

(No Model.)

C. R. HOOPES.  
BURGLAR ALARM.

No. 521,239.

Patented June 12, 1894.

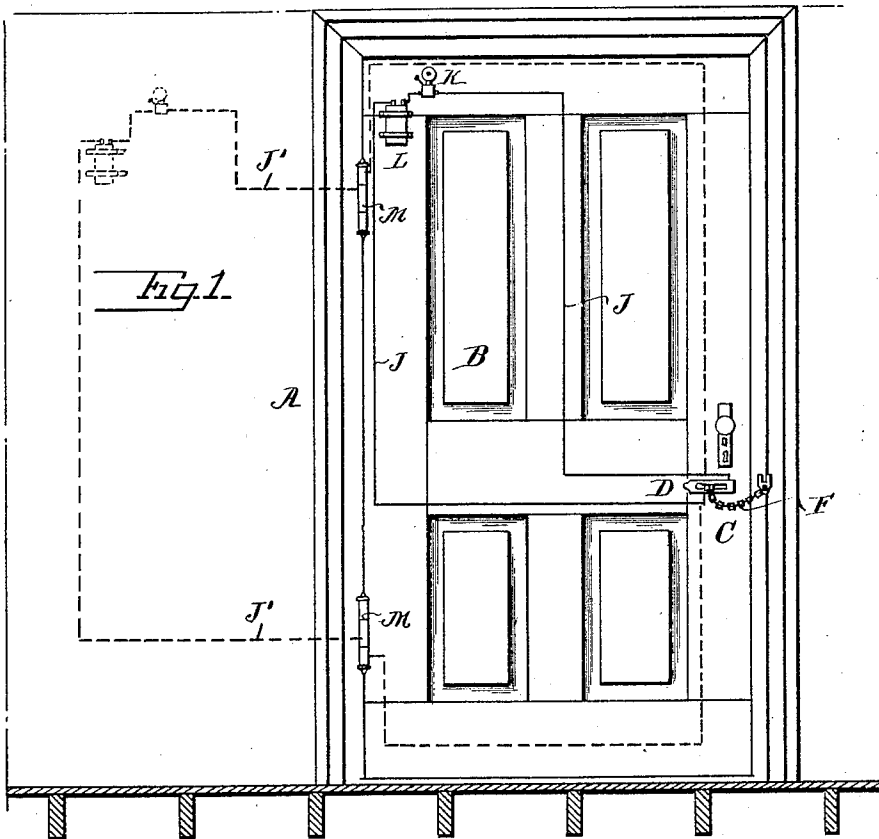
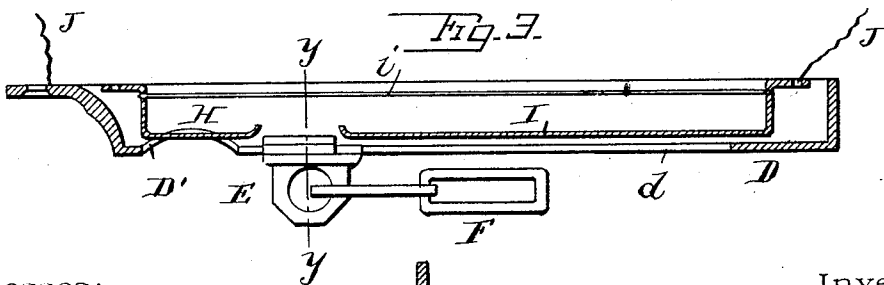
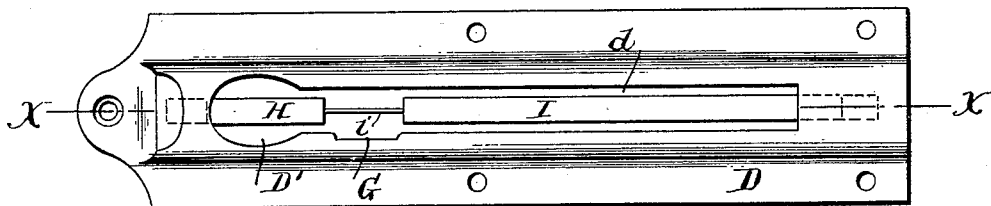


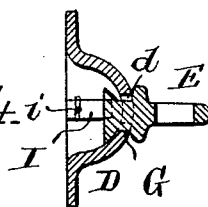
Fig. 2.



Witnesses:

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Fig. 4.



Inventor.

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By *[Signature]*

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# UNITED STATES PATENT OFFICE.

CLEMENT R. HOOPES, OF OGONTZ, PENNSYLVANIA.

## BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 521,239, dated June 12, 1894.

Application filed April 5, 1894. Serial No. 506,393. (No model.)

*To all whom it may concern:*

Be it known that I, CLEMENT R. HOOPES, of Ogontz, county of Montgomery, and State of Pennsylvania, have invented an Improvement in Burglar-Alarms, of which the following is a specification.

My invention has reference to burglar alarms, and consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

Heretofore it has been customary to employ bolts for securing doors against burglars and others whose admittance is not desired. Chain bolts are easily unlatched by skillful burglars so that they lose in a great measure their value as safe guards against surreptitious entrance.

The object of my invention is to provide an attachment to chain bolts so that an alarm is sounded upon any attempt being made to manipulate said chain bolt.

