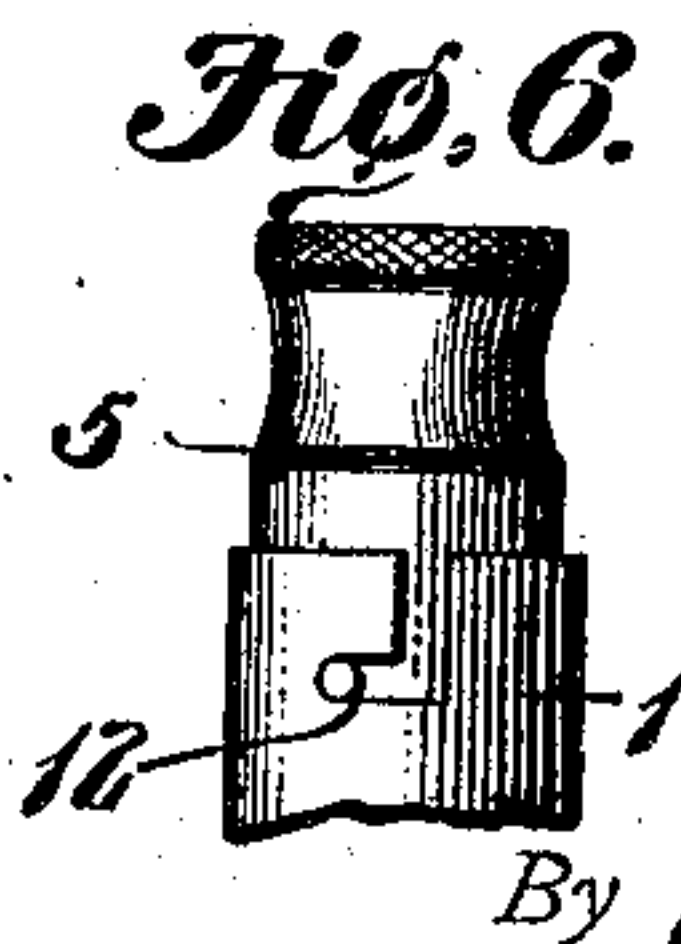
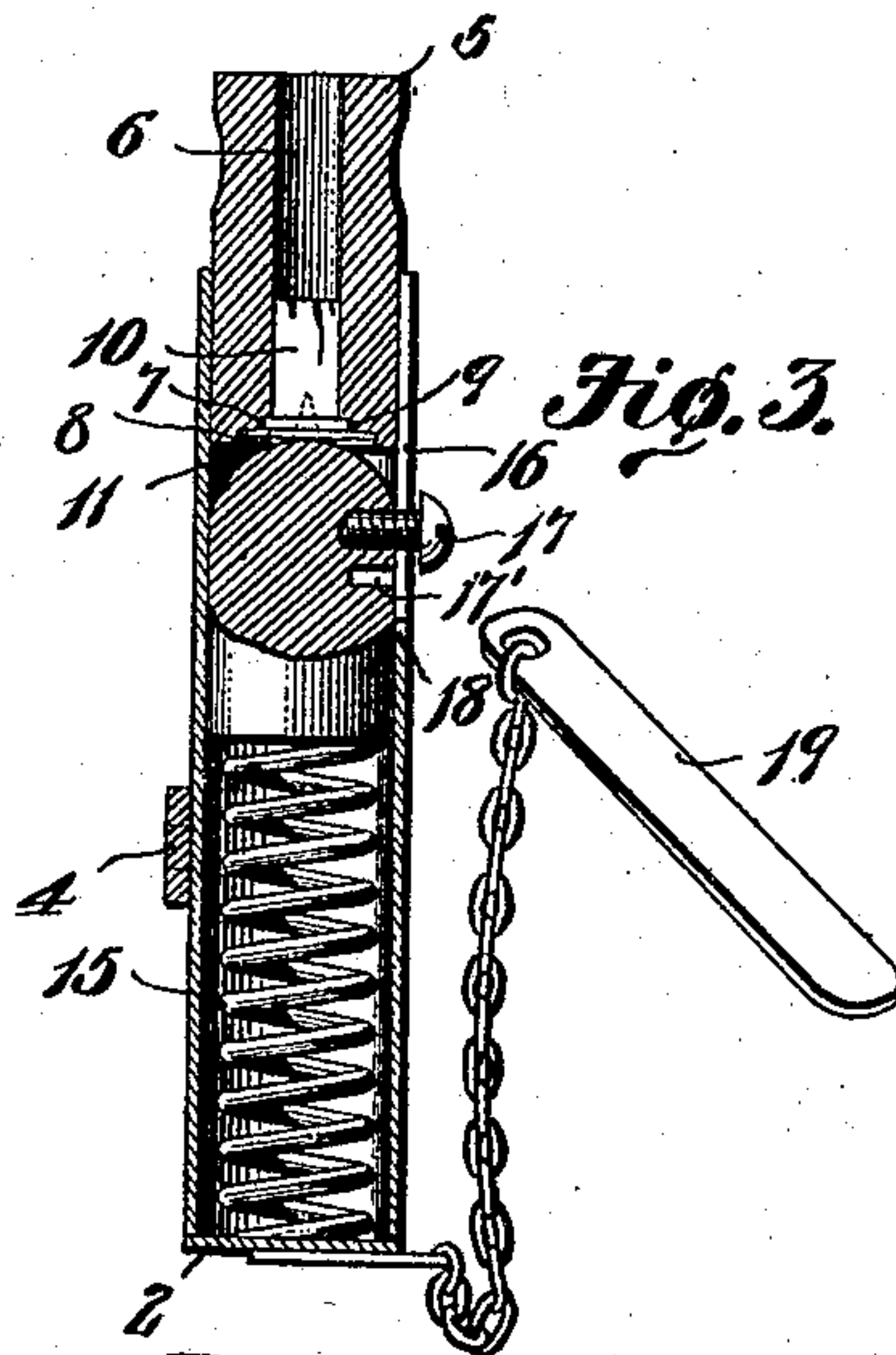
