

Aug. 10, 1926.

1,595,520

P. J. LARSON

DOOR OR WINDOW OPERATED SWITCH

Filed April 18, 1922

2 Sheets-Sheet 1

Fig. 1.

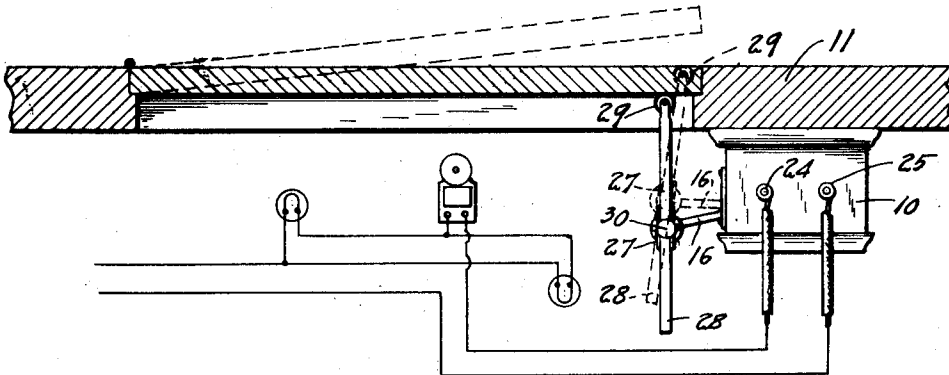
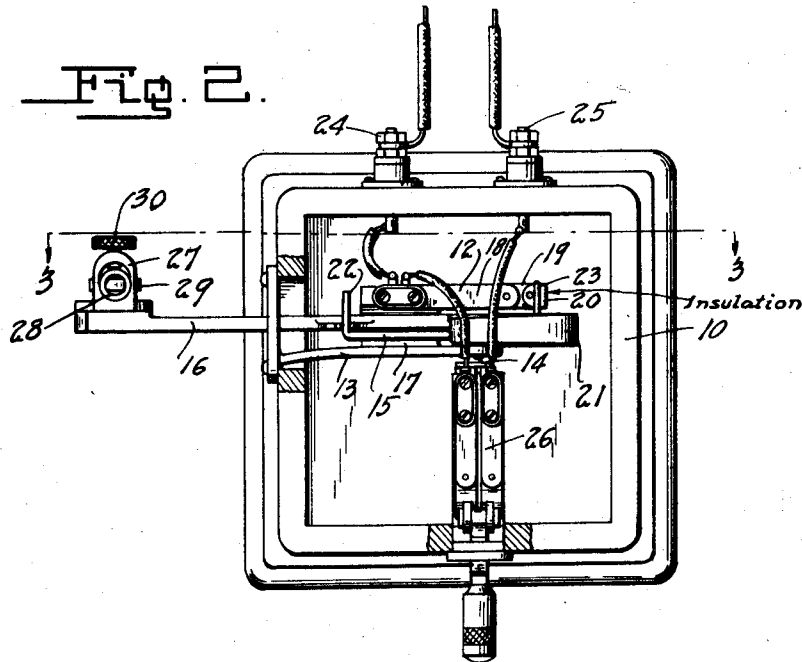


Fig. 2.



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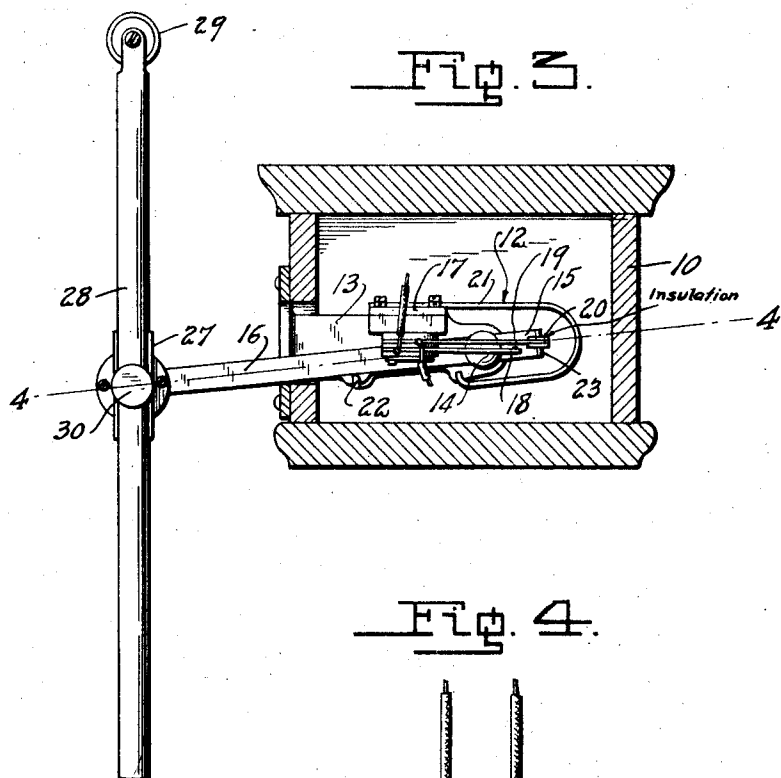
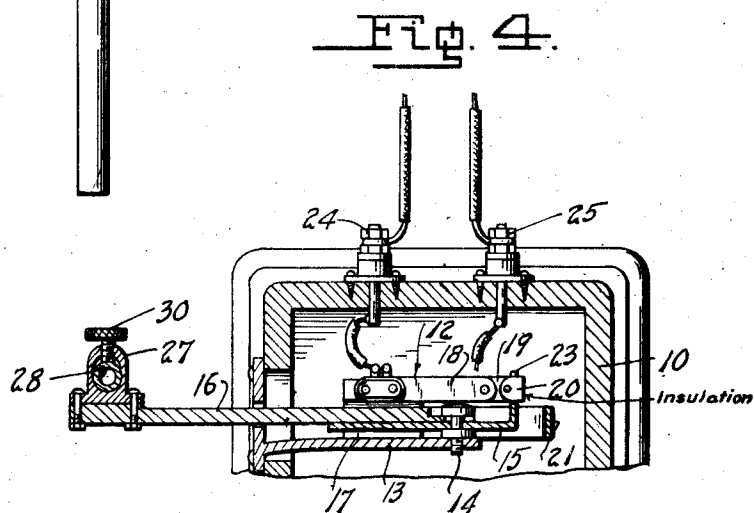
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UNITED STATES PATENT OFFICE.

