

T. L. LEE.
ELECTRIC SWITCH.
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1,353,249.

Patented Sept. 21, 1920.

Fig. 1.

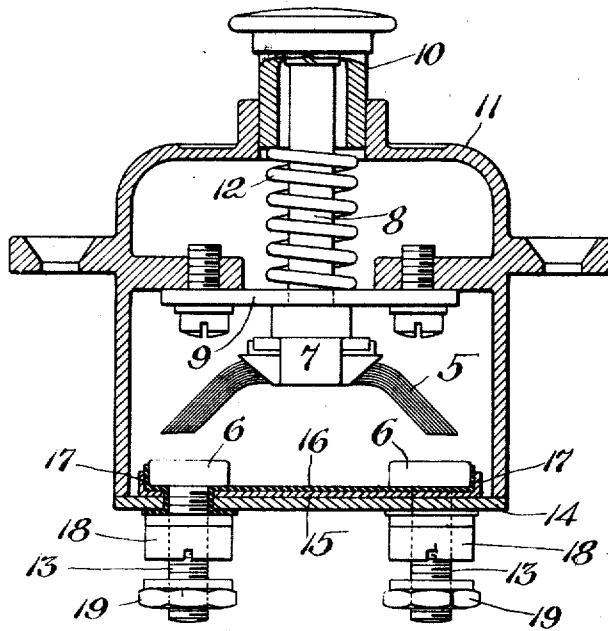
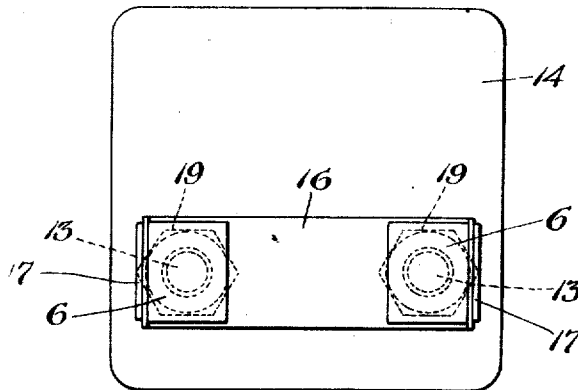


Fig. 2.



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UNITED STATES PATENT OFFICE.

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ELECTRIC SWITCH.

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To all whom it may concern:

Be it known that I, THOMAS L. LEE, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Electric Switches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to electric switches adapted for handling comparatively heavy currents, where the contact-surfaces of the switch are liable to wear and destruction due to arcing and to mechanical causes.

The object of the invention is to produce a switch in which the operative surfaces of the stationary contact-members may be readily renewed without the substitution or replacement of parts of the switch. To this end stationary contact-members are employed, in accordance with the present invention, which are so mounted, and so related to the movable contact-members, that portions only of their heads or working surfaces are engaged by the movable contact-members, and that the portions so engaged may be changed and thus renewed by partial rotation of the stationary contact-members.

In the accompanying drawings Figure 1 is a side-elevation, partly in section, of a switch embodying the present invention; and Fig. 2 is a plan-view of the base-plate of the switch, together with the stationary contacts and their fastening-devices.

The invention is illustrated as embodied in a switch having a movable contact-member 5 of laminated sheet-metal, which co-operates with two stationary contact-members comprising wide flat rectangular metal heads 6. The member 5 is fixed in a clip 7, carried at the lower end of a stem 8 which slides through a guide-bar 9. The upper end of the stem is provided with a head 10 by which it may be depressed to close the circuit through the switch. The head slides in a sleeve in the switch-casing 11, which also supports the guide-bar 9. A compression spring 12, interposed between the guide-bar and the head 10, normally retains the

movable contact-member in raised position, as shown in Fig. 1.

The stationary contact-members are mounted on the base-plate 14 of the switch-casing, and for this purpose, and also to connect them with the conductors of the circuit which is controlled by the switch, each stationary contact-member is provided with a stem 13 which passes through an opening in the base-plate, but is insulated therefrom, as shown in Fig. 1. Nuts 18 fix the stems in place, and nuts 19 are provided for binding wires to the stems in the usual manner.

The heads 6 of the stationary contact-members are made rectangular in form and of such width that only approximately one-half of their surfaces are engaged by the movable contact-member 5 in any position of the stationary contact-members. Accordingly, the wear incident to the use of the switch occurs only upon the outer halves of the working surfaces of the stationary contact-members. When these outer halves have been worn away the nuts 18 may be loosened, and the stems and the heads of the stationary contact-members may be then given a half-rotation, whereby fresh portions of the working-surfaces are brought into coöperative relation with the movable contact-members.

For the purpose of normally preventing rotation of the stationary contact-members, a strip 15 of sheet-metal is employed, this strip being perforated near its ends, so that it may be interposed between the heads 6 and the base-plate 14. A strip of insulating material 16 is interposed between the strip 15 and the heads 6, and the ends of both of the strips 15 and 16 are bent upwardly, at right angles, so as to form flanges which closely embrace the outer edges of the heads 6 and thus positively prevent rotation of these heads under normal conditions. Such rotation may be performed, however, when the nuts 18 have been loosened and backed off sufficiently to permit the heads to be raised clear of the flanges 17.

I claim:

An electric switch comprising: a first contact-member; a support; a second contact-member mounted on the support and

having a stem and a flat contact-surface normal to the axis of the stem, said surface being substantially greater than that of the first contact-member and eccentrically disposed with relation thereto; and means, on the support, normally preventing rotation of the second contact-member, said

member being disengageable from said means and rotatable, when so disengaged, about the axis of its stem to bring a fresh portion of its contact-surface into cooperative relation with the first contact-member.

THOMAS L. LEE.