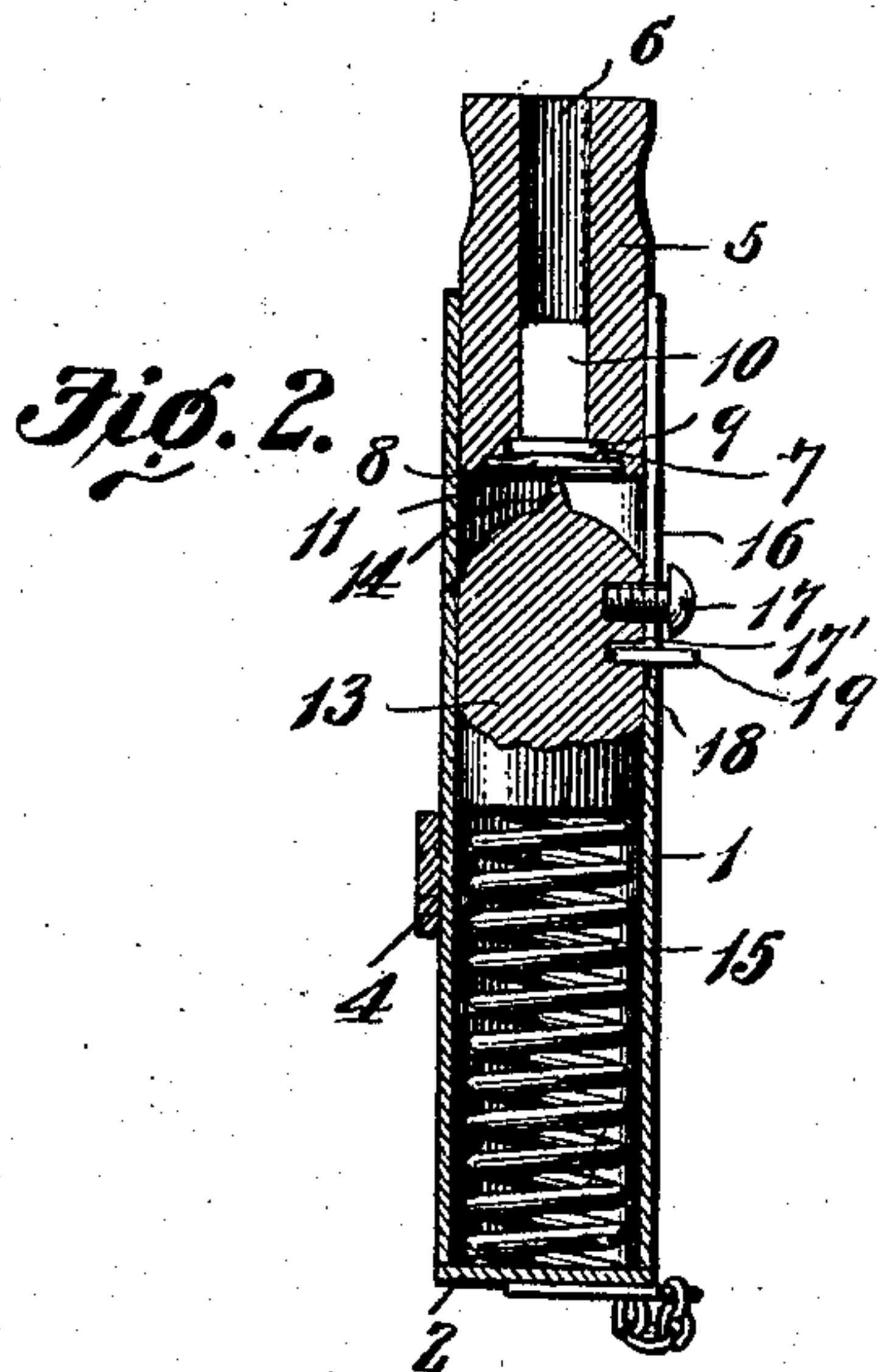
