

No. 824,161.

PATENTED JUNE 26, 1906.

L. W. WADE.
DETONATING BURGLAR ALARM.
APPLICATION FILED NOV. 25, 1904.

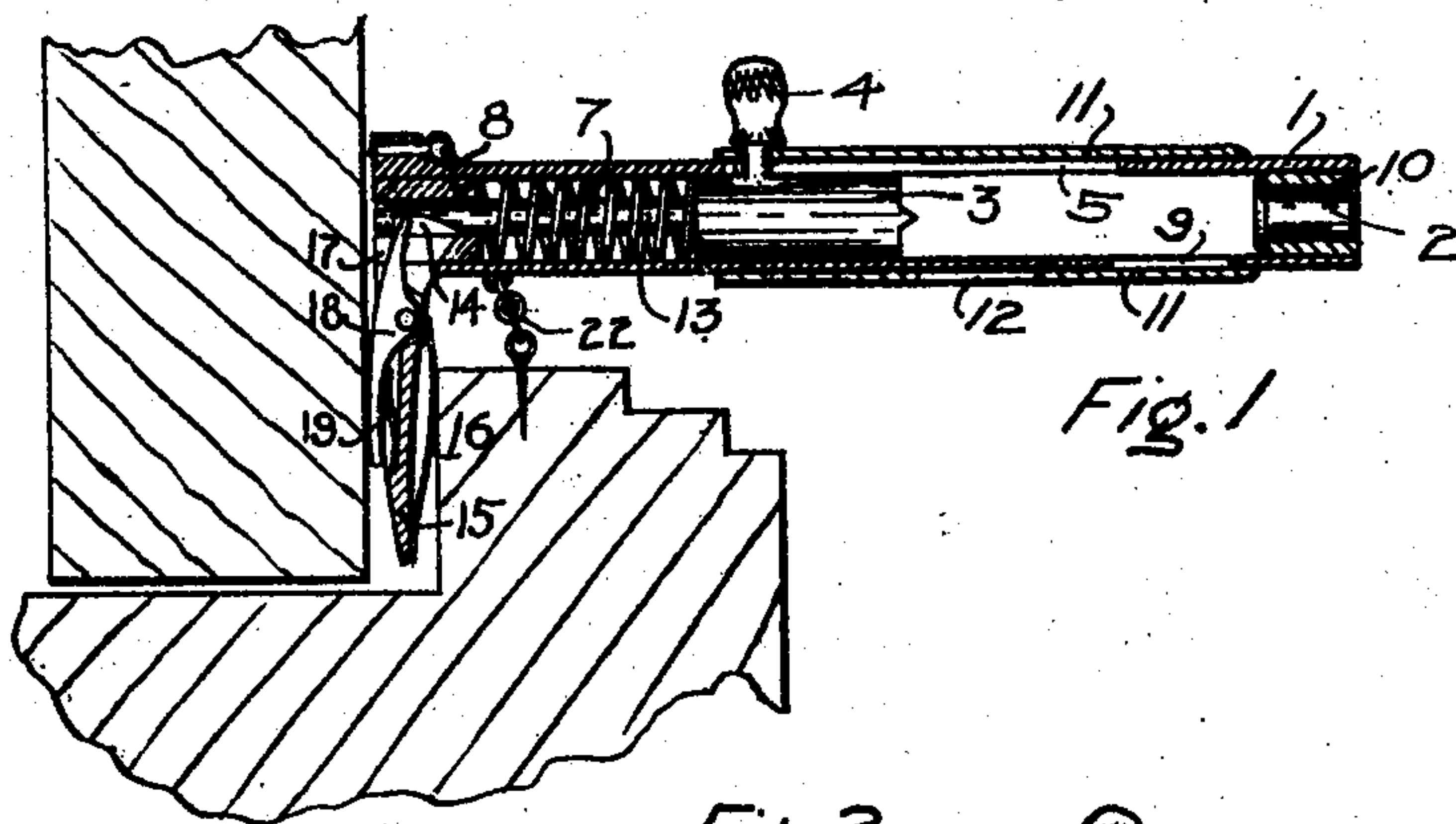


