

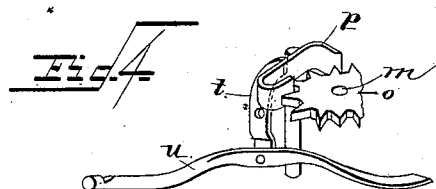
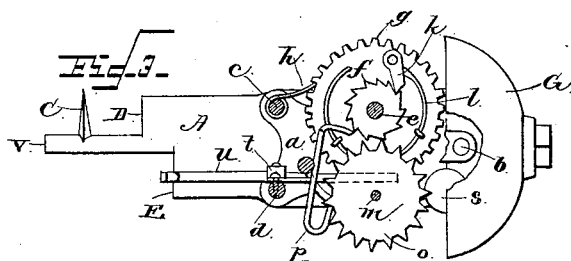
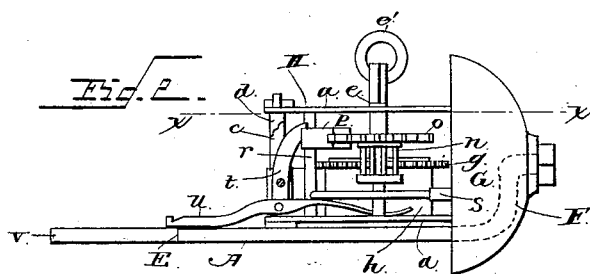
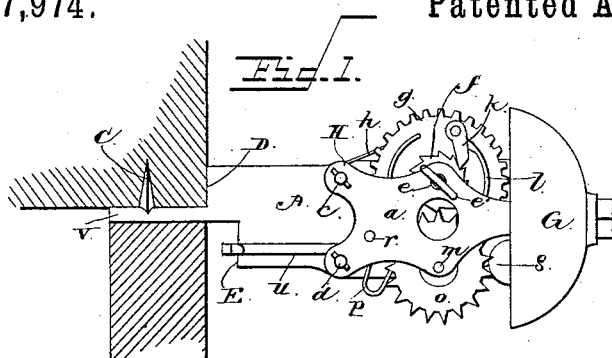
(No Model.)

W. SPRAGUE.

COMBINED BURGLAR ALARM AND DOOR FASTENER.

No. 347,974.

Patented Aug. 24, 1886.



Witnesses

M. E. Fowler

J. Wolman

Inventor

Ward Sprague

By his Attorneys

C. A. Howard

UNITED STATES PATENT OFFICE.

WARD SPRAGUE, OF SANDY CREEK, NEW YORK.

COMBINED BURGLAR-ALARM AND DOOR-FASTENER.

SPECIFICATION forming part of Letters Patent No. 347,974, dated August 24, 1886.

Application filed June 4, 1886. Serial No. 204,161. (No model.)

To all whom it may concern:

Be it known that I, WARD SPRAGUE, a citizen of the United States, residing at Sandy Creek, in the county of Oswego and State of New York, have invented a new and useful Improvement in Combined Door-Fasteners and Burglar-Alarms, of which the following is a specification.

My invention relates to an improvement in combined door-fasteners and burglar-alarms; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a top plan view of my invention attached to a door, the latter and one side of the door-casing being shown in cross-section. Fig. 2 is a side elevation of my improvement. Fig. 3 is a horizontal sectional view of the same, taken on the line *x x* of Fig. 2. Fig. 4 is a detailed view of portions of the burglar-alarm and the apparatus for setting the same automatically in motion to sound the alarm when the door is opened.

A represents a flat supporting-plate, which forms the base of my burglar-alarm and door-fastener. The said plate is provided at one end with a longitudinally-extending shank, *V*, from one side of which and at right angles thereto projects a spur, *C*, the ends and opposite edges of which are sharpened. By extending the shank *V* from one end of the plate *A* a shoulder, *D*, is formed in the plate on one side of the shank, and a shoulder, *E*, is formed also in the plate on the opposite side of the shank. To the outer end of the plate *A* is attached a bracket, *F*, to which is secured a gong, *G*.