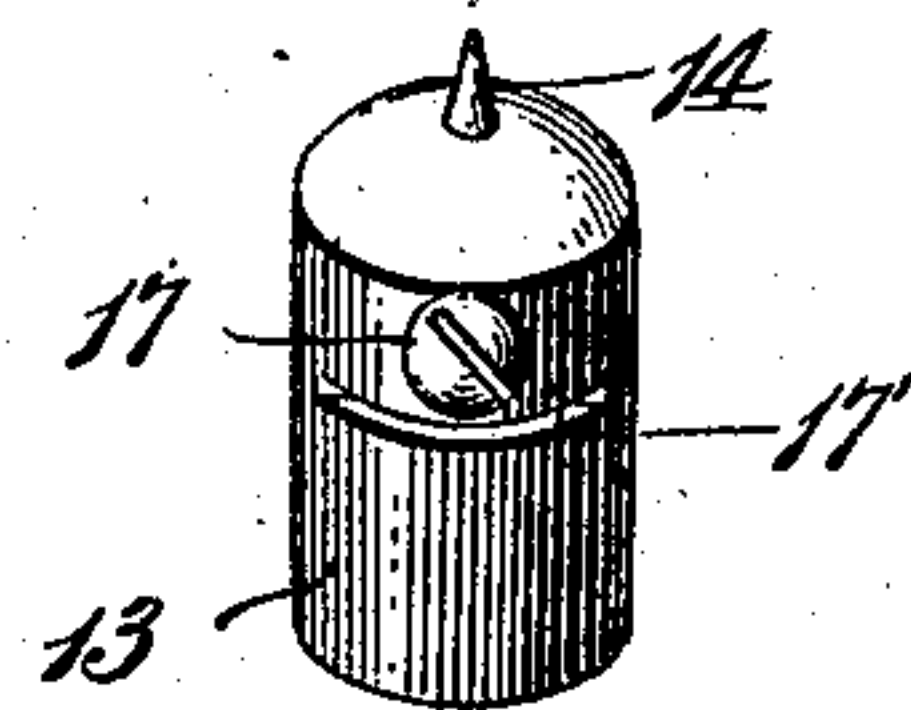
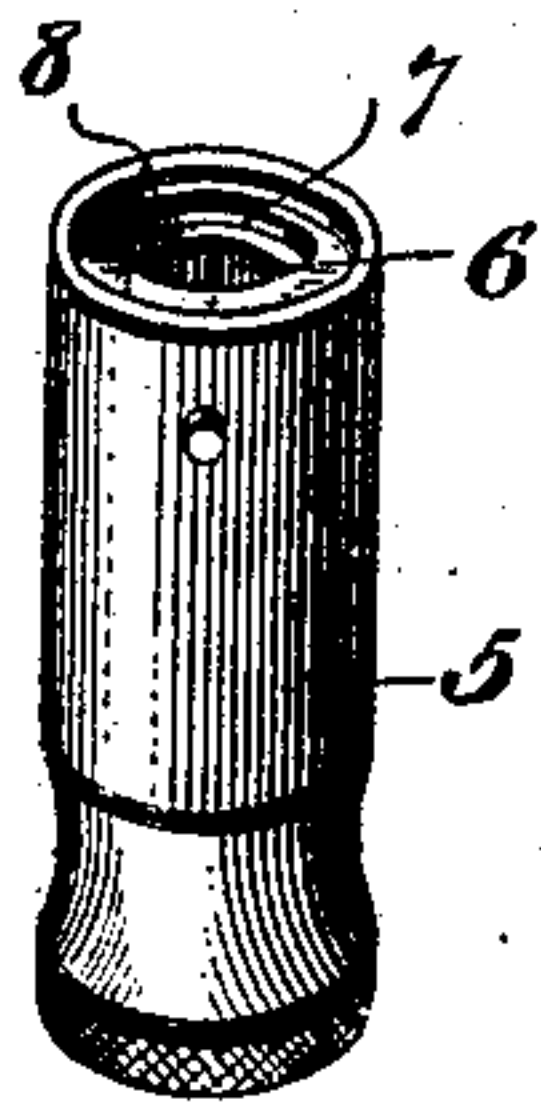