Fig. 1

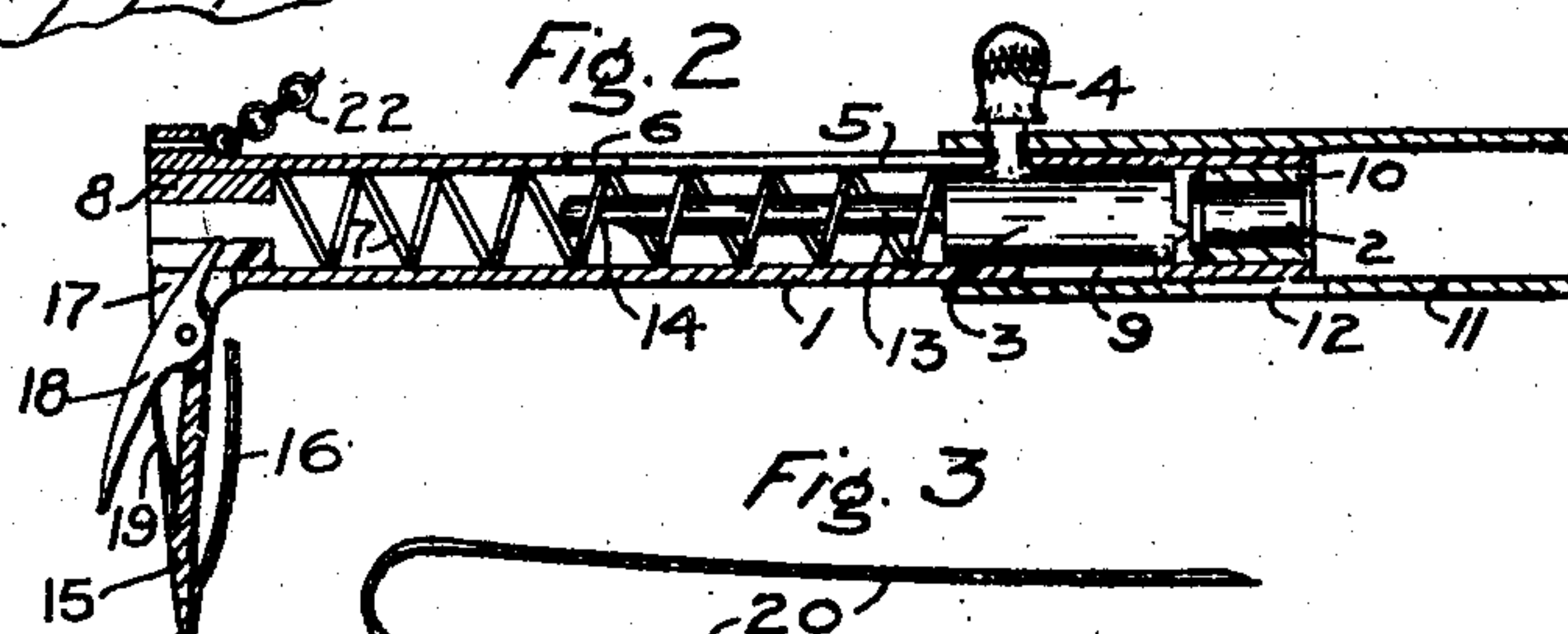


Fig. 2

Fig. 3

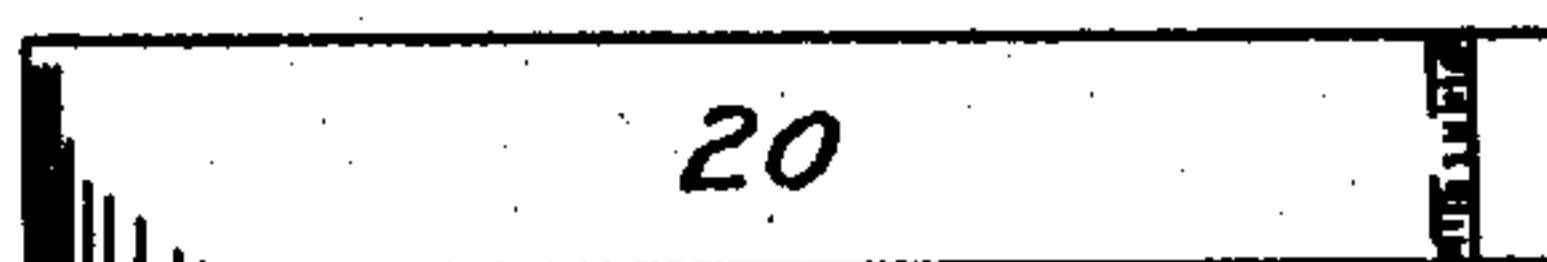
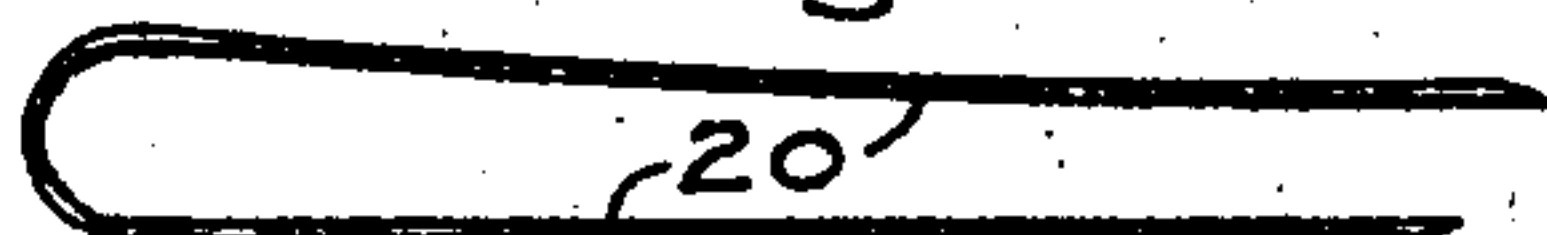


Fig. 4.

