J. G. WOLF.
Alarm-Lock.

No. 200,235. Patented Feb. 12, 1878.

Fig. 1

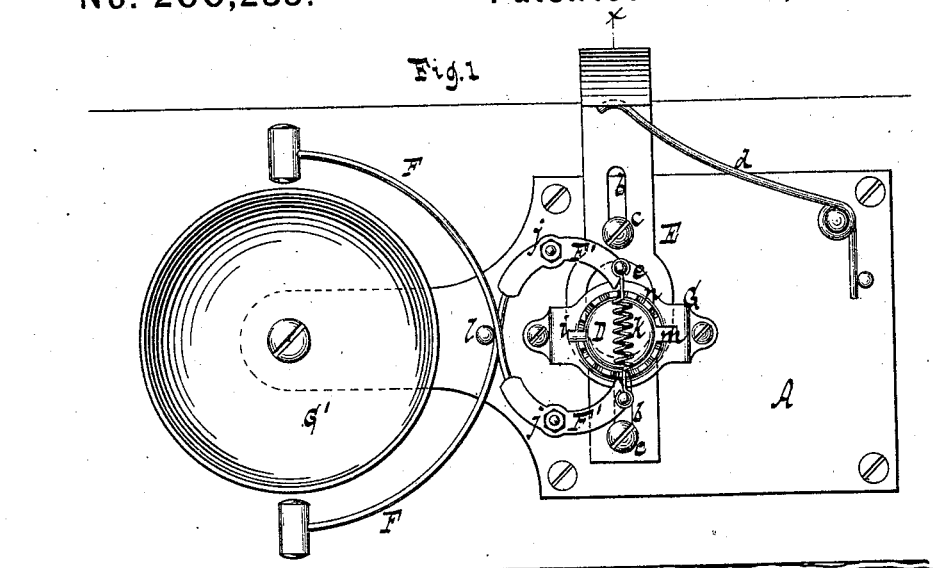


Fig. 2.

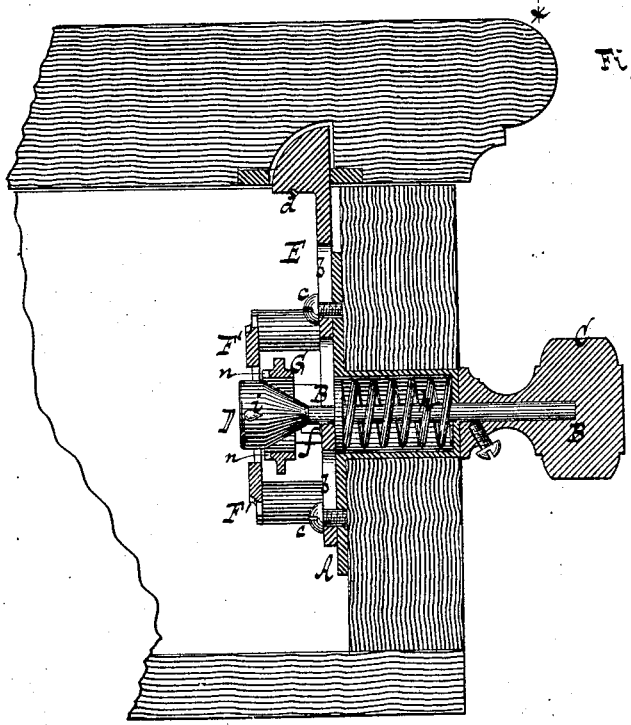


Fig. 4.

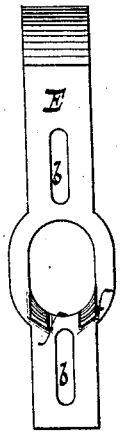
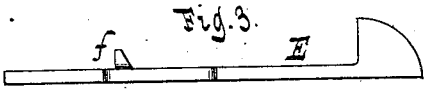


Fig. 3.



Witnesses
Otto Hufeland
Chas. Wahlers.

Inventor.
John George Wolf. by
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his attorneys

UNITED STATES PATENT OFFICE.

JOHN G. WOLF, OF NEW YORK, N. Y.

IMPROVEMENT IN ALARM-LOCKS.

Specification forming part of Letters Patent No. **200,235**, dated February 12, 1878; application filed January 19, 1878.

To all whom it may concern:

Be it known that I, JOHN GEORGE WOLF, of the city, county, and State of New York, have invented a new and useful Improvement in Alarm-Locks, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a rear view of a lock embracing my invention. Fig. 2 is a cross-section thereof in the line *x x*, Fig. 1. Fig. 3 is a side view of the latch detached. Fig. 4 is a plan view thereof.

Similar letters indicate corresponding parts.

