March 12, 1940. E. S. JOHNSON 2,193,690

BURGLAR ALARM

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Fig. 1.

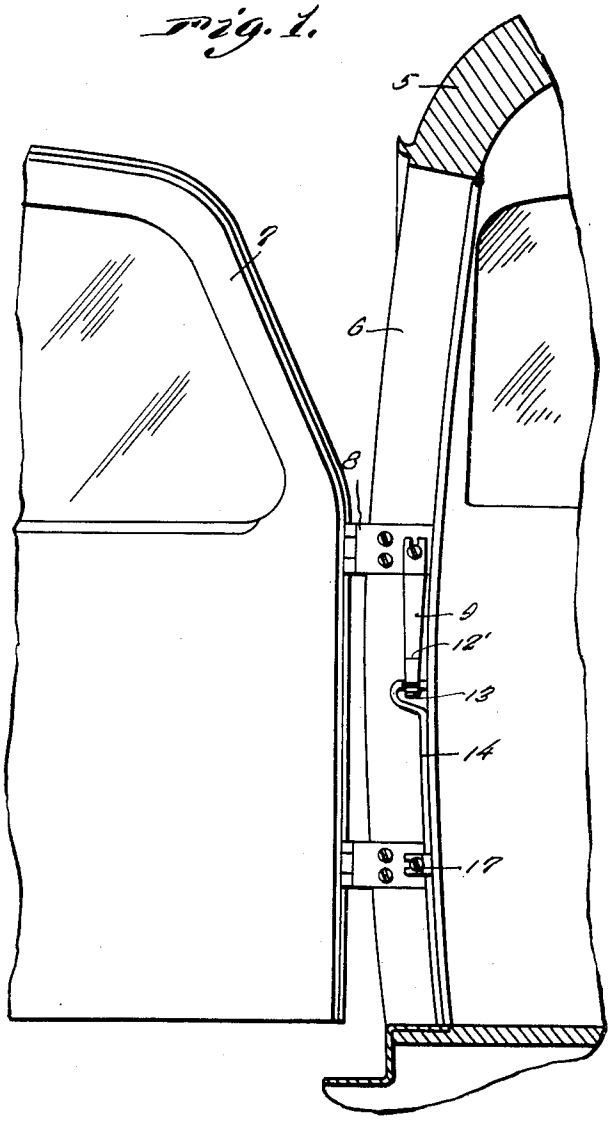
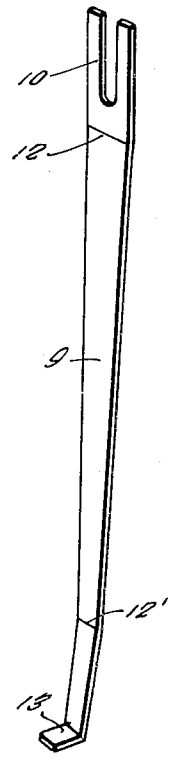


Fig. 2.



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Fig. 3.

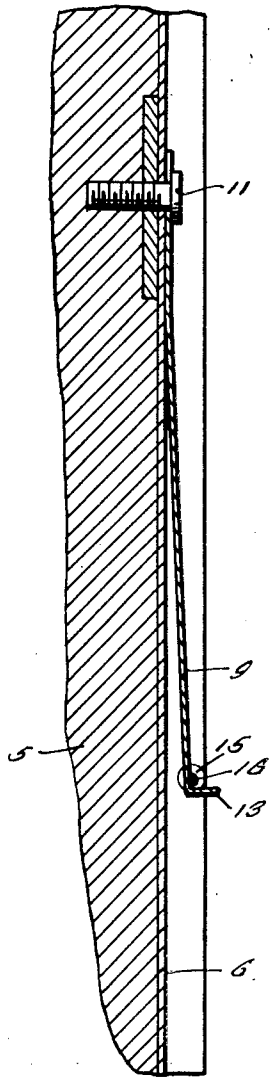


Fig. 4.

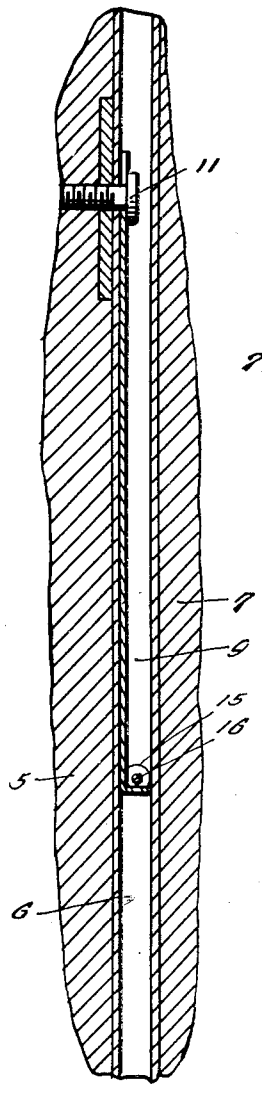
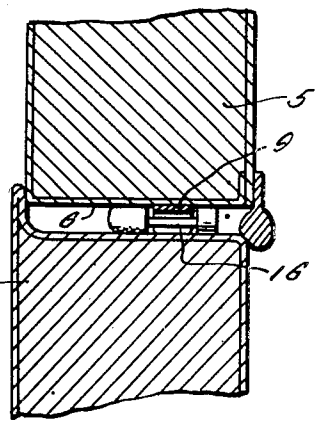


Fig. 5.



