

UNITED STATES PATENT OFFICE.

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BURGLAR-ALARM.

997,240.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE A. CHILDS, a citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Burglar-Alarms; and I do 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, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in burglar alarms, my object being to provide a device of this character adapted to be used in connection with a door or window, and when properly set so arranged that the opening of the door or either sash of the window will result in releasing a spring member whose tension causes it to move toward a bar containing an explosive cap, so that the latter is exploded with sufficient force to give the alarm.

As illustrated in the drawing the use of the invention is disclosed in connection with a window, since this use emphasizes to a greater extent the novel features of the device, its use in connection with a door being somewhat different and requiring that some of the features be omitted which are employed in connection with its employment with windows. The preferred manner of using it in connection with windows consists in applying the device to the top rail of the lower sash and securing a sort of trip to the upper sash, a suitable distance above the top rail of the lower sash to gage the opening movement of either sash before the alarm is given.

The device in detail consists of a bar or body part adapted to be secured or made stationary; and a spring member pivotally connected with one extremity of the stationary member in such a manner that it may be thrown out of alinement with the stationary member, the latter being equipped with a pin which registers with an opening in the spring member when the two parts are in the alined position. When the spring member is thrown out of alinement it is supported by the pin of the stationary member and as either sash of the window is moved, the engagement of the spring member with the trip or actuating member, imparts to the

spring member a sufficient lateral thrust to bring the opening of the spring member into register with the pin of the stationary member, in which event the spring member moves suddenly into engagement with the stationary member by virtue of its spring tension, and explodes a cap, which in the construction shown is located in a recess in the stationary member and is engaged by a projection or lug on the spring member. This lateral thrust movement of the spring member by reason of its engagement with a trip device is believed to be novel in devices of this character.

Where the instrument is used in connection with a door, the trip member is omitted and the lateral thrust movement is not employed. In other words, the device is secured to the frame of the door and as the latter is opened it engages the free extremity of the spring member which protrudes beyond the stationary member and thrusts the latter outwardly until the arc in which the door jamb is traveling becomes of sufficient length to release the spring member, when its tension causes it to return to its normal position with sufficient force to explode a cap and give the alarm. In this form of the device the pin of the stationary member which engages the opening of the spring member serves as a guide to maintain the spring member in constant alinement with the stationary member, and it may be required that the pin shall be of greater length than that employed when the device is used in connection with windows only.

Having briefly outlined my improved construction, I will proceed to describe the same in detail, reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing: Figure 1 is a fragmentary view of the two sashes of a window, a portion of the frame on one side being also illustrated. Fig. 2 is a section taken on the line 2—2, Fig. 1, looking downwardly. Fig. 3 is a section taken on the line 3—3, Fig. 2, looking toward the right and showing the alarm device in two positions, one in full lines and the other in dotted lines. Fig. 4 is a top view of the device showing the spring member in the set position in full lines, its normal position being indicated by dotted lines.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the upper sash and 6 the lower sash of a window. To the top rail 7 of the lower sash is secured the bar 8 of my improved device by means of screws 9. To this bar is pivotally connected as shown at 10, a spring member 12 provided with an opening 13 adapted to receive a pin 14 with which the bar 8 is provided, when the two parts are in the aligned position or that indicated by dotted lines in Fig. 4. To the spring member 12 is also secured a lug or projection 15 forming a sort of hammer adapted to enter a recess 16 in the bar, which is adapted to contain a percussion cap or other suitable mild explosive, adapted to produce sufficient noise to give an alarm. The spring member 12 protrudes beyond the free extremity of the bar 8 and is provided with a fingerhold 17 for convenience of adjustment, this fingerhold consisting of a clip secured to the free extremity of the spring as shown at 18 and projecting transversely therefrom so that by placing one finger below the same the spring may be easily raised and thrust aside, whereby it may be supported in the set position by virtue of the engagement of the pin 14 with the spring member at one side of the opening 13 in the latter.

