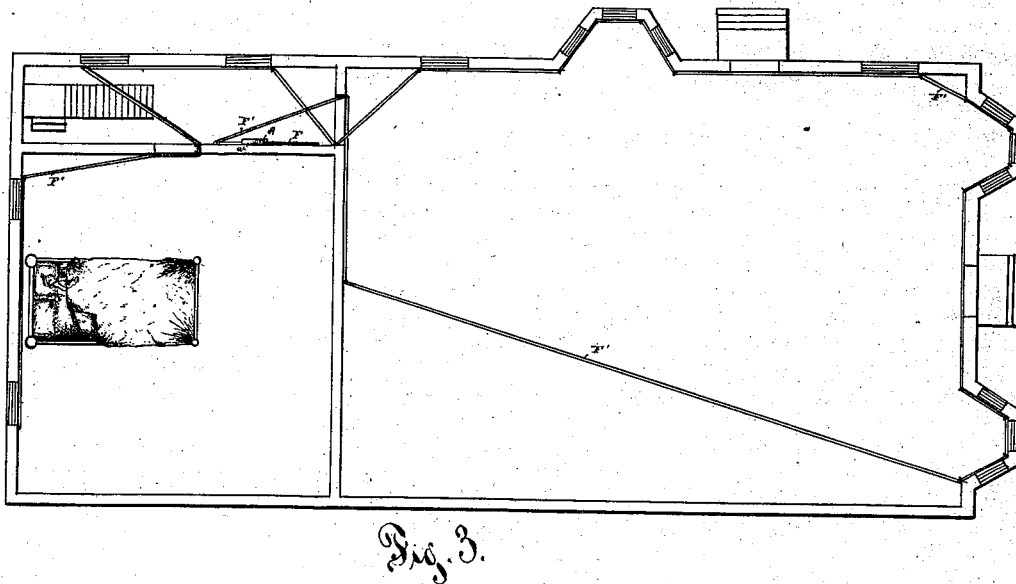
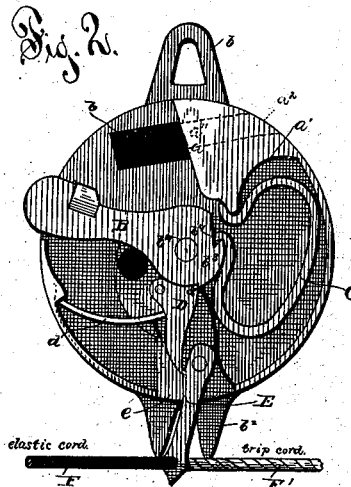
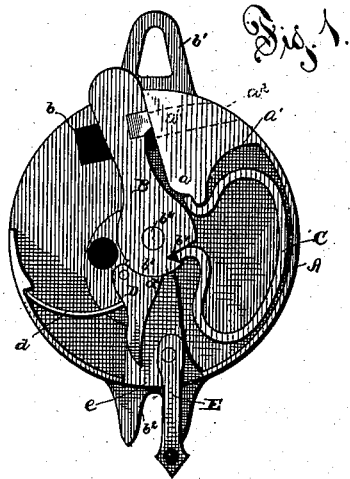


(No Model.)

W. L. SWAN.  
BURGLAR ALARM.

No. 382,669.

Patented May 8, 1888.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

WILLIAM L. SWAN, OF LANSING, MICHIGAN.

## BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 382,669, dated May 8, 1888.

Application filed December 9, 1886. Renewed October 3, 1887. Serial No. 251,322. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM L. SWAN, a citizen of the United States of America, residing at Lansing, in the county of Ingham and State of Michigan, have invented certain new and useful Improvements in Burglar-Alarms, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention pertains to certain new and useful improvements in burglar - alarms and means for operating the same; and it consists in the detailed construction, combination, and arrangement of the parts, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my invention with the cover of the inclosing-casing removed. Fig. 2 is a similar view with the hammer set or in position ready for operation, and Fig. 3 is a plan view of a room showing the method employed for causing the discharge of the alarm.

In carrying out my invention I employ a cylindric casing, A, which has integral with its outwardly-projecting rim or flanged portion an inwardly-projecting flange or shoulder, *a*, which is curved on one side, as at *a'*, the purpose of which will appear farther on. Within this flange or shoulder *a* is formed, a short distance from its outer end, a circular opening or cavity, *a''*, which opens at its outer end into a similar-shaped cavity, *a<sup>2</sup>*, in the rim or flange of the inclosing-casing. In the rear wall of the casing A is formed an oblong-shaped opening, *b*, terminating at one end on a line with the inner end of the circular cavity *a''* in the flange or shoulder *a'*, the purpose of which will also appear farther on. The casing has integral with the rim or flange, at its upper and lower portions, respectively, an outwardly-projecting slotted eye, *b'*, and a prong-like portion, *b<sup>2</sup>*, whereby the device is secured to the wall or other supporting object by means of screws or nails.

