

(No Model.)

C. L. KNAPP.
BURGLAR ALARM.

No. 587,977.

Patented Aug. 10, 1897.

Fig. 1.

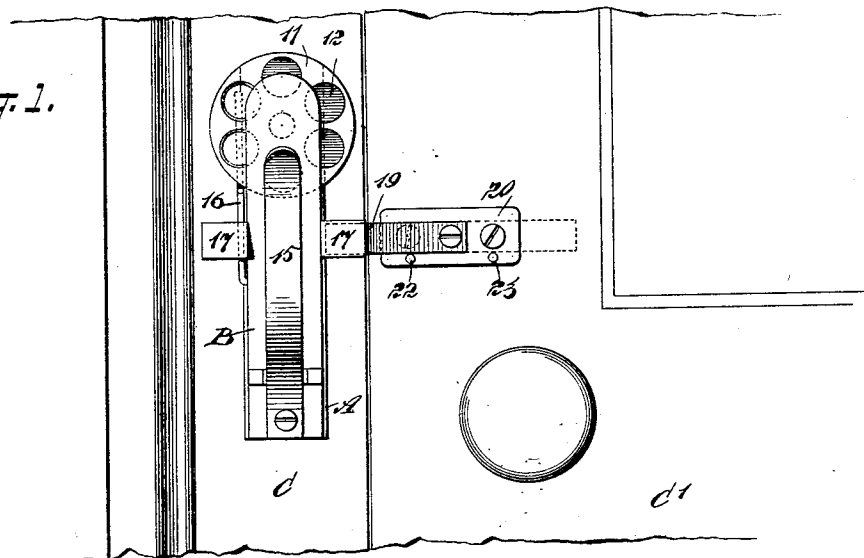


Fig. 2.

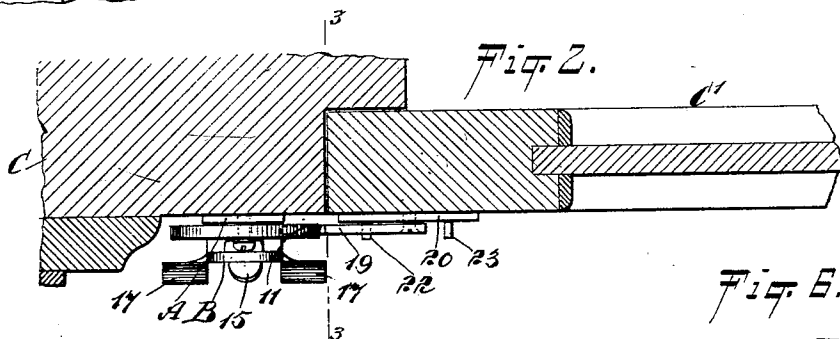


Fig. 3.

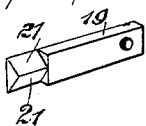


Fig. 4.

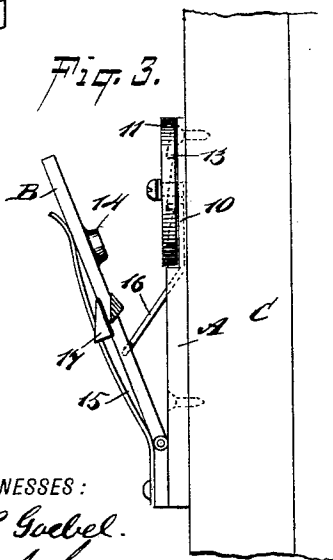


Fig. 5.

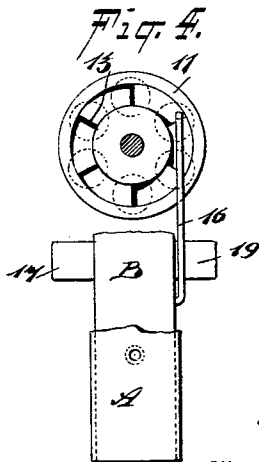
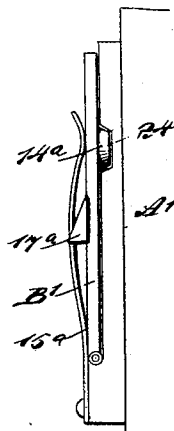


Fig. 6.