My invention consists in the combination of a longitudinally-movable spindle, having a conical head at its inner end, with a spring latch or bolt, having an inclined lug, which is adapted to co-operate with the conical head in such a manner that when the spindle is drawn outward the latch or bolt is retracted, while, when the spindle is released, the bolt is shot by the action of its spring. The spindle, besides moving lengthwise, is capable of rotation, and the conical head carries a trip-pin, in the path of which are arranged one or more hammers, combined with a bell, so that when the spindle is rotated the bell is sounded. Beneath the conical head of the spindle is situated a guard-plate, which is provided with a hole for the passage of the head, and with a slot, which emanates from said hole, for the passage of the trip-pin, so that, in order to permit of drawing the spindle outward for the purpose of retracting the latch, it is necessary to turn the spindle to such a position that the trip-pin registers with the slot in the guard-plate; and hence if after each retraction of the latch the spindle is turned so as to bring the trip-pin beyond the hammer or hammers, (the alarm being thereby sounded,) it follows that the alarm is sounded when the spindle is again turned to cause the pin to register with the slot. On the edge of the hole in the guard-plate are a series of notches to engage with the trip-pin, so that, in case an attempt is made to draw the spindle outward in any other position of the trip-pin than above the slot, the pin is caught in one of the notches, and the spindle is prevented from being turned.

In the drawing, the letter A designates the supporting-plate of my lock, which is fastened to the interior of the door, or other article to which my lock is to be applied, by screws or other suitable means. B is the spindle, to the outer end of which is affixed the usual knob C, and on the inner end of which is formed a conical head, D. I subject the spindle to the action of a spring, *h*, having a tendency to force the same outward. E is the latch or bolt, which is guided by slots *b* and pins *c*, and is forced outward by a spring, *d*. On this latch E is formed an inclined or beveled lug, *f*, which, as shown in Fig. 4, is divided, and receives the spindle B between its two parts, the lug being situated at one end of a slot, *e*, formed in the latch. The slot *e* is made of corresponding width to the diameter of the conical head D, and receives this head in it when the spindle B is drawn out, besides allowing the latch E to move without interference from the spindle.

The letter *i* designates a trip-pin projecting from the side of the conical head D, and F F are hammers, the ends of whose shanks F′ F′ project into the path of said pin. These hammers F F are situated adjacent to a bell, G′, and their shanks are arranged to oscillate on pivots *j*. Said shanks of the hammers are connected together by a spiral spring, *k*, having a tendency to move the hammers toward the bell, the same being, however, held out of direct contact therewith by a stop-pin, *l*. The letter G designates what I term a "guard-plate," situated beneath the trip-pin *i* of the conical head D. This guard-plate is fastened to the lock-plate A, and it has a hole to receive the conical head D, from which hole emanates a slot, *m*, for the passage of the trip-pin *i*. On the edge of said hole in the guard-plate G is formed a raised rim, *n*, which is notched, as shown, being divided at the point of the slot *m*.

When it is desired to retract the latch E the spindle B is first turned so as to cause the trip-pin *i* to register with the slot *m*, and then the spindle is drawn outward, thus bring-

ing the conical head D in contact with the inclined lug *f*, and thereby displacing the latch, the parts being returned to their normal positions when the spindle is released by the action of the springs *d* and *h*.

In order to facilitate the adjustment of the trip-pin *i*, suitable indicating devices may be combined with the spindle B or its knob.

It is intended that after each retraction of the latch E the spindle B should be turned to the position shown in Fig. 1—namely, beyond the shanks of the hammers F or between them—and in consequence thereof the trip-pin *i* comes in contact with one or the other of the hammer-shanks, when the spindle is again turned for the purpose of bringing the trip-pin over the slot *m*, an alarm being thus sounded immediately previous to each retraction of the latch.

If an attempt is made to draw the spindle B outward at any other point than above the slot *m*, the trip-pin *i* is caught in the notches *n* of the guard-plate, and by this means the spindle is prevented from being turned, besides being prevented from being pulled out.

I do not here claim, broadly, the spindle having a conical head, and the latch or bolt having an inclined lug, as such may form the subject of a separate application for Letters Patent.

I am aware that the alarm of a till-lock has been operated by means of a cam on the end of a spindle in the act of turning the latter to bring a stud thereon in coincidence with a slot in the casing of the spindle, so that the latter can be drawn forward to move downward a catch to unlock a draw; but such is not my invention, and is hereby disclaimed.

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

1. The combination, in a lock, of a longitudinally movable and rotating spindle, having a conical head at its inner end, a trip-pin projecting from said head, a spring latch or bolt having an inclined lug, which is adapted to co-operate with the conical head, a bell, and one or more hammers, the shanks of which are situated in the path of the trip-pin, substantially as described.

2. The combination, in a lock, of a longitudinally movable and rotating spindle, having a conical head at its inner end, a trip-pin projecting from the conical head, a spring latch or bolt, having an inclined lug adapted to co-operate with the conical head, a bell, one or more hammers, the shanks of which are situated in the path of the trip-pin, and a guard-plate having a hole for the passage of the conical head, and a slot emanating from said hole for the passage of the trip-pin, substantially as described.

3. The combination, in a lock, of a longitudinally movable and rotating spindle, having a conical head at its inner end, a trip-pin projecting from the conical head, a spring latch or bolt, having an inclined lug adapted to co-operate with the conical head, and a guard-plate provided with a hole for the passage of the conical head, a slot for the passage of the trip-pin, and with notches on the edge of said hole to engage with the trip-pin, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 17th day of January, 1878.

JOHN GEO. WOLF. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.