W. J. GAGNON.

PENDENT ELECTRICAL SWITCH.

APPLICATION FILED SEPT. 4, 1908.

997,054. Patented July 4, 1911.

Fig. 1

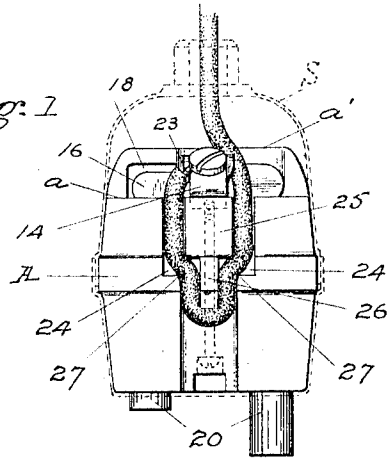


Fig. 2

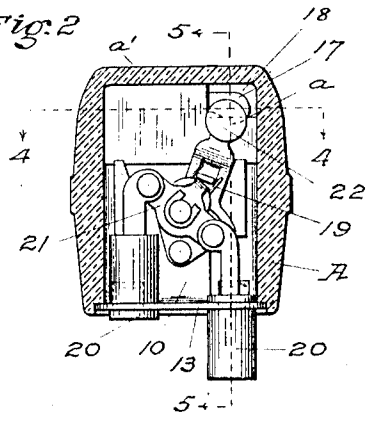


Fig. 3

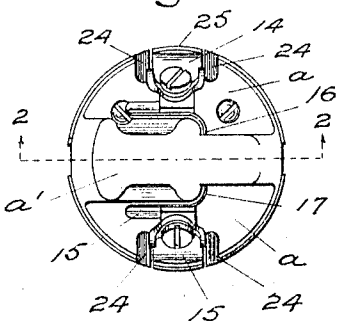


Fig. 4

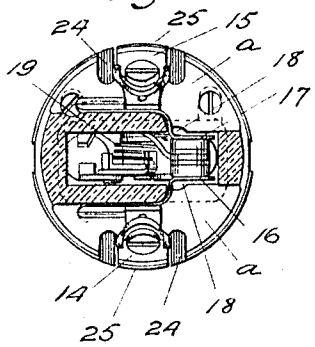


Fig. 5

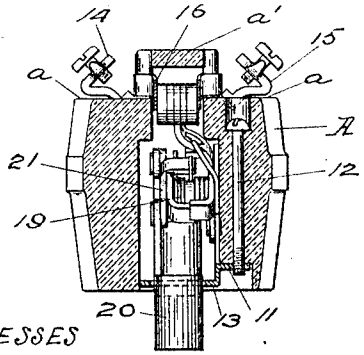
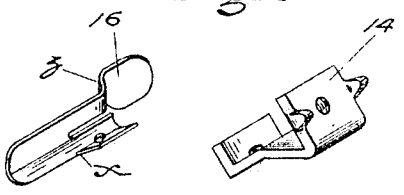


Fig. 6



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM J. GAGNON, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE PERKINS ELECTRIC SWITCH MFG. COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

PENDENT ELECTRICAL SWITCH.

997,054. Specification of Letters Patent. Patented July 4, 1911.

Application filed September 4, 1908. Serial No. 451,703.

To all whom it may concern:

Be it known that I, WILLIAM J. GAGNON, a citizen of the United States of America, residing in Bridgeport, in the county of Fairfield, in the State of Connecticut, have invented a certain new and useful Improvement in Pendent Electrical Switches, of which the following is a specification.

The object of my invention is to provide a pendent electrical switch of a strong and simple construction and one in which the moving parts of the switch are well protected.

My improvements are more particularly intended for use in a two push button type of switch, and in the accompanying drawing I have shown them so applied, but certain features are also applicable to other constructions.

In the accompanying drawings Figure 1 is a side elevation of the switch, without its sheet metal inclosing shell, which is indicated merely by dotted lines; Fig. 2 is a sectional view on the line 2—2, Fig. 3; Fig. 3 is a plan view, the wires not being connected; Fig. 4 is a sectional plan on the line 4—4, Fig. 2; Fig. 5 is a vertical section on the line 5—5, Fig. 2; and Fig. 6 is a perspective view showing details detached.

The body part of the switch is somewhat in the form of an inverted cup A of porcelain or other insulating material, open at the bottom and closed at the top, except as hereinafter described. The chamber in the cup may be of rectangular outline, as seen on reference to Figs. 1, 2 and 4, and within this chamber is contained the switch operating mechanism, which may be of any suitable construction. For convenience I have shown a two button switch mechanism of the construction set forth in the George B. Thomas Patent 743,348, November 3, 1903. This mechanism is carried on a supporting plate 10, with bottom flanges 11, by which the plate may be secured to the insulating body through the medium of screw rods 12. The operating mechanism comprises, among the usual parts, a make and break contact lever 22, spring 19, rock shaft 21, and push buttons 20. These last pass through openings in a bottom flange 13, of the frame plate 10, which flange closes the opening at the mouth of the inverted cup.

As will be seen from examination of Figs. 4 and 5, the top of the inverted cup is cut away on the outside to form depressed shoulders *a*, *a*, below the top of the chamber, on opposite sides thereof but leaving the chamber closed in over the top, by the central transverse elevated portion *a'* as seen in Figs. 2 and 5. These cut away portions are to receive the terminal plates 14, 15 and their spring contact pieces 16, 17. The peculiar forms of these parts will be understood by reference to Fig. 6, which shows one pair of them in perspective view and apart. The V-shaped part *x* of the contact plate 16 is clamped under the correspondingly shaped part of the terminal plate 14, while the upright end *z*, is bent inwardly at its free end to project laterally through a side opening 18 into the chamber containing the switch mechanism in such a position that when the "on" button is pushed, the outer end of the contact lever 22 will enter and make contact between these two spring plates 16 and 17.

The terminal plates 14, 15 are provided with binding screws with which may be connected up the bared ends of the wires 23. In the outer sides of the insulating cup below these terminal plates, I form irregular grooves 24 to receive the covered parts of the wires, as shown in Fig. 1, and thus provide a strain relief. I prefer to provide the abutment 25 between the two grooves 24 with a reduced extension 26 and to provide adjacent thereto shoulders 27, so that the wire when laid into the grooves will have a number of bends formed in it, as illustrated in Fig. 1.

The described switch may be inclosed in any suitable sheet metal shell, indicated by dotted lines at S, Fig. 1.

I claim as my invention:

1. A pendent electric switch, having an insulating body of an inverted cup shape with depressed shoulders on the top on opposite sides of the inner chamber, terminal plates on these shoulders and contacts extending therefrom through side openings into the chamber.

2. A pendent electric switch, having an insulated body of an inverted cup shape with depressed shoulders on the top on opposite sides of the inner chamber, the top

of the latter being closed in by the central transverse elevated portion between the depressed shoulders, terminal plates on the latter and contacts extending from said plates through side openings in the elevated portion into the chamber.

3. A pendent electric device, having an insulating body with terminal plates for the suspending wires, the said body having in its sides adjacent to said plates, grooves 24 for the wires, intermediate abutments and a reduced extension 26 and shoulders 27.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

WILLIAM J. GAGNON.

Witnesses:
G. W. GOODRIDGE,
GEORGE B. THOMAS.