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BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 587,977, dated August 10, 1897.

Application filed January 23, 1897. Serial No. 620,401. (No model.)

To all whom it may concern:

Be it known that I, CLAYTON L. KNAPP, of New York city, in the county and State of New York, have invented a new and Improved
5 Burglar-Alarm, of which the following is a full, clear, and exact description.

The object of my invention is to provide a burglar-alarm of simple, durable, and economic construction, capable of being used in
10 connection with either a door or a window.

Another object of the invention is to construct the alarm in such manner that it will be self-setting, an alarm being sounded when a door, for example, to which it is applied is
15 opened, and when the door is closed the alarm will be placed in position to be again actuated by a second opening of the door.

The invention consists in the novel construction and combination of the several
20 parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of the burglar-alarm applied to a door. Fig. 2 is a horizontal section through the door-jamb and a portion of the door, the alarm being shown in
30 plan view. Fig. 3 is a section on the line 3 3 of Fig. 2. Fig. 4 is a rear elevation of the alarm, parts being broken away. Fig. 5 is a detail perspective view of the trip-bar used in connection with the alarm; and Fig. 6 is
35 a side elevation of the alarm, illustrating a simplified form thereof.

A base-plate A is employed adapted to be attached in any approved manner vertically upon the door-jamb C. The base-plate is
40 usually provided with a recess 10 in its outer face at its upper end, and in the recessed portion of the base-plate a disk or a wheel 11 is mounted to turn. In the outer face of the disk or wheel 11 a series of pockets 12 is
45 formed, each pocket being adapted to receive a cap, while in the back of the disk or wheel ratchet-teeth 13 are made, as shown particularly in Fig. 4.

A hammer B, preferably in the shape of a

bar, is hinged at one of its ends upon the front
50 face of the base-plate at or near its bottom, as is particularly shown in Fig. 3. This hammer is provided with a firing pin or stud 14 upon its under face, so placed that the said firing pin or stud will enter the pockets 12 in
55 the disk or wheel 11 as the said pockets are brought in the path of the hammer. The hammer is held normally in engagement with the base-plate A and its firing-pin in one of the pockets receiving the caps by means of a
60 spring 15 of any approved construction, the spring shown in the drawings being a strap-spring. This spring is illustrated as secured to the base-plate below the hinged connection thereof with the hammer, and the spring ex-
65 tends longitudinally of the hammer to an engagement at its free end with the outer face of the hammer.

An arm 17 is laterally projected from one or both sides of the hammer. These arms 17
70 are illustrated as being carried beyond or forward of the plane of the outer face of the hammer, as shown in Fig. 2, so that a space of predetermined dimensions will intervene the lateral arms 17 and the jamb of the door
75 or other object to which the alarm is applied. The wheel or disk 11 is revolved, when the hammer is carried outward or forward, through the medium of a dog 16, which is pivotally attached to the hammer usually at one
80 side, the dog being also carried to an engagement with the ratchet-surface 13 of the wheel or disk, as shown in Figs. 3 and 4. The under faces of the lateral arms 17 are usually made flat, but their outer or forward faces are
85 inclined, as is particularly shown in Fig. 3.

In connection with the alarm a trip-bar 19 is used. This bar is pivoted at one end upon a body-plate 20, the said body-plate being
90 shown secured to the door C' near the edge which engages with the jamb C. The trip-bar 19 is of such length that it extends across the front edge of the door and over the jamb into the space between the jamb and one of the lateral arms 17, being supported in this
95 position by means of a pin 22, located on the body-plate 20 and engaging with the under face of the aforesaid trip-bar.

The trip-bar may be carried entirely out of engagement with the alarm device whenever it is desired by turning the trip-bar rearwardly to the position shown in dotted lines in Fig. 1, where it will be supported by a second pin 23. The outer or front face of the trip-bar 19 at its free end especially is flat; but its under or rear face at its free end is provided ordinarily with two beveled surfaces 21, extending in opposite directions from a longitudinally-drawn central line, as is particularly shown in Fig. 5.

