

(No Model.)

T. C. SMITH.
 DETONATING LOCKING DEVICE.

No. 543,062.

Patented July 23, 1895.

Fig. 1.

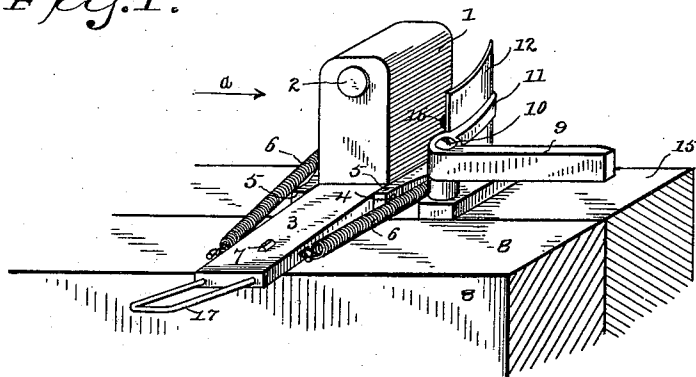


Fig. 2.

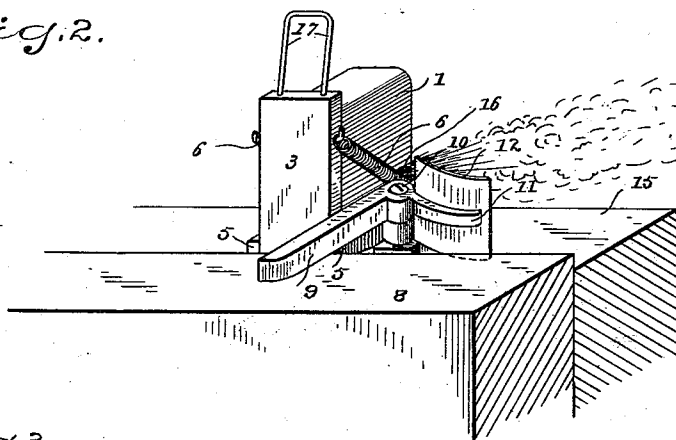
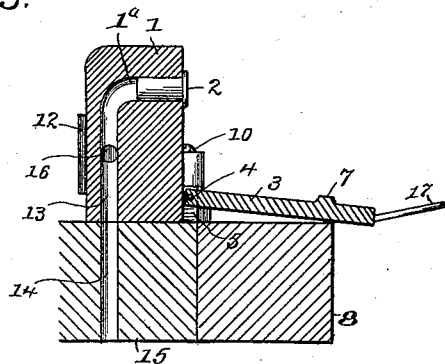


Fig. 3.



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DETONATING LOCKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 543,062, dated July 23, 1895.

Application filed May 14, 1895. Serial No. 549,252. (No model.)

To all whom it may concern:

Be it known that I, THOMAS C. SMITH, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in a Combined Alarm and Locking Device, of which the following is a specification.

My invention relates to an improved automatic window or door fastener and alarm, its object being to provide an alarm, a fastener, or both.

The construction and operation of my improvement will be fully set forth in the following specification, and such other features as I believe to be new and novel particularly pointed out in the claim to follow.

To enable others to fully understand my device reference is had to the accompanying drawings, in which—

Figure 1 represents a view in perspective of my device attached to the meeting-rail of the upper sash of a window, said device being set with the hammer lying across the meeting-rail of the lower sash, while the long arm of the locking-lever is parallel with said meeting-rails, leaving the sashes unlocked. Fig. 2 is a view in perspective of the lower sash slightly raised, which has thrown the hammer up and exploded the cartridge, the escaping gases caused from such explosion having thrown the long arm of the locking-lever over the top of the lower sash. Fig. 3 is a vertical central section of the device, as shown in Fig. 1, looking in the direction of arrow *a*.

Its construction and operation are as follows:

1 is the upright or standard having (see Fig. 3) in its front face the chamber 1^a to receive the cartridge 2.

3 is a plate which acts as a hammer and is pivotally supported on pin 4 extending laterally through the base-plate 5. 6 are retractile springs attached to the hammer and the said base-plate. 7 is a firing-pin in said hammer to explode the cartridge.

8 is the meeting-rail of the lower sash. 9 is the long arm of the locking-lever for said sash.

10 is a screw or pin attached to the base-plate for supporting the locking-lever. 11 is the short arm of said lever, which carries the wide

plate 12 for the purpose to be hereinafter more fully explained.

The chamber 1^a, Fig. 3, to receive the cartridge 2 joins the vertical hole 13, or rather such hole is a continuation of such chamber. The hole 14 in the meeting-rail 15 registers with said hole or passage-way 13 of the standard 1. The meeting-rail 15 being the exterior or outer rail, this hole 14 will therefore open into the outer air.

16 (see also Figs. 1 and 2) is a vent-hole in the side of the standard 1, which also communicates with the hole or vertical passage-way 13.

The operation of the device is as follows: The standard 1 is secured to the upper surface of the meeting-rail 15 of the top sash of the window, and the hammer-plate 3 is pulled down in a horizontal position, as shown at Fig. 1, over the top of the meeting-rail 8 of the lower sash. It will be observed that the hammer-plate is thrown by its alignment, so that the pull of the springs 6 will tend to keep such hammer down. The arm 9 of the locking-lever is set parallel with the sashes, while the short arm carrying the plate 12 is set parallel with the side of the standard 1 and directly in front of the vent-hole 16 in the side thereof. The slightest upward movement of the lower sash will carry the hammer beyond its horizontal pivotal center, when the springs 6 will force the firing-pin 7 against the cartridge 2 and explode the same. A portion of the explosive gases will escape through the vent-hole 16 (see Fig. 2) and, striking against the plate 12, will throw the arm 9 over the meeting-rail 8 and lock the same against further upward movement. The surplus gas will escape through the hole 14 of the meeting-rail 15 into the outer atmosphere. The hole 16 can be so proportioned that only sufficient gas will pass through to turn the loosely-pivoted locking-arm, while the greater quantity of such gas will escape into the outer atmosphere.

The locking-arm can be used independently of the alarm, if so desired, so that an inexperienced person pulling the hammer down or throwing the locking-arm around will have performed an act that will give ample security against intruders. Its advantage over other

devices for this purpose lies in this independent movement of the locking-lever and the operation of the same through the instrumentality of the escaping gases, and also in the
5 fact that most of the gas passes into the outer air and not into the room to blacken or set fire to the window-curtains.

It will also be understood that the device can, with equal advantage, be attached to
10 doors as well as to windows.

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

In a combination lock and alarm of the character described, comprising in combination,
15 an upright or support, a cartridge holding chamber therein, a passageway leading from said chamber through the base of said upright and a side vent therefor, a pivotally-
20 supported hammer carrying a firing pin, operating springs therefor, a locking lever piv-

otally supported to said base, one arm of said lever carrying a plate adapted, when the hammer is lowered over the top of the lower meeting rail of a window, to stand in front of the
25 vent hole so that when the cartridge is exploded the gases escaping from the said vent hole will throw the other arm of the said lever around and lock the window, combined with
30 a hole in the meeting rail or other support registering with such passageway of the upright so as to carry the surplus gases into the outer atmosphere, as described and for the purpose hereinbefore set forth.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 27th day
35 of April, A. D. 1895.

THOMAS C. SMITH.

Witnesses:

WM. E. DISBROW,
LEWIS F. PELTON.