

Burner, Automatic Electric.—An electric device for either turning on the gas and lighting it, or for turning it off.

One push-button, usually a white one, turns the gas on and lights it by means of a succession of sparks from a spark coil. Another push-button, usually a black one, turns the gas off. Automatic burners are also made with a single button.

Burning at Commutator of Dynamo.—An arcing at the brushes of a dynamo-electric machine, due to their imperfect contact, or improper position, which results in loss of energy and destruction of the commutator segments.

Button, Push.—A device for closing an electric circuit by the movement of a button.

A button, when pushed by the hand, closes a contact, and thus completes a circuit in which some electro-receptive device is placed. This circuit is opened by a spring, on the removal of the pressure. Some forms of push-buttons are shown in Figs. 73 and 73a.

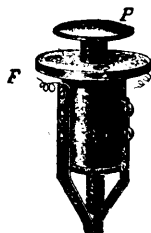


FIG. 74.



FIG. 73a.



FIG. 73.

A floor-push, for dining-rooms and offices, is shown in Fig. 74.

B. W. G.—A contraction for Birmingham Wire Gauge.

Cable, Aerial.—A cable for telegraphic or telephonic communication, suspended in the air from suitable poles.

Cable, Electric.—A conductor containing either a single conductor, or two or more separately insulated electric conductors.

Strictly speaking, the word cable should be limited to the case of more than a single conductor. Usage, however, sanctions the employment of the word to indicate a single insulated conductor.

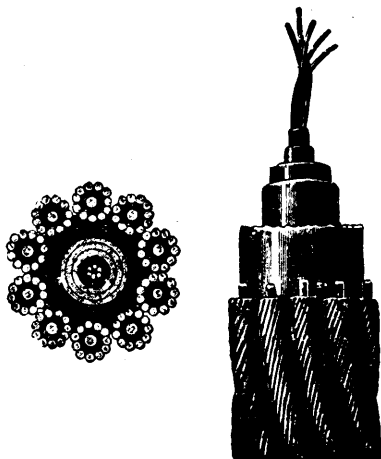


FIG. 75.

The conducting wire may consist of a single wire, of a number of separate wires electrically connected, or of a number of separate wires insulated from one another.

An electric cable consists of the following parts, viz. :

- (1) The conducting wire or *core*.
- (2) The insulating material for separating the several wires, and
- (3) An *armor* or protecting covering, consisting of strands of iron wire, or of a metallic coating or covering of lead.

As to their position, cables are, *aerial*, *sub-marine*, or *under-ground*. As to their purpose, they are *telegraphic*, *telephonic*, or *electric light* and *power cables*.

Fig. 75 shows a form of submarine cable in which the armor is formed of strands of iron wire.

Cablegram.—A message received by means of a submarine telegraphic cable.

Cable Hanger.—A hanger or hook, suitably secured to the cable, and designed to sustain its weight by intermediately supporting it on iron or steel wires.

A cable hanger, or *cable clip*, is shown in Fig. 76.

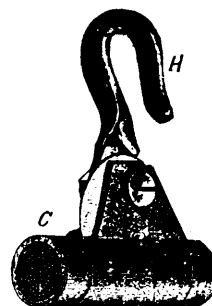


FIG. 76.

The weight, per foot, of an aerial cable is generally so great that the poles or supports would require to be very near together, unless the device of intermediate supports, by means of cable clips, were adopted.

Cables, Submarine.—Cables designed for use under water.

These are either *shallow-water*, or *deep-sea cables*. Gutta-percha answers admirably for the insulating material of the core. Various other insulators are also used.

Strands of tarred hemp or jute, known as the *cable-serving*, are wrapped around the insulated core, to protect it from the pressure of the galvanized iron wire armor afterwards put on. To prevent corrosion of the iron wire, it is covered with tarred hemp, galvanized, or otherwise coated.

THE POOR MAN'S LIGHT.

“At a recent meeting of the Western Gas Association one of its members, who by his own statement had never invested in an electric light plant, congratulated himself and comforted his fellow-gasometers by proving to their mutual satisfaction that the incandescent electric light is forever barred from becoming a successful competitor of gas. This statement has been so often repeated by those most ignorant of the subject that we feel some embarrassment in commenting on it at the present day. Nevertheless, one of the accompanying statements is worth a little discussion. The incandescent lamp is in the aforesaid paper stigmatized as “the rich man’s light.” Now, as touching the general question of economy the electric light is to-day in a very large number of places furnished at one cent per lamp hour, the equivalent of just about \$2 per thousand feet for gas. As regards the economy of the matter, this statement ought to be quite sufficient. If the incandes-