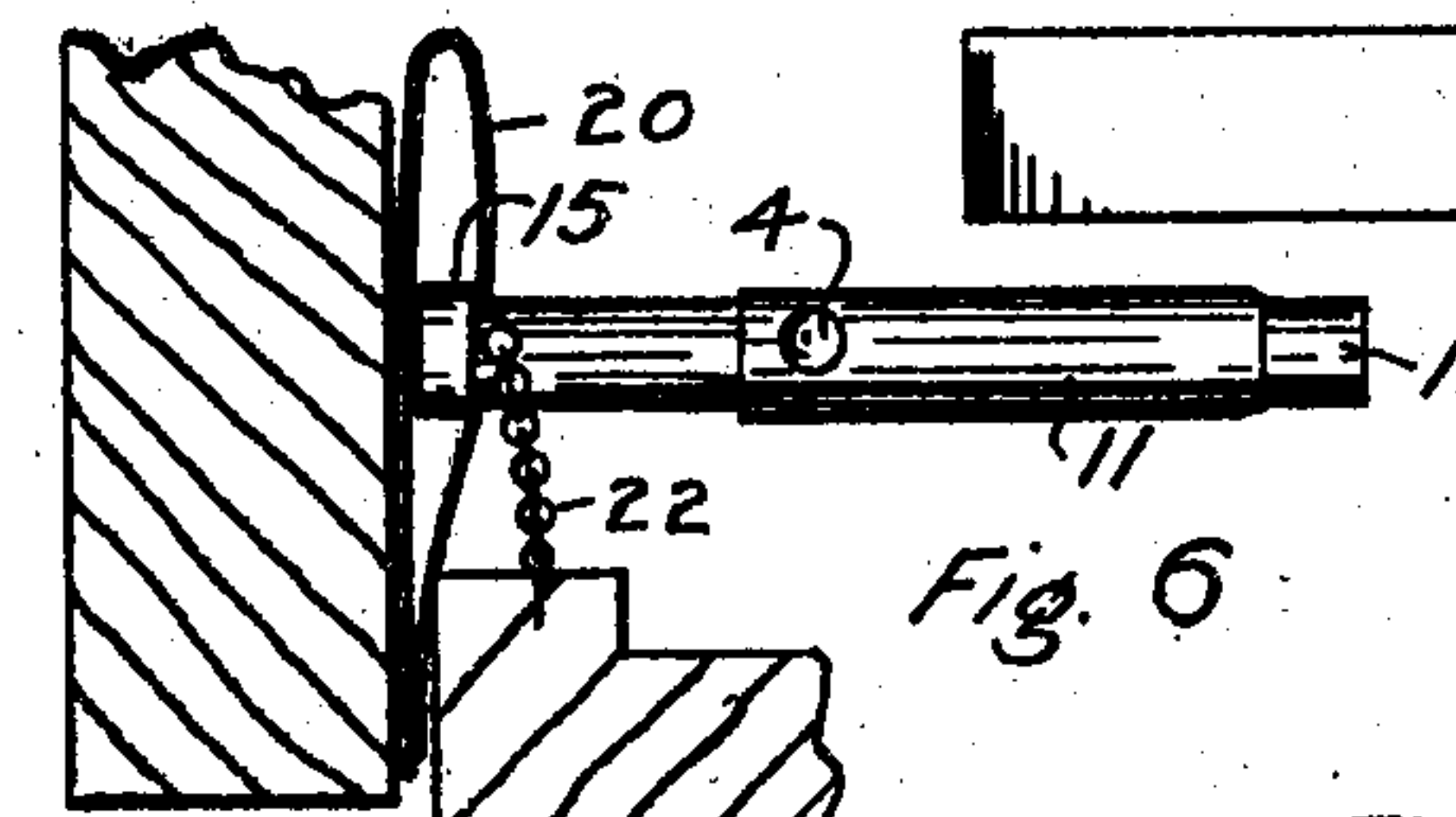


Fig. 6

Fig. 7.