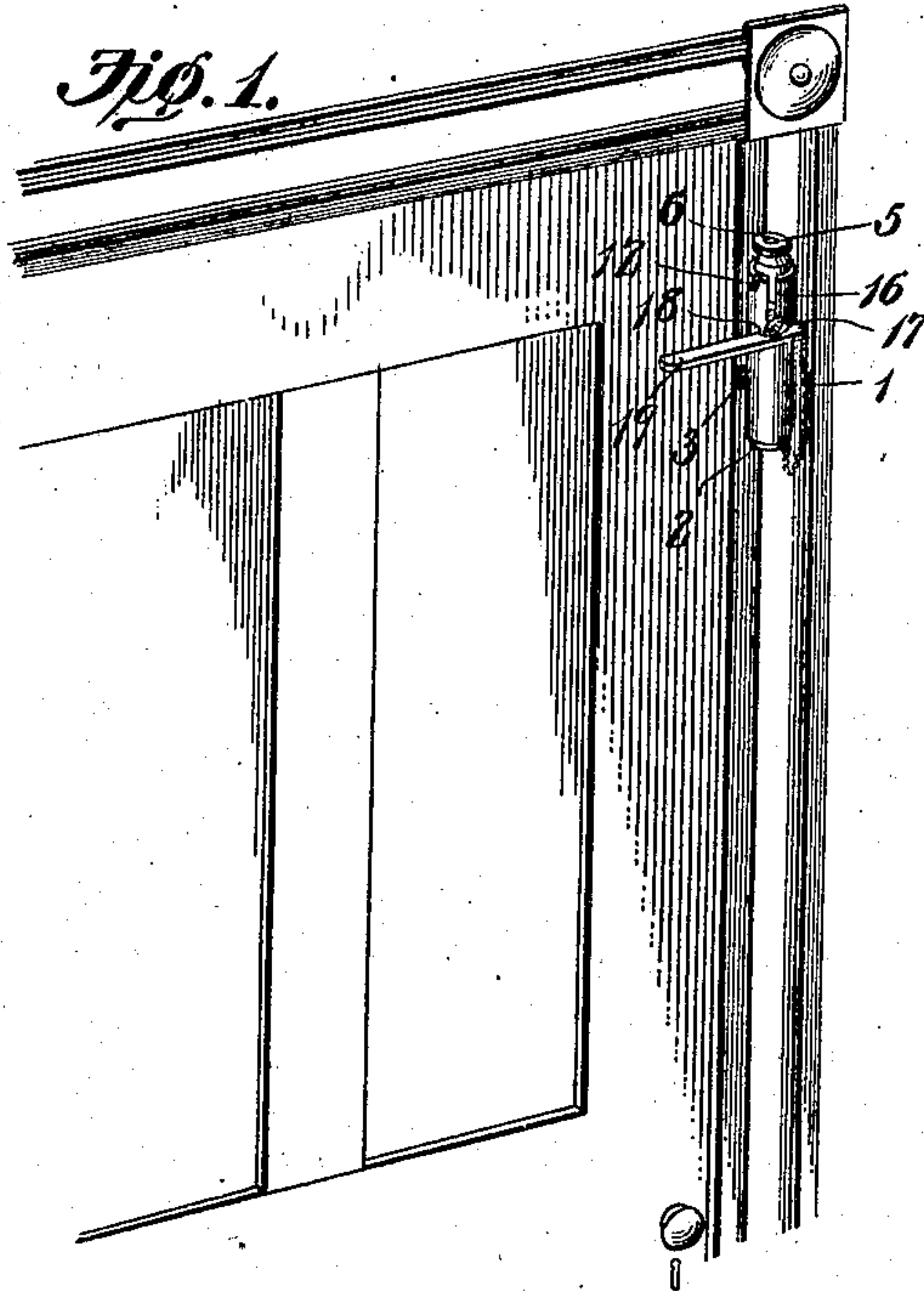