In operation the alarm having been secured to the jamb C of the door and the trip-bar having been connected with the door, as shown in Fig. 1, when the door is opened the free end of the trip-bar will engage with one of the lateral arms from the hammer and force the hammer forward against the tension of the spring 15, as illustrated in Fig. 3. As the hammer is thus moved outward the wheel or disk 11 will be revolved by the dog 16 a sufficient distance to bring a pocket containing a cap in the path of the firing pin or stud 14 of the hammer. After the door has been opened to a certain extent the trip-bar will have passed the arm of the hammer with which it was in engagement, permitting the spring 15 to force the hammer violently in direction of the base-plate of the alarm device, causing the firing pin or stud to explode the cap in its path. When the door is closed, the beveled surface 21 of the trip-bar will ride along the inclined surface of the lateral arm of the hammer facing the door, and as the door is closed the trip-bar will have passed the said arm and will have dropped to a point at the back of the arm, assuming its normal position. In this manner the alarm will set itself after a cap has been exploded and the door is closed.

In Fig. 6 I have illustrated a slightly-modified form of the device in which the base-plate A' is provided with a single pocket 24, adapted to contain a cap. The hammer B' is hinged to the base-plate, as has been heretofore described, and is provided with a firing pin or stud 14^a, arranged to enter the pocket 24. The hammer is likewise provided with laterally-extending arms 17^a, corresponding to the arms 17 heretofore referred to, and the hammer is held in engagement with the base-plate by means of a spring 15^a.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A burglar-alarm consisting of a base-plate having a pocket to receive an explosive, a hammer carried by the base-plate, said hammer being spring-controlled and capable of movement to and from the said pocket, and an arm projected from the said hammer, having its outer face beveled, and a trip-bar having its under surface beveled, the said trip-bar being adapted to engage with the

arm and carry the hammer outward against the resistance of its spring, and the beveled surface of the trip-bar being adapted for engagement with the beveled surface of the said arm when the trip-bar is to be carried again to an operative engagement with the arm of the hammer, as and for the purpose specified.

2. A burglar-alarm consisting of a base-plate having a pocket for the reception of an explosive, a hammer carried by the base-plate, said hammer being spring-controlled, an arm projected from the said hammer, having its under surface straight and its outer surface beveled, a pivoted trip-bar arranged for engagement with the said arm, the said trip-bar having its outer face straight and its under face at its free end beveled, and a supporting device for the said trip-arm, as and for the purpose specified.

3. In a burglar-alarm, a base-plate, a disk provided with pockets to receive explosives and held to turn on the base-plate, the said disk being provided also with ratchet-teeth, a spring-controlled hammer carried by the body, having a firing-pin adapted to enter the pockets in the disk, a shifting device for the disk, controlled by the movement of the hammer, an arm projected from the disk, and a pivoted trip-bar adapted for engagement with the said arm, as and for the purpose set forth.

4. In a burglar-alarm, a base-plate, a disk provided with pockets to receive explosives and held to turn on the base-plate, the said disk being provided also with ratchet-teeth, a spring-controlled hammer carried by the plate, having a firing-pin adapted to enter the pockets in the disk, a shifting device for the disk, controlled by the movement of the hammer, an arm projected from the hammer, having a flat under face and a beveled outer face, a pivoted trip-bar and a support for the said bar, the free end of the bar having its outer face straight and its inner or under face beveled, the free end of the trip-bar being adapted for engagement with the arm of the hammer, as and for the purpose set forth.

5. The combination with a base-plate, of a movable cartridge-carrier lying flat against the base-plate, a hammer pivoted to the base-plate and movable toward and from the cartridge-carrier, a spring carried on the base-plate and pressing the hammer toward the cartridge-carrier, and a connection between the hammer and the cartridge-carrier to operate the cartridge-carrier from the hammer.

6. The combination of a base-plate capable of carrying a cartridge, a hammer pivoted to the base-plate and swinging toward and from the same to explode the cartridge, an arm running transversely to the hammer and attached thereto whereby to transmit movement to the hammer, and a leaf-spring secured flat against a portion of the base-plate

and bearing flat against the outer face of the hammer whereby to press the arm inward against the base-plate.

7. The combination with a base-plate, of a
5 movable cartridge-carrier on the base-plate, a hammer pivoted to the base-plate and swinging toward and from the face of the cartridge-carrier, means actuating the hammer,

and a connection between the hammer and the cartridge-carrier whereby the cartridge- 10 carrier is revolved.

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