In carrying out my invention I provide the socket piece of the chain bolt with one or more electrical contacts, preferably formed as springs, and so arranged as to be brought into contact with the bolt in case the same is moved. In connection with the above device I arrange an electric circuit including a battery or otherwise charged, and an alarm or indicator such as an electric bell, one terminal of the electric circuit being connected with the spring contact and the other terminal with the socket piece, so that it is in electrical connection with the movable bolt. The bolt is normally out of contact with either of the spring contacts, but should it be moved in either direction it will instantly come in connection with one or other of the spring contacts and cause the electric bell to sound an alarm. I prefer to form a slight recess or provide a suitable stop to normally hold the bolt in a definite position out of contact with the springs, but so that should the door be opened or any attempt made to push the bolt back to unlatch it, it will instantly come in connection with the contact springs and sound the alarm as aforesaid.

It is immaterial to my invention what the details of construction are as they may be modified in a variety of ways to adapt the improvement to any chain bolt now upon the

market, or which might be made as a substitute for those now in use.

The invention will be better understood by reference to the accompanying drawings, in which—

Figure 1 is an elevation of the door having my improvements applied thereto. Fig. 2 is a front elevation of the socket piece of the chain bolt. Fig. 3 is a section plan view of same on line  $x-x$  of Fig. 2 showing the bolt in position; and Fig. 4 is a cross section of the same on line  $y-y$  of Fig. 3.

A is the main frame of the door.

B is the door proper, and M are its hinges.

C is a chain bolt and is similar in construction to chain bolts heretofore employed. The chain bolt consists of a socket piece D attached to the door and having a long narrow slot  $d$  terminating in a large opening  $D'$  at the distant end or that nearest the hinges of the door. A sliding bolt E is connected by a chain F in any suitable manner with the frame A of the doorway. The length of the bolt E is just long enough to permit the bolt E being inserted or removed from the opening  $D'$ .

The bolt is formed with an enlargement which fits the socket piece and which cannot be withdrawn through the narrow portion of the slot  $d$ , as is well known. Formed in the lower part of the slot  $d$  near the enlarged opening  $D'$ , I provide a recess in one of the walls in the slot as indicated at G, the object of which is to enable the bolt when placed in the slot at this position to remain there without regard to jarring or vibration of the door. Arranged within the socket piece, I provide two contact springs H and I, separated at their inner ends a distance slightly greater than the length of the bolt, so as to just clear it when the said bolt rests in the notched portion of the slot as clearly shown in Fig. 3. The contact springs are electrically connected together by a conductor  $i$  or in any other suitable manner, and these two springs might be readily formed in one piece, in which case the conductor  $i$  would represent the connecting base.

The advantage of placing the bolt E normally in the opening G near the enlarged opening  $D'$  is to cause the bolt to be moved for the very smallest opening of the door, the

said opening being necessary as a preliminary operation to throwing the bolt out of the socket piece when an attempt is made surreptitiously to force an entrance.

5 The socket piece D is electrically connected to one terminal of the electric circuit J, and the springs H, I, are electrically connected with the other terminal of said circuit J. The circuit J is secured to the door and includes  
10 in it a suitable battery L and an alarm or indicator, to which devices may be secured to and movable with the door. It will now be evident that if the bolt E be moved either to the right or left to a very small extent it will  
15 instantly be brought into contact with the contact springs I or H, and will complete the electric circuit and cause the alarm or indicator to be operated. Normally the bolt E is held out of contact, but no attempt can be made  
20 to shift the said bolt to unlatch it without sounding the alarm.

It is quite evident that in place of the battery and indicator being carried upon the door, the circuit J might be as indicated at  
25 J' in dotted lines leading to an alarm or indicator at a distant place, and forming the electrical connections between the circuit on the movable door and the stationary circuit through the hinges M, M as a media. This  
30 is clearly indicated in Fig. 1 in dotted lines.

I do not confine myself to any particular construction of the chain bolt mechanism, nor to the electrical connections thereof, my invention comprehending broadly a chain bolt  
35 combined with suitable electrical devices for sounding an alarm upon moving the bolt proper. It is also evident that where a source of electrical energy is available other than by a battery, the electrical circuit may be charged  
40 therefrom.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a movable door, a chain bolt to limit the movement of said door  
45 provided with a circuit closing device or switch, an electric circuit controlled by a circuit closing device or switch of the chain bolt,

and an alarm or indicating device included in the electric circuit.

2. The combination of a moving door, a chain bolt to limit the movement of said door  
50 provided with a circuit closing device or switch, an electric circuit controlled by a circuit closing device or switch of the chain bolt, and a battery and alarm or indicator both secured to and movable with the door included  
55 in the electric circuit and also carried by the door.

3. The combination of a movable door, a chain bolt to limit the movement of said door  
60 provided with a circuit closing device or switch, and means to normally hold the movable bolt in a fixed position to maintain the circuit open.

4. In a chain bolt, the combination of a socket piece, a sliding bolt and chain, and one or more electric contacts arranged within the socket piece but electrically independent thereof and adapted to be brought into contact with the sliding bolt when the latter is  
70 moved.

5. In a chain bolt, the combination of a socket piece having a bolt slot provided with a notched recess, a sliding bolt adapted to the notch or recess to hold it normally in a definite position, and one or more electrical contacts arranged close to the notched or recessed portion of the socket piece but electrically independent of said socket piece whereby normally the bolt is out of contact therewith, but  
80 adapted to close an electric circuit when the bolt is moved.

6. A chain bolt having a movable bolt and chain connection, combined with an electric circuit closing switch device or contact adapted to close the electric circuit upon movement being given to the bolt.

In testimony of which invention I hereunto set my hand.

CLEMENT R. HOOPES.

Witnesses:

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