No. 855,023.

PATENTED MAY 28, 1907.

J. A. SMITH.  
BURGLAR ALARM.  
APPLICATION FILED MAY 8, 1906.



WITNESSES:  
*E. J. Blount*  
*Chattie Bradway,*

*Joseph A. Smith,*  
INVENTOR

By *Chas. Snow & Co.*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

JOSEPH ARTHUR SMITH, OF DENVER, COLORADO, ASSIGNOR OF ONE-HALF  
TO ROBERT J. MITCHELL.

## BURGLAR-ALARM.

No. 855,023.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed May 8, 1906. Serial No. 315,834.

*To all whom it may concern:*

Be it known that I, JOSEPH ARTHUR SMITH, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented a new and useful Burglar-Alarm, of which the following is a specification.

The present invention relates to a burglar alarm of that type designed to give a signal, as by firing a blank cartridge, when a door or window of a dwelling or other building is opened by unauthorized persons.

It has for its object to provide a device of this character which is reliable in operation, and simple and inexpensive to construct.

To these ends, the invention comprises the various details of construction and arrangement of parts to be more fully described hereinafter, in connection with the accompanying drawing, and set forth with particularity in the claims appended hereto.

In the accompanying drawing which illustrates one embodiment of the invention:— Figure 1 is a perspective view of the alarm applied to a door and showing the parts in set position. Fig. 2 is a longitudinal section thereof. Fig. 3 is a similar view showing the alarm after it has been fired. Figs. 4 and 5 are detail perspective views respectively of the cartridge and cap holder and firing pin. Fig. 6 is a detail view.