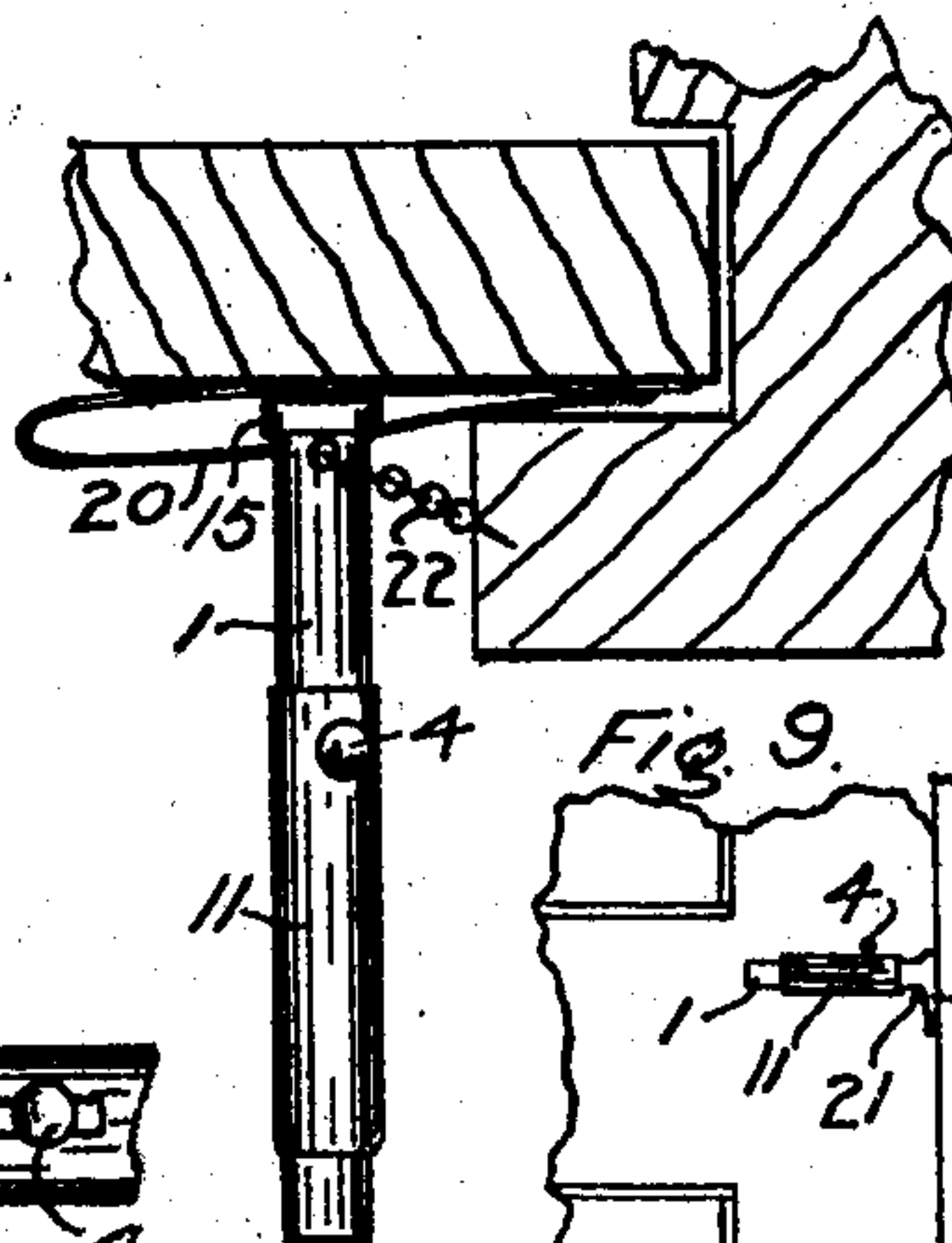


Fig. 9.

