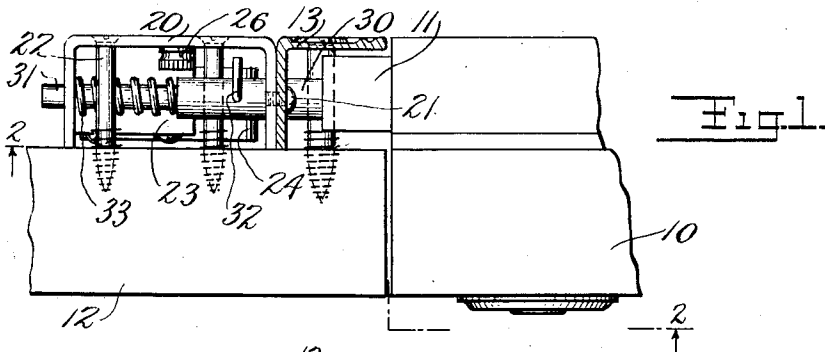
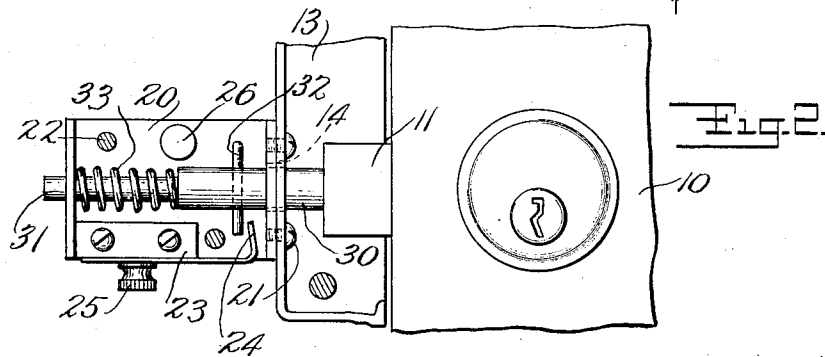
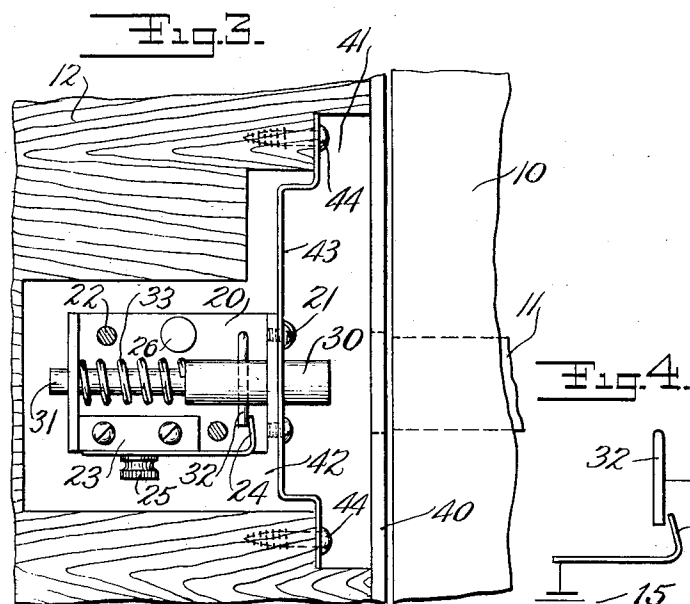
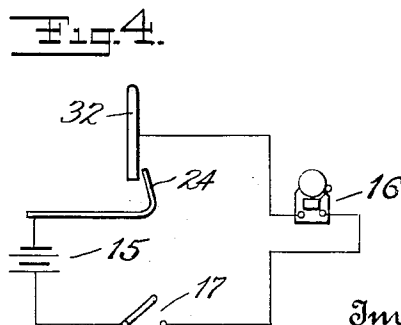


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BURGLAR ALARM.
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1,399,170.

Patented Dec. 6, 1921.



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UNITED STATES PATENT OFFICE.

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BURGLAR-ALARM.

1,399,170.

Specification of Letters Patent.

Patented Dec. 6, 1921.

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To all whom it may concern:

Be it known that I, PAUL VICTOR VANDEVELDE, a citizen of the United States of America, and a resident of Corona, county of Queens and State of New York, have invented certain new and useful Improvements in Burglar-Alarms, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

This invention relates to burglar alarms, and its object is to provide a simple circuit closer for electric burglar alarms which is inexpensive to manufacture and which is effective in operation. Another object is to so construct the device that it may be applied directly to the stationary latch casing of an ordinary lock or door latch with a minimum of labor. Another object is to simplify the wiring by placing the wire terminals in an accessible position. A still further object is to provide a circuit closer which will be closed automatically either by actuating the bolt or latch to unfasten a door or by forcing the edge of the door away from the door casing.

These and other objects of the invention will appear in the following specification in which I will describe the invention and the novel features of which will be set forth in appended claims.

Referring to the drawings:

Figure 1 is a plan view partly in section of parts of a door and door casing with a rim lock and its latch casing and with a burglar alarm device which is made according to and embodies this invention applied thereto.

Fig. 2 is an elevation of the same parts as those shown in Fig. 1.