Referring to the drawing, 1 represents the frame of the alarm which may be of any approved construction and provided with a socket or receptacle for receiving the working parts. According to the preferred form of the invention, for the reason of its cheapness and simplicity, the frame 1 is constructed from tubular stock of metal which is closed at its bottom end by a cap 2 suitably secured thereto. The frame is adapted to be secured in place by means of screws 3 or other fastening devices extending through perforations in the base plate 4 on which frame is mounted.

At the upper end of the tube or frame 1 is supported the cap end cartridge holder 5 which extends at its upper and beyond the top of the tube so as to be easily gripped between the fingers for removing it. This holder 5 is provided with a central bore 6 and at its lower end is counterbored on two different diameters so as to form the shoulders 7 and 8 which receive respectively the bead 9

of the blank cartridge 10 and the torpedo or powder cap 11. By this arrangement, the alarm can be used with either a cartridge or a cap, or with both, as desired. When simply a cap is employed, an empty cartridge shell may best be utilized to serve as a support for the cap in addition to the shoulder 8 so that the cap will be fired without fail. The holder 5 is secured in place by means of a bayonet joint indicated at 12, Fig. 6.

Arranged in the frame below the holder 5 is the firing member 13, having at its upper end the pin 14 for igniting the cap and cartridge. Below the firing member 13 is a helical compression spring 15 that is seated at its lower end on the cap 2 of the frame or tube 1 and abuts at its upper end the under side of the firing member. Extending from one side of the firing member through a longitudinal slot 16 in the tube 1 is a thumb piece or screw 17 whereby the firing member can be depressed and locked in position. For locking the firing member the same is provided with a slot 17' which is adapted to register with a slot 18 in the tube 1 when the said member is in set position so as to receive a key 19. This key is preferably a thin strip of metal, long enough to extend partly over the door so that when the latter is opened, it will be displaced from the slots 17 and 18 and the firing member released. The key is permanently connected to the frame of the alarm by means of a chain so as to be always convenient for setting the alarm when desired.

Although I have illustrated the alarm as applied to a door so as to be actuated directly thereby, I desire to have it understood that the alarm can be located at a remote point therefrom and where it may be better heard. In such a case it is actuated by the door through a cord, or any other suitable means, operatively connecting the door and the alarm. On the same principle, one alarm can be located at a central point or station, and be connected with any desired number of doors and windows so as to be fired by any one of them.

I have described the principle of operation of the invention, together with the apparatus which I now consider to be the best embodiment thereof, but I desire to have it understood that the apparatus shown is



merely illustrative, and that the invention can be carried out by other means within the scope of the claims.

What is claimed is:—

- 5 1. In an alarm, the combination of a tubular support closed at one end and provided with transversely and longitudinally extending slots, the latter slot being open at the open end of the support, a firing pin arranged  
10 in the support and provided with a transversely extending slot, a finger-piece on the firing pin which extends through the longitudinal slot and passes freely in and out of the latter during the removal and insertion  
15 of the firing pin, a key or trigger for engaging in the transversely extending slot of the support and firing pin for holding the latter in set position, and a cartridge holder removably supported in the open end of the sup-  
20 port in coöperative relation with the firing pin and forming a closure for the open end of the support to retain the firing pin therein.
2. In a device of the class described, the combination of a single-piece hollow member

open at one end and provided with a trans- 25  
verse slot intermediate its ends and a longitudinal slot extending inwardly from the open end, a helical compression spring abutting the closed end of the member, a firing  
pin arranged in end to end relation to the 30  
spring and having a transverse slot adapted to register with the slot of the member when the pin is in set position, a flat key for engaging the transverse slots of the pin and member, a flexible element attaching the key to 35  
the member, a device on the pin engaging in the longitudinal slot of the member for preventing the pin from turning and permitting it to move longitudinally, and a cartridge holder removably held in the open end of 40  
the member.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOSEPH ARTHUR SMITH.

Witnesses:

E. J. ADDY,

E. W. ELWELL.