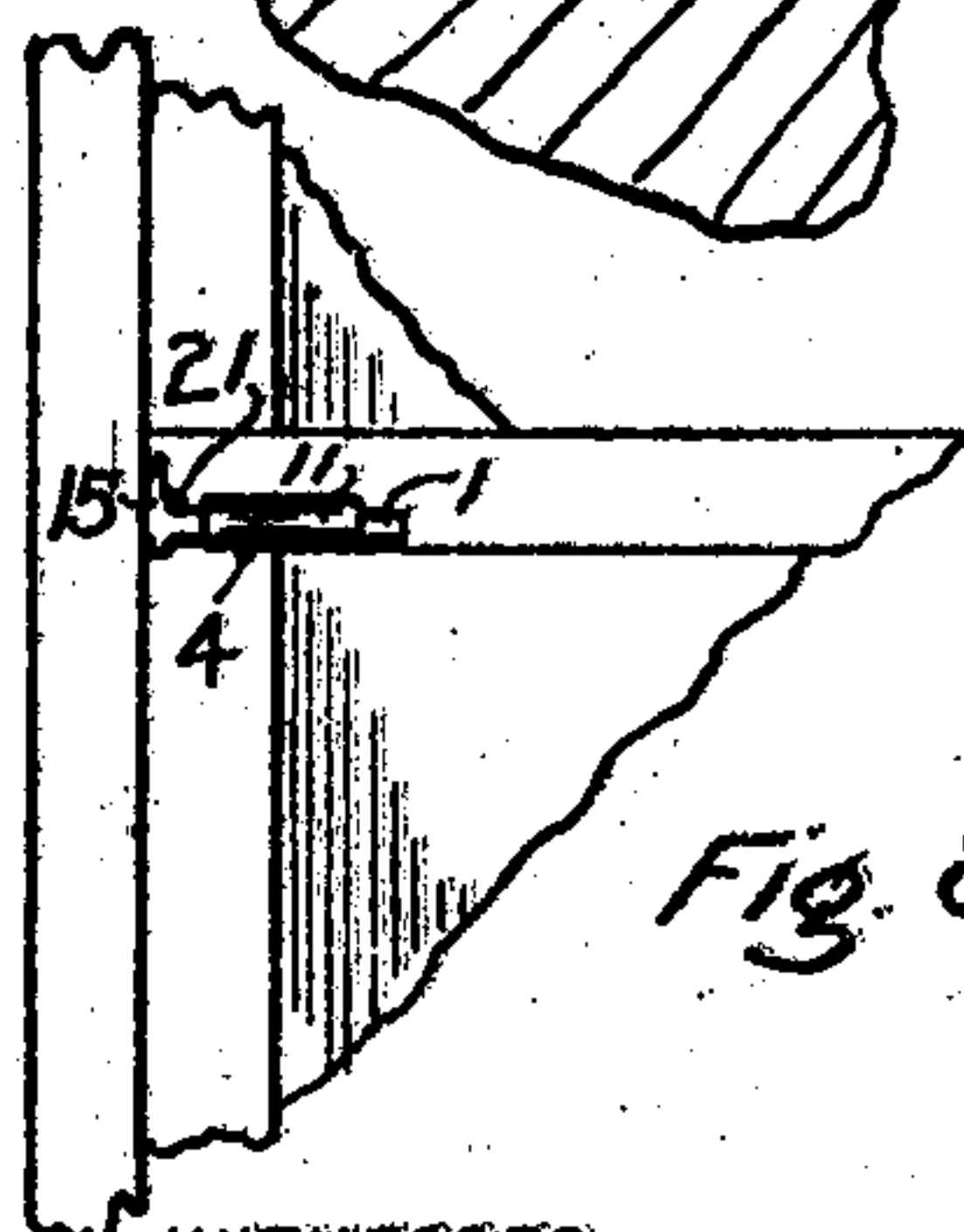
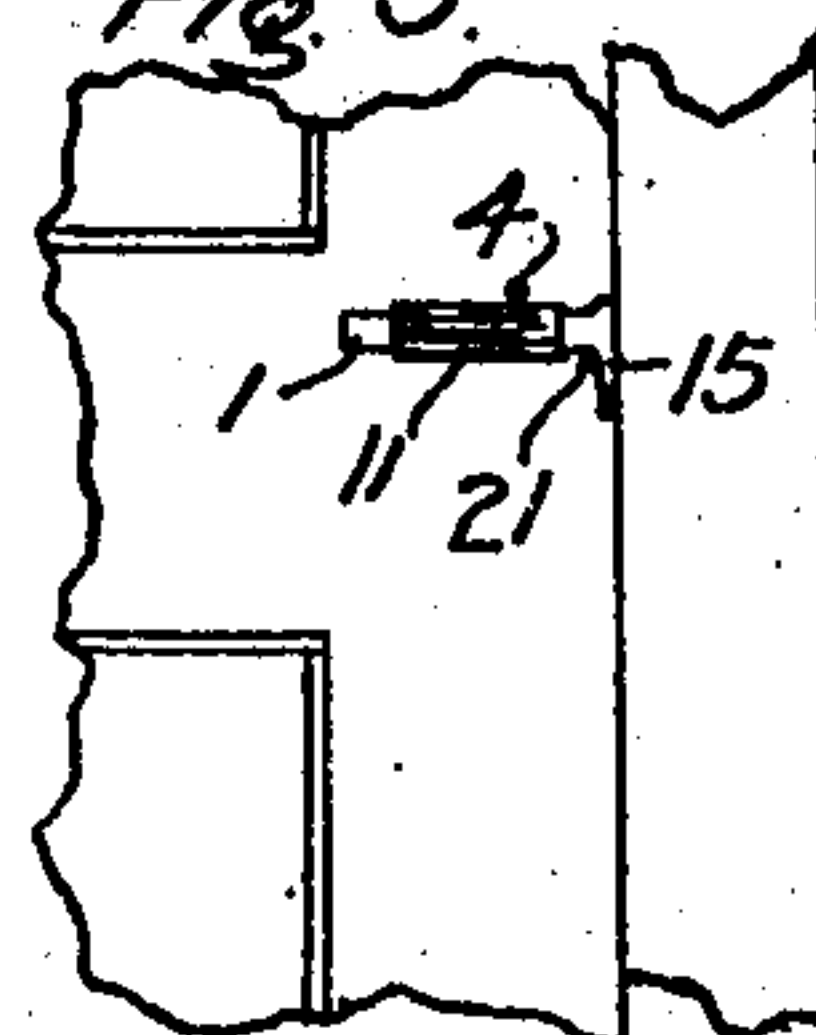