B is the hammer, which is secured by means of a pivot, *b''*, to the center of the casing, said pivot being passed through a central aperture in the curved or cam-like end *b<sup>3</sup>* of said hammer. The curved or cam-like portion *b<sup>3</sup>* of this hammer has a portion of its outer surface removed, as at *b<sup>4</sup>*, wherein is secured one end of

a bent or bow-shaped spring, C, the other end of said spring being secured against the curved end of the flange or shoulder *a*, hereinbefore referred to. By means of this spring C the hammer is held in the position shown in Fig. 1, with its upper-side edge pressing against the flange or shoulder *a*.

D is the trigger, which is likewise pivoted to the casing, and is normally held under tension of a spring, *d*, which bears against one side of the long arm of said trigger, the other end of said spring being secured by contact with a small lug or flange of the rim of the inclosing-casing. The short arm *d'* of this trigger is designed to bear against the cam-like portion of the hammer, and when said hammer is forced back through the slot formed in the rim of the casing said short arm will come in contact with a small shoulder formed on the cam-like portion by cutting away a portion of the surface thereof, and said hammer will thus be held in its retracted position.

The trigger-trip E is pivoted to the casing and extends downwardly through a slot, *e*, formed in the rim of the casing. The outer end of this trigger-trip is apertured for insertion therein of one end of an elastic cord or coil-spring, F, and the end of a trip-cord, F', about to be described. The other end of the elastic cord or spring F is secured a short distance to one side of the alarm, as shown, the purpose of which will soon appear.

In Fig. 3 I have shown the method of employment of my invention, which consists in attaching the alarm at any desired point in a room, and connecting by means of small pins or hooks the trip-cord F' at different points throughout the room a short distance above the floor.

I do not limit myself to any precise disposition of the trip-cord, but preferably pass the same diagonally across the room to be protected, thence diagonally across in another direction, and fasten the end of the cord, thus forming a triangle within which are all the valuables of the room, and without which are all the openings to the room; or, if desired, the trip-cord may be attached to every door and window in such manner that neither can be opened without discharging the alarm, or it may be attached to any articles or article of furniture with like result. The trip-cord be-

ing thus secured, the same must be drawn sufficiently taut to cause the trigger-trip to occupy nearly a vertical position, the spring secured thereto serving to hold back said trip.

5 From what has been said it will be seen that should any one enter the room thus protected or any piece of furniture to which the cord is attached moved the slightest distance the trigger-trip will at once bear against the  
10 longer arm of the trigger, thus freeing the cam-like end of the hammer, causing the same to strike with great force against the end of a blank cartridge previously disposed in the cylindric cavity *a'*.

15 Should the trip-cord be cut or in any way severed, the elastic cord or spring secured to the end of the trigger-trip will cause the same to free the trigger in the manner as above detailed. The hammer at the point that comes  
20 in contact with the cartridge is pointed, as usual, to effect the striking or contact of the hammer with said cartridge.

It will be observed that the trigger and hammer are so arranged as to be sensitive to the  
25 slightest movement, whereby the discharge of the alarm is always certain. The outer end of the hammer projects a slight distance beyond the casing, whereby the hammer can be forced back and the trigger caused to come in  
30 contact with the shoulder on the cam-like portion ready for operation.

I do not restrict myself to the employment of my trigger, hammer, and co-acting parts in connection with a burglar-alarm, as it is obvious that said parts can be used in a gun, the  
35 same mechanism serving both purposes.

I am aware that it is not new to provide a burglar-alarm with a casing having an opening for insertion of the detonating wafer and  
40 a rotary hammer, against which bears a coil-spring, the other end thereof bearing against an abutment of said casing; also a burglar-alarm having a pivoted spring-pressed hammer and a trigger engaging therewith; and I  
45 am further aware that it is not new to provide a breech-loading fire arm with a pivoted tumbler having cams, a spring bearing there-

against and against a dog-lever operated by a trigger, and hence I do not make broad claim to the features here acknowledged to be old. 50

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a burglar-alarm, the combination of the inclosing casing having the inner flange or  
55 shoulder provided with a circular cavity, the hammer pivoted to the center of said casing, and having a cam-like inner end with a shoulder or flange against which bears one end of a bow-shaped spring, the spring-actuated trigger  
60 pivoted in close proximity to the inner end of said hammer and having one arm engaging therewith, the loosely-pivoted trigger-trip, and the elastic cord or spring and trip-cord connected to the lower end of said pivoted trigger-trip, all arranged substantially as shown  
65 and described.

2. The combination, with the pivoted hammer having the cam-like end, the spring bearing against said hammer, the trigger engaging  
70 with said cam-like end, and the pivoted trigger-trip having the elastic cord or spring and trip-cord connected to its lower end, of the inclosing casing having an oblong aperture in one side thereof for insertion and removal of a  
75 blank cartridge or cap, and the flange or shoulder having a circular cavity in alignment with said oblong aperture, substantially as shown, and for the purpose described.

3. The combination, with the spring-actuated hammer, the trigger engaging with a  
80 shoulder on the inner end of said hammer and the trigger-trip, of the elastic cord or spring connected to the lower end of said trigger-trip, and the trip-cord, also connected to said end  
85 and extending in opposite direction to the elastic cord or spring, substantially as shown and described.

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

WILLIAM L. SWAN.

Witnesses:

S. M. MILLER,

O. A. MILLER.