Light Bulb Anatomy

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A light bulb is a relatively simple device consisting of a filament resting upon or somehow attached to two wires. The wires and the filament are conducting materials that allow charge to flow through them. One wire is connected to the ribbed sides of the light bulbs. The other wire is connected to the bottom base of the light bulb. The ribbed edge and the bottom base are separated by an insulating material that prevents the direct flow of charge between the bottom base and the ribbed edge. The only pathway by which charge can make it from the ribbed edge to the bottom base or vice versa is the pathway that includes the wires and the filament. Charge can either enter the ribbed edge, make the pathway through the filament and exit out the bottom base; or it can enter the bottom base, make the pathway through the filament and exit out the ribbed edge. As such, there are two possible entry points and two corresponding exit points.

The successful means of lighting the bulb as shown above involved placing the bottom base of the bulb on the positive terminal and connecting the ribbed edge to the negative terminal using a wire. Any charge that enters the light bulb at the bottom base exits the bulb at the location where the wire makes contact with the ribbed edge. The second arrangement that lead to a lit light bulb involve placing the bulb at the negative terminal of the cell. A wire must then connect the other part of the bulb to the positive terminal of the cell.



Successful attempts at lighting the electric bulb