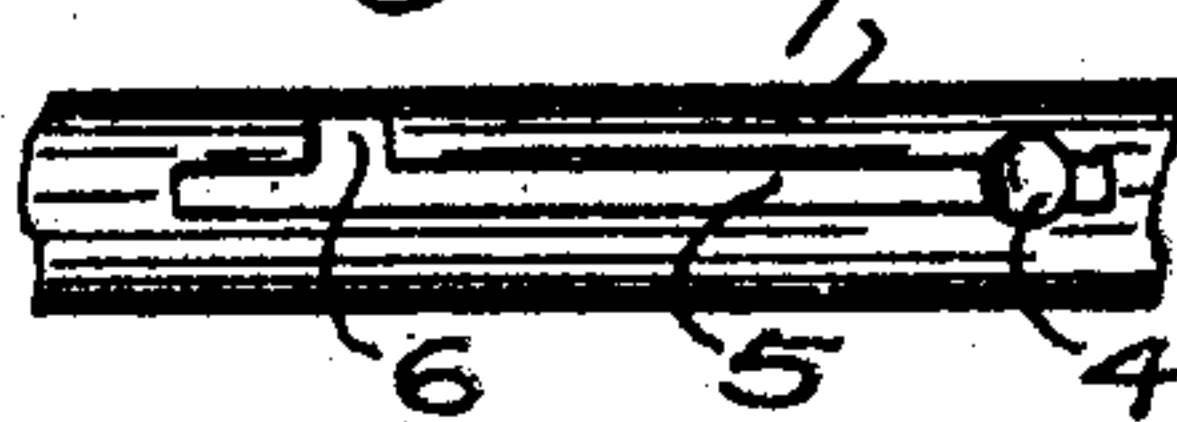


