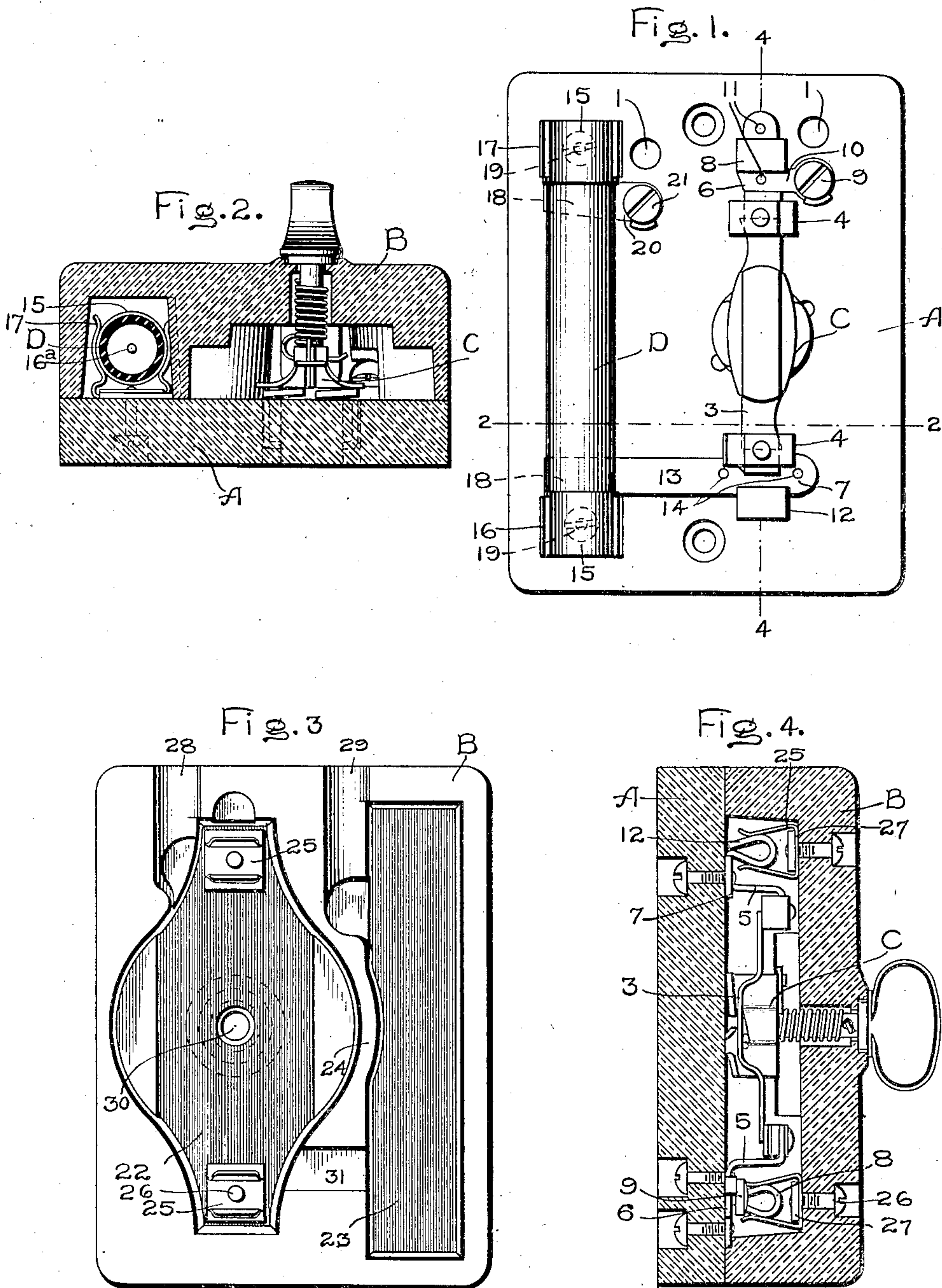


H. R. SARGENT.
COMBINED SWITCH AND OUT-OUT.
APPLICATION FILED DEC. 1, 1902.

919,473.

Patented Apr. 27, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

HOWARD R. SARGENT, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

COMBINED SWITCH AND CUT-OUT.

No. 919,473.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed December 1, 1902. Serial No. 133,377.