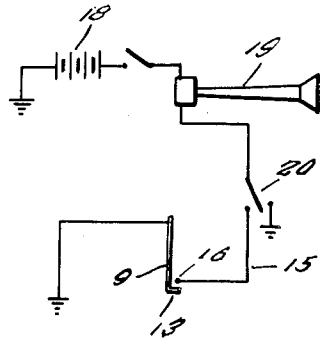


Fig. 6.

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Patented Mar. 12, 1940 2,193,690

UNITED STATES PATENT OFFICE

2,193,690

BURGLAR ALARM

Edward S. Johnson, Seven Mile, Ohio

Application December 2, 1938, Serial No. 243,671

1 Claim. (Cl. 200—54)

The present invention relates to burglar alarm devices for automobiles, and has for its primary object to provide an electrical switch mounted in position against the door jamb of the automobile and arranged in open position when the door of the car is closed, said switch being automatically moved into a circuit closing position upon the opening of the door to sound the alarm.

A further object is to provide a burglar alarm for automobile doors of a simple and practical construction, which is completely hidden and protected when the door is closed, which may be installed in operative position without necessitating any changes or alterations in the construction of the automobile, which is efficient and reliable in performance, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which—

Figure 1 is a fragmentary elevational view of an automobile door showing the switch mounted in position thereon.

Figure 2 is a perspective view of the leaf spring contact forming the switch.

Figure 3 is a fragmentary sectional view showing the switch in circuit closing position when the door is open.

Figure 4 is a similar view showing the switch in open position when the door is closed.

Figure 5 is a transverse sectional view through the hinged connection of the door, and

Figure 6 is a diagram of the electric circuit.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates an automobile body having a door frame 6 for accommodating the door 7 which is mounted on the frame by means of the conventional hinges 8.

A leaf spring 9 is provided at one end with a bifurcated portion 10 adapted for engagement under the head of a bolt 11 utilized for securing the hinge 8 to the door frame, as clearly illustrated in Figure 1 of the drawings. The spring contact member 9 is formed of spring metal and is bent slightly outwardly from the door frame at a point 12 adjacent the bifurcated end and also at a point 12' adjacent its free end and has its free end bent angularly as shown at 13 to form an abutment for engaging the edge of the door 7 to force the spring flatwise against the edge of the door when the latter is closed, in the position as shown in Figure 4.

Extending between the door and the frame is one end of a circuit wire 14 provided with an insulation covering 15, said wire having an exposed portion 16 inwardly from its extremity and bent at right angles to the spring 9 in a position for contact by the spring member when the latter is released by the opening movement of the door into the position as shown in Figure 3 of the drawings.

The wire 14 is clamped in position to the frame by means of a clip 17 secured by one of the bolts of the hinges. The circuit wire is connected with a suitable source of current such as a battery indicated at 18 and also has interposed therein a signal device such as a horn 19, the circuit further including a switch 20 which may be mounted in any desirable accessible position on the automobile.

In the operation of the device it will be apparent that with the switch 20 closed and the door 7 closed, the spring contact arm 9 will be maintained out of engagement with the circuit wire 14, thus maintaining the circuit open, but as soon as the door 7 is opened the spring arm will move outwardly from the door frame for closing the circuit and thus sound the alarm.

It is believed the details of construction and manner of operation will be readily understood from the foregoing without further detailed explanation.

Having thus described the invention, what I claim is:

A door actuated switch for an automobile burglar alarm comprising an elongated spring member having one end forked for engaging a screw which fastens a door hinge of an automobile door to the frame, said switch lying in the space between the frame and the hinged edge of the door and having its free end bent outwardly away from the frame when the door is opened but said spring member being forced against the frame when the door is closed, a circuit wire for the alarm extending into the space between the hinged edge of the door and the frame and having one end bent into hook shape, with the beak part of the hook stripped to expose the wire, the exposed part of the wire being engaged by the bent end of the spring member when the door is opened but being pressed away from said stripped part by the door when the door is closed, and a clip for holding the circuit wire in position, said clip having a forked end for engaging a screw which fastens a second door hinge to the automobile frame.

EDWARD S. JOHNSON.