Fig. 8.

Fig. 5.



WITNESSES

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LAWRENCE W. WADE, OF TACOMA, WASHINGTON.

DETONATING BURGLAR-ALARM.

No. 824,161.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed November 25, 1904. Serial No. 234,220.

To all whom it may concern:

Be it known that I, LAWRENCE W. WADE, a citizen of the United States of America, residing at Tacoma, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Detonating Burglar-Alarms, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to detonating burglar-alarms, and has for its objects, first, to provide a device which is of small compass and yet which may be readily applied to either side of any door or window; second, which prevents a plug from being inserted between the hammer and the cartridge, and, third, which prevents the discharge of the cartridge from soiling or staining the door or window or their frames. I attain these objects by the devices illustrated by the accompanying drawings, in which—

Figure 1 is a horizontal section of my alarm applied to a door and ready to be fired. Fig. 2 is a horizontal section thereof, showing the positions of the parts when it is fired. Figs. 3 and 4 are respectively plan and side views of my auxiliary applying-spring. Fig. 5 is a plan of a portion of the main tube, showing the slot and notch therein. Fig. 6 is a plan showing my alarm applied to a door by means of my auxiliary applying-spring. Fig. 7 is a similar view showing it applied to a window, and Figs. 8 and 9 are views showing my alarm applied to a window and a door, respectively, by means of a nail.

Similar numerals of reference refer to similar parts throughout the several views.

My alarm consists of a main firing-tube 1, adapted to receive a cartridge 2 near its outer end and having a spring-actuated hammer 3 sliding within the tube and adapted to strike and to fire the cartridge 2. The hammer 3 is cocked by means of a handle 4, extending from its side and passing through a longitudinal slot 5 in the tube 1. The slot 5 has a recess or notch 6 near its inner end, into which the handle 4 may be pressed, so as to prevent the alarm from firing prematurely. The hammer 3 is actuated by means of the spiral spring 7, compressed between it and the shoulder 8 at the inner end of the tube. The slot 9 is cut in the tube 1 near the cartridge-seat 10 and is long enough to receive a blank cartridge of the caliber desired, but too short to receive a loaded cartridge. The protective tube 11 is secured to the handle 4 and

slides over the tube 1 with the hammer 3. This tube 11 has a slot 12, corresponding in size with the above-mentioned slot 9 and so placed therein that when the hammer 3 is pulled back out of the way of a cartridge entering the two slots 9 and 12 exactly correspond, and when the hammer is either in its cocked or its fired positions, Figs. 1 and 2, the two slots 9 and 12 do not correspond, and therefore no device could be inserted to prevent the hammer from firing the cartridge. The hammer 3 has a central extension 13, projecting backward in the tube 1 and being of such length that when the handle 4 is engaging the notch 6 the end of the extension 13 reaches the end of the tube 1. The extension 13 is provided with a notch 14 near its inner end adapted to be engaged by the end of the hereinafter-described controlling-trigger.

The tube 1 is provided at its inner end with a foot 15, extending at right angles therefrom and being practically wedge-shaped. A flat spring 16 is secured to the end of the foot 15 on the outer side thereof and is adapted to help the wedge-foot 15 to hold the alarm when it is placed in position. A recess 17 is cut in the foot 15, and a trigger 18 is pivoted therein in such manner that the end thereof extends to about the center line of the tube 1 and is adapted to engage the notch 14 in the extension 13 of the hammer 3 when in its cocked position, so as to prevent the said hammer from moving under the influence of the spring 7 when the other end of the trigger 18 is held. A small spring 19 is inserted under the outer end of the trigger, so that when the device is in its fired position the spring 19 will hold the end of the trigger 18 out of the way of the extension 13 of the hammer 3, so that it can be drawn back into its cocked position.

My invention also includes an auxiliary applying-spring 20, (illustrated in Figs. 3, 4, 6, and 7,) which consists of a flat piece of spring metal bent to substantially the shape shown in Fig. 3, having one leg slightly shorter than the other and having both legs slightly sharpened. This auxiliary applying-spring I use in cases where the space between the door or window and the casing is too small to allow the foot 15 to be inserted, as shown in Fig. 1. In such cases I insert the spring 20 and then insert the foot 15 between the legs thereof, as shown in Figs. 6 and 7.