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DOOR OR WINDOW OPERATED SWITCH.

Application filed April 18, 1922. Serial No. 554,669.

This invention relates to improvements in door or window operated switches, and an important object of the invention is to provide a device of this character which may be employed with either swinging or sliding closures.

A further object of the invention is to provide in a device of this character a novel and improved switch structure.

A still further object of the invention is to provide an improved structure of door or window engaging arm whereby the operation of the switch is facilitated.

An additional object is the provision of a device of this character which is simple in construction and operation, durable in service, and a general improvement in the art.

These and other objects I attain by the construction and arrangement shown in the accompanying drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention and wherein like reference characters designate like parts throughout.

In the drawings:

Figure 1 is a plan view showing an apparatus constructed in accordance with my invention applied to a door;

Figure 2 is a plan view thereof, the cover being removed and parts being broken away;

Figure 3 is a section on the line 3—3 of Figure 2; and

Figure 4 is a section on the line 4—4 of Figure 3.

Referring now more particularly to the drawings, the numeral 10 designates a casing adapted to be secured upon a door or window jamb 11. Disposed within the casing 10 is a switch 12. This switch comprises a support 13 secured to the inner wall of the casing and provided with a pivot 14 upon which is mounted a lever 15. The pivot 14 likewise serves for a pivotal mounting for one end of an operating arm 16, the opposite end of which extends through a slot formed in the casing wall and projects beyond the edge of the openings of the door frame.

The plate or support 13 is provided with an annular supporting flange 17 upon which are mounted a pair of substantially parallel spaced contacts 18 and 19, the contact 19 being of greater length than the contact 18 and having its free end covered with insulation, as indicated at 20. This flange like-

wise forms a mounting for a spring 21 which engages in a notch formed in the lever 15 at a point spaced from the pivot thereof and normally forces the lever in one direction. The lever 15 is provided with an overhanging foot 22 engaging against the operating arm 16, normally maintaining this arm in one end of the slot of the casing. The opposite end of the lever is provided with an annular furcated portion 23 receiving in the furcation thereof the insulation covered free end of the contact 19. When the lever is in that position which it assumes under influence of the spring the engagement of the furcated portion 23 of the lever with the spring contact 19 flexes the same causing engagement between the contacts 18 and 19 so as to complete the circuit.

The casing 10 is provided with a pair of binding posts 24 and 25, the binding post 24 being connected with one of the contacts 18 or 19 and the binding post 25 being connected with one terminal of a switch 26. The other terminal of the snap switch is connected with the remaining contact 18 or 19. It will be seen that when the contacts 18 and 19 are engaged and the switch is closed, a circuit having its terminals engaged with the binding post 25 will be completed through the switch 12 and the switch 26. This circuit may include either a light lighted upon opening of the door or may include an alarm bell or buzzer, or all, or any combination of these devices.

The outer end of the operating arm 16 or that end thereof which projects beyond the casing has secured thereto a yoke 27 in which is slidably mounted a bar 28 provided at its free end with a rubber covered roller 29. The bar may be adjusted through the yoke and is held in any desired adjusted position by means of a set screw 30 or the like. The roller engagement of the end of the arm with the door prevents sticking or binding of the arm against the door as the door is slid or swung to open or closed position and the adjustability of the arm permits the use of the device in conjunction with a plurality of various types of door and window casings and frames without the necessity of providing separate arms in each instance.

From the foregoing it is believed to be obvious that a door operated switch constructed in accordance with my invention

is particularly well adapted for the purpose for which it is intended by reason of the fact that the same may be employed with either swinging or sliding closures, is adaptable
5 to many different types of closures, and is so constructed as to be very durable in service. It will furthermore be obvious that the construction as hereinbefore set forth is capable of some change and modification
10 without materially departing from the spirit of my invention and I accordingly do not limit myself thereto except as herein-after claimed.

I claim:

15 In a door operated switch, a casing adapted for attachment to a door frame, spaced contacts within the casing, one of

which is flexible and provided with an insulated portion, a pivoted lever having a furcation receiving the insulated portion of
20 the flexible contact, an elastic member normally forcing said lever in a direction to flex the flexible contact into engagement with the other contact, an arm engaged with
25 the lever and projecting exteriorly of the casing, and means carried by said arm for engagement by the door and shifting said arm to move the lever against the action of the elastic member and open said contacts
30 when the door is closed.

In testimony whereof I hereunto affix my signature.

PALMER J. LARSON.