H represents a frame, which comprises the top and bottom plates, *a*, and the connecting vertical bars *b*, *c*, and *d*, which are attached to the corners of the frame and connect the said plates *a*.

e represents a shaft which is journaled in the plates *a*, and is provided with a fast ratchet-wheel, *f*, and a loose spur-wheel, *g*. A flat spring, *h*, has one end attached to the bar *d*, and the opposite end coiled upon and attached to the shaft *e*. The said wheel has a pawl, *k*, which engages the ratchet-wheel *f*, and is provided with the usual spring, *l*, bearing on the said pawl to keep the latter normally in en-

gagement with the ratchet-wheel, thereby locking the wheel *g* to the shaft *e*, and permitting the said shaft to be rotated independently of the wheel *g* in one direction in order to wind up the spring. For this purpose I provide the outer end of the shaft *e* with a pivoted ring or handle, *e'*, or the said outer end of the shaft may be squared, and thereby adapted to a key.

m represents a shaft which is journaled between the plates *a* on the opposite side from the shaft *e*, and to the said shaft *m* is attached a pinion, *n*, and an escapement-wheel, *o*.

p represents an anchor-escapement, the arms of which engage the serrations of the wheel *o*, and to the said escapement is attached a vibrating arm, *r*, carrying a hammer, *s*, which is adapted to strike against one side of the gong, and thereby sound the latter, when the train of gearing before described is put in motion by the spring. To the rod *d* is fulcrumed an arm or detent, *t*, the upper end of which is adapted to bear against the escapement, and thus lock the train of gear-wheels and prevent them from rotating. To the lower end of the detent *p* is attached an endwise-moving spring-rod, *u*, the inner end of which bears against the lower plate *a*, and the outer end of which bears against the plate *A*, the said rod being guided by the said plates.

When the detent bears against the escapement, in order to lock the train of wheels, the outer end of the rod *u* projects a short distance beyond the shoulder *E* of the plate *A*, as shown in Fig. 1, and in solid lines in Fig. 4.

The operation of my invention is as follows: In order to secure the attachment to the door, the latter is first partly opened a few inches, and the plate *A* is turned parallel with the crack between the outer edge of the door and the side of the door-casing against which the door closes, and the spindle or shank *V* is inserted between the edge of the door and the door-casing, and the door is closed thereon, thus clamping the spindle firmly in place. The plate *A* is then turned either to the right or to the left, as the case may be, thus causing the spur *C* to enter the door-casing and lock or secure the door-fastener firmly between the door and the casing, the shoulder *D* bearing against the door-casing, and the shoulder *E* being opposed to the inner side of the free edge of the door,

as shown in Fig. 1. The inner end of the rod *u* projects beyond the shoulder E and extends toward the free edge of the door, as shown in said Fig. 1. The spring is then wound by turning the shaft *e*, and the detent bears against the escapement and locks the train of gear-wheels. In the event that a person seeking an entrance succeeds in picking the lock and opening the door, the latter strikes against the outer end of the rod *u* and moves the same inwardly, thereby releasing the train of gear-wheels and sounding the alarm. The door will be only permitted to move sufficiently far to sound the alarm by tripping the detent, when it is arrested by the shoulder E, and thus prevented from being opened.

A combined burglar-alarm and door-fastener thus constructed is cheap and simple, and will be found of great utility to house-keepers, particularly to travelers, and will be found very efficacious in securing the door and frightening away a burglar who should attempt to enter it.

Having thus described my invention, I claim—

1. The combination of the plate A, having the shank V, the spur C, and the shoulders D and E on opposite sides of the shank, with the gong, the mechanism for sounding the same, and the trip-rod having one end normally projecting beyond the shoulder E, and

adapted to set the mechanism in motion when the said rod is moved inwardly, the shoulder E preventing the opening of the door after the alarm has sounded, substantially as described.

2. The combination of the plate A, having the shank V, the spur C, and the shoulder E, with the gong, the mechanism for sounding the same, and having the escapement *p*, the pivoted detent *t*, adapted to bear against the escapement, and the trip-rod attached to the detent and bearing on the plate A, and extending beyond the shoulder E, substantially as described.

3. The combination of the plate A and means for fastening the same to a door-frame, so as to secure the door, with the alarm mechanism having the escapement, the pivoted detent *t*, adapted to bear against the escapement, and the spring trip-rod attached to the detent and projecting beyond one end of the plate, the said rod being held against the plate by its own inherent resilience, substantially as described.

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

WARD SPRAGUE.

Witnesses:

M. R. BALDWIN,
G. C. WIDRIG.