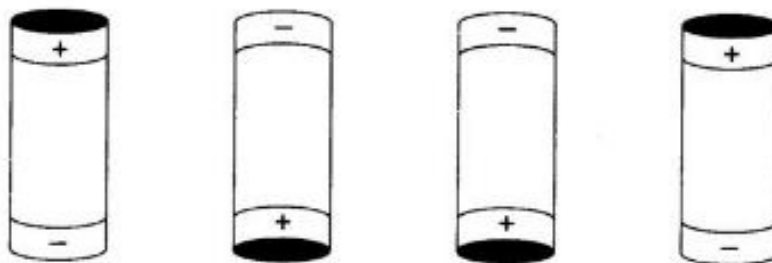


Fig. 14.11

Answer:

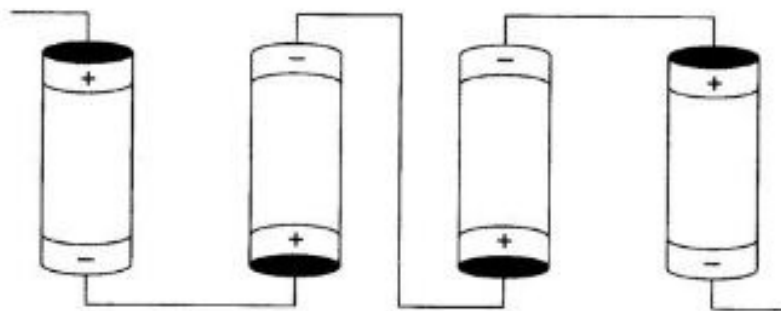


Fig. 14.12

4. The bulb in the circuit shown in fig. 14.13 does not glow. Can you identify the problem? Make necessary changes in the circuit to make the bulb glow.

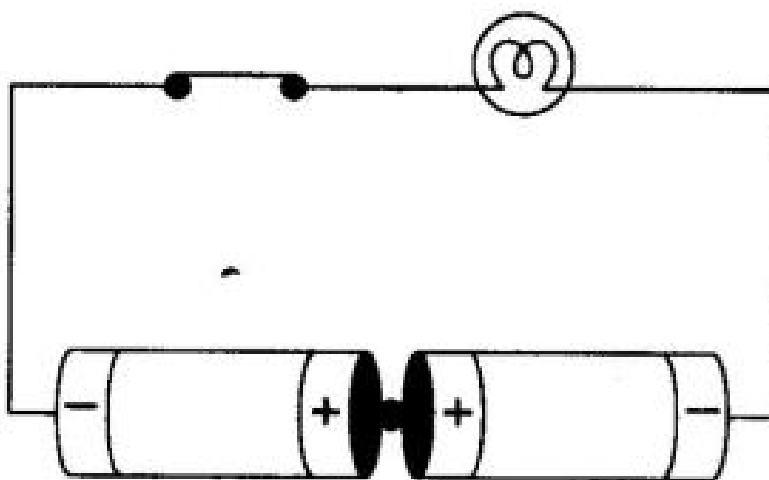


Fig. 14.13

Answer: Problem in this circuit is the combination of two cells. In the circuit positive terminal of one cell should be connected with negative terminal of other to make the bulb glow

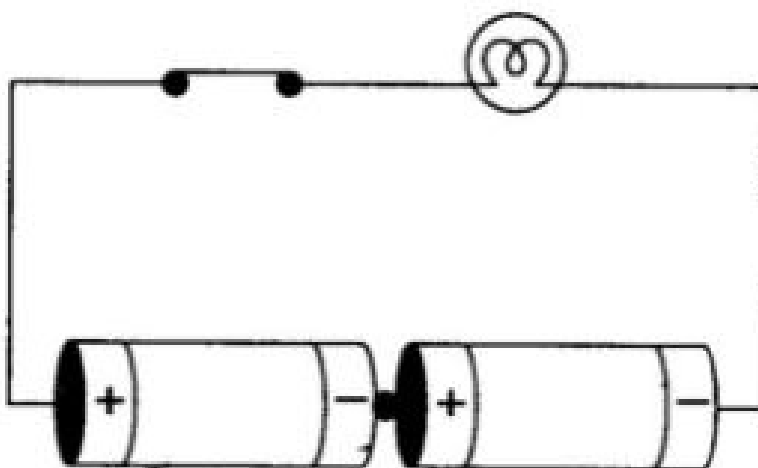


Fig. 14.14

5. Name any two effects of electric current.

Answer: Electric current has the following effect :

- (i) Electric current can give rise to heating and lighting.
- (ii) Electric current can convert a straight conductor into a temporary magnet.

6. When the current is switched on through a wire, a compass needle kept nearby gets deflected from its north-south position. Explain.

Answer: When current is passed through the wire, it deflects the compass near it from its north-south position like a magnet. This is called magnetic effect of the current. As we know that needle of the compass is made up of a thin magnet. When this needle comes in contact with another magnet then the like poles of the magnet repel each other and opposite poles attract each other. So the deflection is seen in the needle. In this case the wire behaves like a magnet and causes deflection in needle of the compass.

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