

F. C. RENNER.
Door-Alarm.

No. 206,899.

Patented Aug. 13, 1878.

Fig. 1.

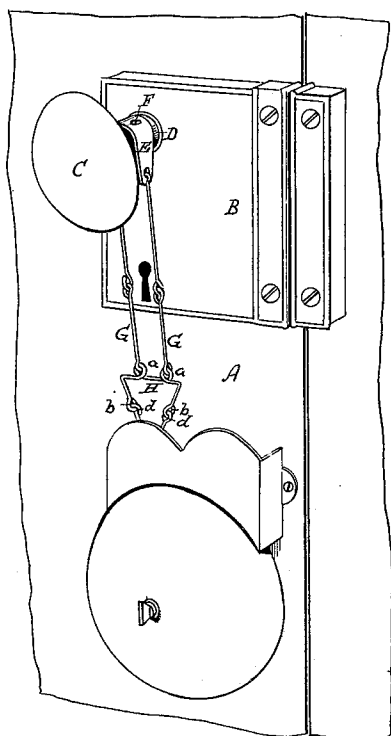


Fig. 2.

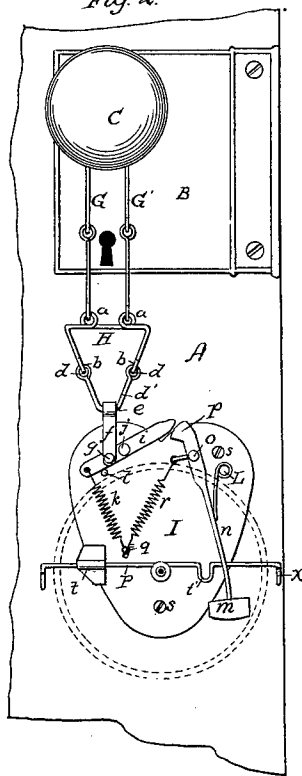


Fig. 3.

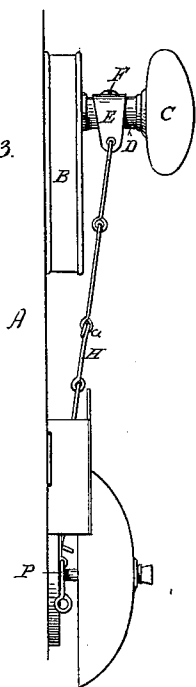
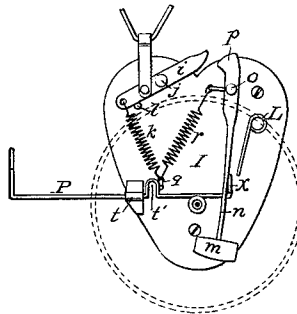


Fig. 4.



Witnesses:
Clarence Poole
R. K. Evans.

Inventor:
Frances C. Renner
by A. H. Evans & Co
Atty

UNITED STATES PATENT OFFICE.

FRANCIS C. RENNER, OF NEW MIDWAY, MARYLAND.

IMPROVEMENT IN DOOR-ALARMS.

Specification forming part of Letters Patent No. 206,899, dated August 13, 1878; application filed July 18, 1878.

To all whom it may concern:

Be it known that I, FRANCIS C. RENNER, of New Midway, Frederick county, State of Maryland, have invented a new and Improved Door-Alarm; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of the apparatus applied to a door. Fig. 2 is a front elevation, with the gong and casing removed. Fig. 3 is a side elevation, showing the attachment of the yoke to the knob. Fig. 4 is a view of the striking apparatus, with the hammer retracting, so as not to strike the bell when the knob is drawn.

The object of my invention is to provide an alarm adapted to be attached to open-faced locks, whereby the turning of the knob will strike an alarm indicative of the turning, and provided with a detent or stop, whereby the striking of an alarm may be dispensed with, when desired, without removing the apparatus from the door; and it consists in a metallic yoke screwed to the shank of the knob by means of a screw, which holds the shank of the spindle, having attached to each end of said yoke parallel chains or links, having their other ends attached to a spreader, whose ends, in turn, are attached to a loop, which operates the latch to throw a hammer, striking the gong.

It further consists in a sliding bar provided with certain stops as a detent to hold the striking-hammer out of contact with the gong when it is desired to prevent the alarm from ringing.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the drawings, A is a door, to which is attached the lock B, provided with an ordinary latch-knob, C, having a shank, D. Around this shank D fits a sheet-metal yoke, E, provided with a hole, through which passes the screw F, that holds the shank to the spindle. From each end of the shank pass links or chains G G', having their other ends attached to eyes *a a* in a bow, H. The bow H has on

its ends eyes *b b*, which engage in eyes *d d* of the loop *d'*, which runs through an eye, *e*, in the bar *f*, pivoted at *g* to a latch-shaped lever, *i*. Secured to the door by screws *ss* is a plate, I, to which is journaled the operating parts of the alarm mechanism. The latch-shaped lever *i* is pivoted at *j*, and has attached to its lower end a coiled spring, *k*, and rests against a pin, *l*, which limits its movement. The upper end is cam-shaped for purposes hereinafter described. *m* is a hammer for striking the gong, and is provided with a striking-lever, *n*, pivoted at *o*, and is provided with a triangular-shaped head, *p*, lying contiguous to the cam-shaped end of lever *i*. Above the pivot *o* there is attached to lever *n* a coiled spring, *r*, fastened to a pin, *q*, which also holds the end of spring *k*. *L* is a coiled spring attached to plate I, having a projecting arm which bears against the hammer-lever *n*, to afford an elastic bearing to retract the hammer from the gong after the blow is struck. In a guide, *t*, slides a rod, P, provided with a U-shaped bend, *t'*, which acts as a detent to hold the hammer away from the gong and disengage the triangular-shaped head *p* when it is desired to use the knob freely without striking an alarm. This disengagement is effected by means of a hooked end, *x*, catching the hammer-lever, and drawing it toward the center of the gong, where it is retained by turning the U-shaped projection behind the pin *q*.

It will be observed that by the use of the yoke, attached by means of the screw that holds the shank to the spindle, the bearing-points of the links of the chains are thrown outward, so as to avoid rubbing against the corners of the face of the lock, and the use of the bow to keep the chain or links parallel keeps the key-hole freely exposed.

The alternate raising and lowering of latch-lever *i* by means of the rotation of the knob throws the cam-shaped end against the triangular-shaped head *p*, forcing it outward, and stretching the spring *r* until the cam-shaped head passes beneath the triangular-shaped head, and the retraction of the spring strikes a blow on the gong. This operation extends spring *k*, and when the knob is released the retraction of spring *k* against the lower side of the triangular-shaped head *p* again forces

it back, and it strikes another blow on the return.

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

1. The yoke E, shank-screw F, shank D, parallel links G G', bow H, provided with eyes *a a b b*, and pivoted bar *f*, in combination with the lever *i*, provided with spring *k* and pin *l*, and hammer-lever *n*, provided with head

p and spring *r*, and gong Q, all constructed, arranged, and operated as described.

2. The sliding rod P, provided with a bent end *x*, and U-shaped bend *y*, in combination with the hammer-lever *n* and pin *g*, as described.

FRANCIS C. RENNER.

Witnesses:

R. K. EVANS,
B. ZEVELY.