To the side rail 19 of the upper sash is secured a trip device 20 which may be of any suitable construction. As shown in the drawing it consists of a plate having flat extremities 21 and an outwardly curved intermediate part 22, which will engage the spring member 12 of the device as the upper sash is lowered or the lower sash is raised, and gradually return the spring member into its position of alinement with the bar 8, thus allowing the pin 14 to enter the opening 13 and permitting the spring device to move suddenly into engagement with the bar, whereby the hammer 15 explodes a cap in the recess 16.

In order to set the device it is only necessary to raise the spring member 12 and throw it out of alinement with the bar 8 by moving it toward the upper sash of the window. This will bring the spring member into the path of the tripping device so that when either sash is opened the spring member will be given a lateral thrust with the result heretofore explained.

It is evident that if desired two of the devices might be employed in connection with a window, one being secured to each sash thereof. In this case there would be a separate trip for each one of the devices and the trips would be located on the window frame. This is an obvious modification in the use of the device, and of course need not be illustrated.

In locating the trip 20, care should be taken that it be not placed far enough above the top rail of the upper sash in the form

of construction illustrated in the drawing, to allow either sash to be opened wide enough to permit a person to enter, without giving the alarm. It can, however, with safety be located several inches above the top rail of the upper sash, and this would allow either sash to be placed in the open position for ventilating purposes without interfering with the alarm, but if an attempt is made to open either sash far enough for a person to enter, the alarm will at once be given.

In loading the device it will be found convenient to lift the spring member until it passes beyond the pin 14, after which it may be thrust aside and allowed to move toward the bar in the non-registering position. The cap may then be put in place and the spring member set for alarm purposes, or allowed to return to its normal position with the hammer 15 resting upon the cap.

Having thus described my invention, what I claim is:

1. A burglar alarm, comprising a bar member adapted to be secured and made relatively stationary, a spring member pivotally connected with the bar member, the latter having a pin, and the spring member having an opening which the pin member enters when the two parts are in the registering position, the pin forming a support for the spring member when the latter is in the non-registering position, one of the members having a cap holding recess, and the other a hammer adapted to enter the same, the spring member having its free extremity protruding beyond the adjacent extremity of the stationary member, for the purpose set forth.

2. A burglar alarm device comprising a relatively stationary bar member, a leaf spring member pivotally connected with the bar member, one of the members having a pin and the other an opening which the pin is adapted to enter when the two parts are in the registering position, the pin feature forming a support for the spring member when the latter is in the non-registering position and set for alarm purposes, one of the members having a hammer and the other being adapted to contain a cap arranged to be exploded by the action of the spring member and thrust laterally from its set to its registering position, substantially as described.

3. A burglar alarm device comprising a bar adapted to be secured to a window sash, a spring member pivotally connected with the bar at one extremity, one of the members having a pin and the other an opening adapted to engage the pin when the two members are in registering position, one part having a hammer and the other part a cap-holding recess which the hammer is adapted to enter, the spring member when

set or in the non-registering position, being supported by the said pin, and a trip device mounted in such proximity to the alarm that when the sash carrying the alarm device is moved a predetermined distance the trip will thrust the spring member into the registering position, substantially as described.

4. In a burglar alarm, the combination of a stationary member, a spring member pivotally connected therewith, the stationary member being adapted to be secured to the top rail of the lower sash of the window, a spring member pivotally connected at one extremity to the stationary member, one of the members having a pin and the other an opening which the pin enters when the two parts are in a registering position, the spring member arranged to be supported by the said pin when in the non-registering position, and a trip adapted to be mounted on the upper sash, whereby it will engage the spring member of the alarm and thrust it

laterally into the registering position when either sash is opened a predetermined distance, substantially as described.

5. A burglar alarm, comprising a bar member, a spring member pivotally connected with the bar member, the latter having a pin, and the spring member having an opening which the pin enters when the two parts are in the registering position, the pin forming a support for the spring member when the latter is in the non-registering position, one of the members being adapted to retain a cap arranged to be exploded by the action of the spring member when thrust laterally from its set to its registering position, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE A. CHILDS.

Witnesses:

A. J. O'BRIEN,
F. E. BOWEN.