Sept. 17, 1968 M. CONTRERAS 3,402,405

SELF-LOCKING BURGLAR ALARM SYSTEM

Filed Jan. 3, 1966

Fig. 2.

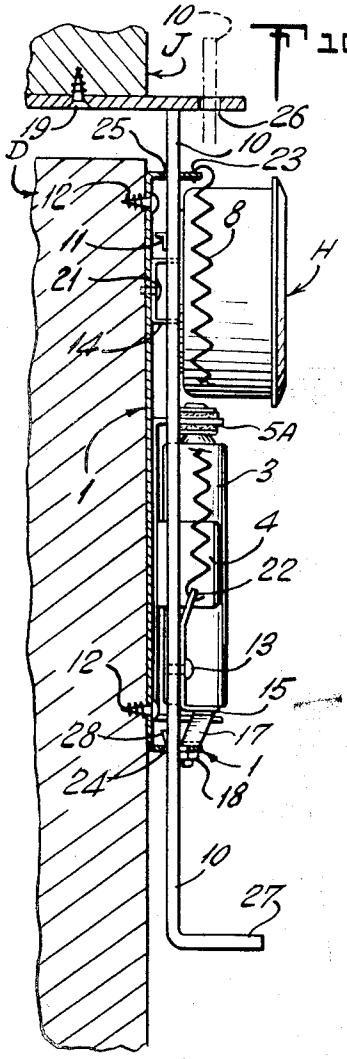


Fig. 1.

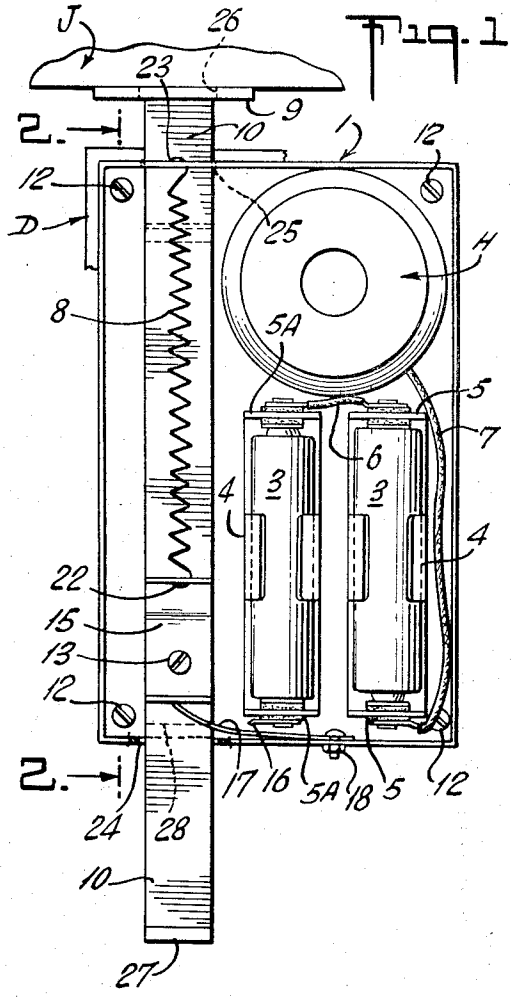
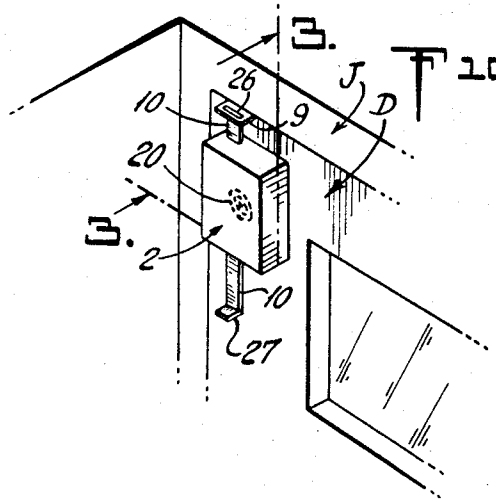


Fig. 3.



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United States Patent Office 3,402,405 Patented Sept. 17, 1968

3,402,405

SELF-LOCKING BURGLAR ALARM SYSTEM

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Filed Jan. 3, 1966, Ser. No. 518,354
3 Claims. (Cl. 340—274)

The present invention generally relates to a burglar alarm system, and more specifically to a burglar alarm and locking device, which is automatically operated when a door, window or the like is opened, to operate an alarm signal.

It is well known that burglars enter homes and stores through doors and windows, and, as such, pose a potential threat to life and property within.

It is therefore an object of the present invention, to provide a novel, strong, durable and compact burglar alarm and lock which will be relatively inexpensive to manufacture, simple and positive in action and yet highly efficient in use.

It is another object of the present invention to provide a burglar alarm and lock wherein the same means for activating an alarm signal also activates a locking device.

It is yet another object of the invention to provide an alarm system that will not operate until tripped by the surreptitious movement of a door, window or the like, and which can be made totally inoperative when so desired.

It is a still further object of the invention to provide an alarm system which is easy to install, without the requirement of special installation equipment.

It is a further object of the present invention to provide a self-contained alarm system, which does not require an external power supply, and which is capable of being placed in locations so as to be relatively tamper-proof.