To all whom it may concern:

Be it known that I, HOWARD R. SARGENT, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in a Combined Switch and Cut-Out, of which the following is a specification.

My invention relates to electric lighting, and especially to series systems of lighting such as are employed upon street cars and similar places where relatively high tension electric currents are used, and its object is to provide a simple and highly efficient combined switch and cut-out.

My invention will be more readily understood by reference to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a plan of a combined switch and cut-out with the cover removed showing one form of my invention; Fig. 2 is a cross section of the device taken on a plane indicated by line 2—2 of Fig. 1; Fig. 3 is a plan view of the inner side of the cover; and Fig. 4 is a longitudinal section taken on a plane indicated by line 4—4 of Fig. 1.

As shown in the drawing the base A and the cover B are of porcelain and form an insulating box for the several electrical parts of the device. The base A is a plane rectangular slab pierced by a number of counter-sunk screw holes and two plane apertures 1 for the passage of the line wires. Upon the upper surface of the base A and to one side of its center line is mounted a snap switch C having a two-arm blade 3, and in line with the switch C are two stationary contacts 4 consisting of U-shaped strips of spring metal and connected by screws or rivets to bent arms 5 of the punched metal supports 6 and 7. The support 6 has its middle portion bent up into a loop 8 and carries a binding screw 9 in an arm 10 extending out at right angles, and is secured to the base A by two screws 11 extending through the base and engaging threaded holes therein. The support 7 is provided with a loop 12 corresponding to loop 8 of support 6 and a long arm 13 which extends nearly across the base and engages a fuse contact, and is secured to the base by two screws 14.

The fuse D may be of the well known cartridge type provided with metallic caps or end pieces 15 to which the fusible member

16^a is attached at its respective ends, and adapted to make contact with metallic U-shaped clips 16 and 17 of spring metal. The clip 16 is connected to the arm 13 of support 7 by means of an offset 18 from the arm which extends between the arms of the clip and is held in engagement therewith by a screw 19 extending through the base and engaging a tapped hole in the offset of arm 13. The clip 17 is connected to a metallic strip 20 provided at one end with a binding screw 21, and at the other with an offset 18 and screw 19.

The cover B has two main cavities 22 and 23 in its underside which are adapted to receive the switch and fuse members respectively and effectually insulate the one from the other by means of the wall or barrier 24 between the cavities. At each end of the switch cavity 22 is secured a U-shaped clip 25 by means of a screw 26 extending through the cover and engaging a nut 27 located between the arms of the clip. When the cover is in place these clips 25 engage the loops 8 and 12 of the switch contact supports 6 and 7, and operate to hold the cover in place. The forward end of the cover is provided with two grooves 28 and 29 through which the line wires may be led to the respective binding screws 9 and 21, when it is impracticable or inconvenient to lead the wires through the apertures 1 in the base. A hole 30 is provided in the cover for the passage of the stem of the switch C. The lower edges of the cover B, with the exception of the grooves 28 and 29 and a slight groove 31 for the passage of the connection 13, are in a plane and make close joints with the upper surface of the base B.

The cover is held in engagement with the base by the clips 25 engaging the loops 8 and 12, and by the thumb-piece of the switch, so that when it is desired to remove the cover to inspect or renew any of the electrical parts of the device, it is only necessary to unscrew the thumb-piece and pull upon the cover to disengage the clips 25 from the loops 8 and 12.

It is to be noted that my device is adapted to be opened for inspection without interference with the electrical connections, that when the cover is in place the connections are substantially sealed against dust, that the switch is effectually protected from injury by blowing of the fuse, and that the

line terminals are separated by a wall of insulating material whereby short circuiting between them is prevented.

What I claim as new, and desire to secure
5 by Letters Patent of the United States, is,—

The combination of a base of insulating material, a rotary switch and inclosed fuse contacts mounted on the upper surface thereof near opposite edges, stationary contacts
10 mounted on both sides of the switch and provided with holding loops, connections be-

tween the switch contacts and the fuse contacts, and a cover of insulating material having two cavities and holding clips adapted to engage said loops.

In witness whereof I have hereunto set
my hand this 24th day of November, 1902.

HOWARD R. SARGENT.

Witnesses:

ALEX. F. MACDONALD,
HELEN ORFORD.