Fig. 3 is an elevation partly in section of a mortise lock showing the manner in which the device may be applied to locks of this type.

Fig. 4 is a diagram of an alarm circuit.

Like characters of reference designate corresponding parts in all the figures of the drawings.

10 designates a part of a hinged door on which is a latch or lock which comprises a slidable bolt 11. 12 is a part of the door casing to which is affixed the latch casing 13. These form no part of my invention.

20 is a metallic bracket which may be affixed to the latch casing 13 by screws 21 or to the door casing 12 by screws 22, or by

both. On it is a block 23 of insulating material which supports a contact spring 24 and a binding post 25. 26 is a binding post by means of which a wire may be connected with the bracket 20.

Slidably supported in the end walls of the bracket is a plunger which has a part 30 and another part 31 of smaller diameter. This plunger contact carries pin 32 which is pressed against contact spring 24 by a spring 33 surrounding the part 31 of the plunger and interposed between one of the end walls of bracket 20 and a shoulder formed at the junction of the parts 30 and 31 of the plunger. A clearance hole 14 is drilled in the latch casing in alinement with the plunger and in alinement with the bolt or latch 11.

When the bolt or latch is out in position to secure the door, it presses against the plunger and pushes the pin 32 away from contact spring 24, as shown in Fig. 2. The alarm circuit shown in Fig. 5 comprises a battery 15, a bell 16 and a manually operated switch 17. It also comprises a conductor which connects these parts and the contact spring 24 and pin 32. When the switch 17 is closed it is obvious that the bell 16 will ring unless the circuit is interrupted by the pin 32 being moved away from the contact spring 24. A slight retraction of the bolt or latch will allow the spring 33 to move the plunger so that the pin 32 will come in contact with the spring 24 to close this alarm circuit. The alarm will be sounded even before the door is unlocked or unlatched. The alarm circuit will be closed also if the door is pried back away from the casing, and in this case, too, the alarm will be sounded even before the door is fully released.

In addition to the quick and delicate operation of this device, attention is called to its simplicity, and the ease of its installation. No special lock is required and the wires of the alarm circuit lead to stationary points which are near together and are accessible.

When used with mortise locks, an arrangement such as that shown in Fig. 3 may be employed. Such a lock comprises a striking plate 40 through which the latch or bolt 11 protrudes when the door is latched or locked. A recess 41 is cut in the door frame. This is cut deeper than is usual, as shown at 42, to receive the alarm switch and a plate

43 is secured to the door frame in the recess by means of screws 44. The bracket 20 is fastened to this plate 43 in such a position as to bring the part 30 of the plunger into
5 alinement with the bolt or latch 11, and in the proper relation therewith to cause it to open the alarm circuit when the door is latched or bolted.

I have illustrated and described together
10 embodiments of this invention in order to show that it is not limited to any specific form or construction, and I intend no limitations other than those imposed by the appended claims.

15 What I claim is:

1. A burglar alarm switch for attachment to an ordinary lock comprising a metallic bracket having spaced end walls, one of which is provided with means by which the
20 same may be secured at the outside of a latch or bolt casing, a plunger slidably guided in said end walls and adapted to project through one of the end walls into the path of movement of the latch or bolt in the casing, a block of insulating material mounted
25 on the bracket between the end walls, a contact finger carried by said insulating block, a binding screw for said contact finger, a transverse pin on the plunger and projecting into the plane of the contact finger, a spring engaged between one of the end walls of the bracket and a shoulder on the plunger to thrust the plunger over and carry the transverse pin into engagement with the contact
30 finger and a binding screw on the metallic bracket for carrying current to the plunger slidably supported thereby.

2. A burglar alarm switch for attachment to an ordinary lock comprising a metallic
40 bracket having spaced end walls, one of which is provided with means by which the same may be secured at the outside of a latch or bolt casing, a plunger slidably

guided in said end walls and adapted to project through one of the end walls into the
45 path of movement of the latch or bolt in the casing, a block of insulating material mounted on the bracket between the end walls, a contact finger carried by said insulating block, a binding screw for said contact
50 finger, a transverse pin on the plunger and projecting into the plane of the contact finger, a spring engaged between one of the end walls of the bracket and a shoulder on the plunger to thrust the plunger over and
55 carry the transverse pin into engagement with the contact finger and a binding screw on the metallic bracket for carrying current to the plunger slidably supported thereby, the securing means aforesaid for the bracket
60 consisting of screws extending through the wall of the latch or bolt casing into engagement with the adjacent end wall of the bracket and said wall of the latch or bolt casing having an opening therethrough in
65 line with the plunger to permit the plunger to extend into the latch or bolt casing.

3. In combination with the casing of a lock bolt, a bracket secured at the outside of said bolt casing, said bracket having spaced end
70 walls and arranged with one of said end walls substantially abutting the outside of the bolt casing, said end wall and the adjacent wall of the bolt casing having an opening therethrough, a plunger projecting
75 through said opening into position to be engaged by the bolt in the casing and having a sliding bearing in the opposite end wall of the bracket, cooperating relatively insulated contacts on the plunger and on the
80 supporting bracket and terminal screws for said contacts.

In witness whereof, I hereunto set my hand this 12th day of January, 1920.

PAUL V. VANDEVELDE.