In accordance with these objects, the present invention provides a means whereby, upon an attempt by a burglar to make an illegal entry, an alarm is activated while simultaneously providing a secondary lock preventing entry of the burglar. The present invention also provides means for making the present invention inoperative during periods of normal door usage. The operation of the novel alarm and locking device is achieved by a spring biasing an arm in position, so that when the door or window is illegally moved, the arm is caused to move through an aperture in a plate fixed to the door jamb, to simultaneously close an electric circuit and activate an alarm.

The above objects as well as other and further objects, features and advantages of the present invention will be manifest in the following detailed description of a preferred embodiment thereof when read in connection with the accompanying drawings which form a part hereof.

In the drawings:

FIG. 1 is a longitudinal section, taken along line 3—3 of FIG. 3, showing the burglar alarm and locking device in the inactivated position;

FIG. 2 is a vertical transverse section, taken along line 2—2 of FIG. 1 of the device shown in FIG. 1; and

FIG. 3 is a fragmentary perspective view, in a reduced scale, showing the present invention installed relative to a door and an adjacent wall.

Referring in detail to the drawings, wherein like and related numerals designate like and related parts throughout the several views, an elongated casing **1**, preferably of a dielectric material, is employed, having suitable screw openings through which screws **12** secure casing **1** to a door D. Casing **1** has an open front which is closed by a removable cover **2**, adapted to snap securely over casing **1**. Cover **2** is provided, at the upper part thereof, with a plurality of concentric holes **20** which permit the transmission of sound or light to the exterior of the casing **1**. A horn H is secured to casing **1** by means of a screw **21**,

through suitable screw openings in a terminal **14**, which is secured to the rear of horn H. Terminal **14** thus forms a conduction path between horn H and casing **1**.

A wire **7** leads from horn H to one side of spring terminal **5**, which is disposed adjacent and parallel to a spring terminal **5A**. Both spring terminals **5** and **5A** are secured to the bottom of casing **1**. A wire **6** leads from other side of spring terminal **5** to the same side of spring terminal **5A**, thus forming a conduction path therebetween. A contact **16** is mounted on the opposite side of spring terminal **5A**, and is positioned to engage contact spring **17** when contact spring **17** is activated by movement of an arm **10** described below. Contact spring **17** is secured to casing **1** by a screw **18**, which passes through a screw opening in casing **1**, thus forming a conduction path between contact spring **17** and casing **1**. When the device is in a first position, as shown in FIG. 1, contact spring **17** engages a flanged plate **15**, which is mounted to an arm **10** by a screw **13** through a screw opening in flanged plate **15**.

Affixed through hole **22**, in flanged plate **15**, is one side of coil spring **8**, the other side of said coil spring **8** being affixed through hole **23** in casing **1**. Coil spring **8** is in tension when the present device is in the first position.

Arm **10** extends through slots **24** and **25** in casing **1** and engages plate **9**, which is secured to a door jamb J by a screw **19**. When the device is in the first position, the force exerted by coil spring **8** results in arm **10** being biased against plate **9**, and plate **9** restrains arm **10** from vertical movement

Batteries **3** are inserted within C-shaped spring battery clips **4** so as to be supported thereby. The poles of said batteries **3** are electrically engaged to spring terminals **5** and **5A**. Batteries **3** are similar in structure, but are disposed in reversed polarity and are thus electrically connected to horn H. Upon the engagement of contact spring **17** with contact **16**, when the present device is in a second position shown in FIG. 2 by a dotted fragmentary portion of arm **10**, horn H is activated, while simultaneously locking arm **10** in plate **9**, as shown in the dotted view.

When door D is thus opened, arm **10** will engage an aperture **26** in plate **9**, and said arm **10** will slide through slots **24** and **25** and aperture **26** in plate **9**, into the second position shown in FIG. 2, thereby causing contact spring **17** to engage contact **16**, resulting in the activation of horn H. An angle plate **11**, mounted on the underside of arm **10**, is suitably disposed to serve as a stop against the overhanging portion of casing **1** when the inventive device is in the aforesaid second position.

The device is readily returned to the closed position by pulling down on a flange **27** of arm **10**, thus deactivating horn H, and unlocking the device. Upon a further downward pulling of flange **27** a stop **28**, which is mounted on the underside of arm **10**, will engage the corner of slot **24**, and will thus render the present invention inoperative. In this manner, the alarm system can be made operative only during those periods when usage of the door is not to be expected.

What I claim is:

1. In combination with a door, window, or the like, an alarm and locking device comprising, a housing mounted to said door having openings at the upper and lower surfaces thereof, an arm member extending through both of said openings, a mounting plate secured to said arm member, resilient means secured at one end thereof to the upper surface of said housing and at the other end thereof to said mounting plate for biasing said arm in a first position, a locking plate having an aperture therethrough mounted to the jamb of said door disposed above said housing, signal means mounted to said housing, electrical supply means, a first contact connected to said supply means and said signal means, and a second con-

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tact biased by said mounting plate out of connection with said first contact, whereby when said door is laterally moved, said arm member comes into registry with said aperture and is urged therethrough into a second position by said resilient means, thereby locking said door and bringing said first and second contacts into electrical connection to energize said signal means.

2. The alarm and signal device as recited in claim 1, wherein said signal means comprise a horn, and said electrical supply means comprise a battery.

3. The alarm and signal device as recited in claim 1, further comprising stop means mounted to said arm member and adapted to engage with the hole at the lower surface of said housing to place said device in an inoperative position by pulling said arm through said lower hole.

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