In some circumstances it is not desirable to use the spring 20, and then I insert a nail or screw 21, Figs. 8 and 9, into the door or into the window-sash in such position that there is just enough space between the screw 21 and the side of the door or window frame to allow the foot 15 to be forced between them. In the case illustrated in Fig. 8 the screw 21 is driven into the lower sash of the window, which may then be left open at any height, and the foot 15 is placed between it and the window-frame from the bottom, (end pointed up.) If the sash is lifted, the screw is slid from over the foot 15 and the trigger 18 is released and the alarm is fired. In the case illustrated in Fig. 9 the screw 21 is driven in a door and acts in a similar manner as above described. As soon as whatever means by which the alarm is held and the trigger 18 pressed against the foot 15 moves enough to allow the trigger under the action of springs 19 and 7 to turn on its pivot, so that the hammer 3 is released, the hammer 3 and the outer tube 11 pass rapidly along the inside and outside, respectively, of the tube 1, and the hammer 3 strikes and fires the cartridge 2. The flame and smoke from the cartridge are, however, kept from injuring the wood-work of the door or window by the tube 11, which now extends over the end of the tube 1. An additional effect is obtained in the increased noise from the explosion of the cartridge by the extended tube 11.

It will be noted that my device is readily installed on any window or door without necessarily permanently marring them and is also especially adapted for temporary use, as by travelers in hotels, &c. If, however, it is desired to permanently secure it at any place, this may be done by the chain 22, which is secured at one end to the alarm, and at the other end is provided a screw-eye.

If the alarm has not been fired and it is desired to open the window or door, the tube 1 should be held firmly in one hand, and the handle 4 should be pressed back with the other until the notch 6 is reached, when it should be pressed into it, or the device may be held and allowed to pass slowly to the fired position, when the cartridge may be removed, if desired.

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

1. In a detonating burglar-alarm, a tube having a slot therein adapted to admit a cartridge into said tube, and means adapted to close said slot when the alarm is set.

2. In a detonating burglar-alarm, a tube having a slot therein adapted to admit a cartridge into said tube, and means sliding on said tube adapted to close said slot when the alarm is set.

3. In a detonating burglar-alarm, a tube

having a slot therein adapted to admit a cartridge into said tube, means for firing the cartridge, and means secured to said firing means and adapted to close said slot when the alarm is set.

4. In a detonating burglar-alarm, a tube having a slot therein adapted to admit a cartridge into said tube, means sliding into said tube for firing the cartridge, and means secured to said firing means and adapted to slide on said tube and to close said slot when the alarm is set.

5. In a detonating burglar-alarm, a main tube having a slot therein adapted to admit a cartridge into said tube, and an outer tube sliding on said main tube and having a slot therein adapted to register with the slot in said main tube to admit a cartridge therethrough when the alarm is not set but being out of register therewith when the alarm is set.

6. In a detonating burglar-alarm, a main tube having a slot therein adapted to admit a cartridge into said tube, means for firing the cartridge, and an outer tube secured to said firing means and having a slot therein adapted to register with the slot in said main tube to admit a cartridge therethrough when the alarm is not set but being out of register therewith when the alarm is set.

7. In a detonating burglar-alarm, supporting means adapted to be inserted between two adjacent bodies and extending from therebetween, a separate firing-tube having a lateral extension adapted to engage and be held by said supporting means, and a trigger mechanism within said lateral extension and engaging and being held by said supporting means and being adapted to be released by a slackening of said supporting means.

8. In a detonating burglar-alarm, a U-shaped supporting-spring adapted to be inserted between two adjacent bodies and extending from therebetween, a separate firing-tube having a lateral extension adapted to engage between and be held by the legs of said supporting-spring, and a trigger mechanism within said lateral extension and engaging and being held between the legs of said supporting-spring and being adapted to be released by the slackening of the pressure of said legs.

9. In a detonating burglar-alarm, a main tube containing a cartridge and spring-actuated means for firing the same, and an outer tube sliding on said main tube and extending beyond the end thereof when the cartridge is fired.

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

LAWRENCE W. WADE.

Witnesses:

M. A. VAN HOUSE,
C. E. PALMER.