A. BECK.

Burglar Alarm.

No. 201,382. Patented March 19, 1878.

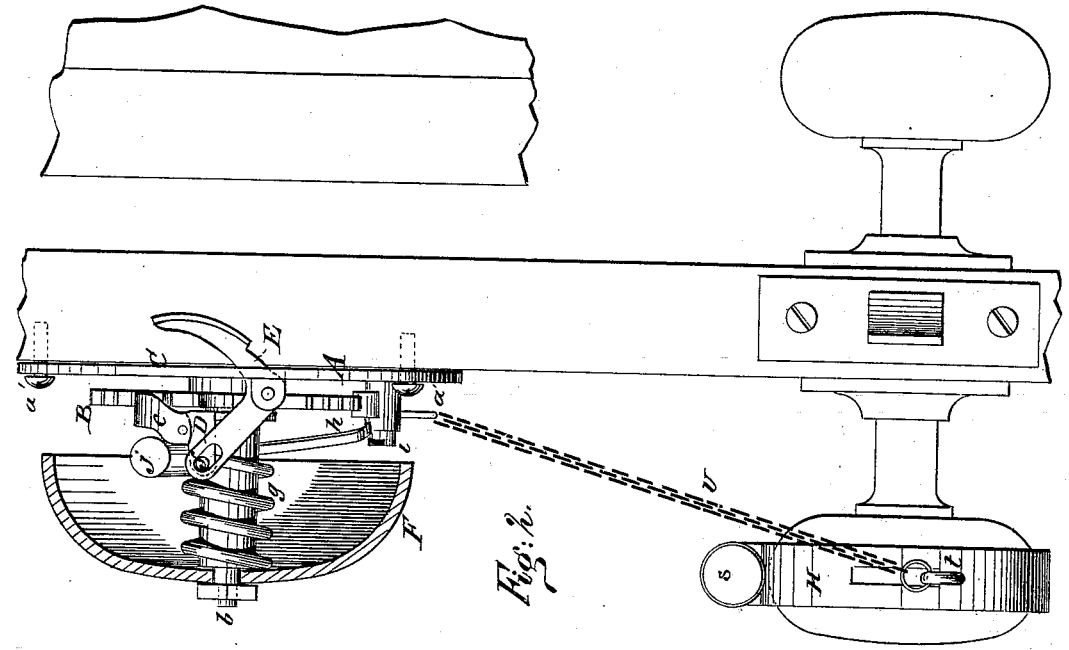

Fig. 2.

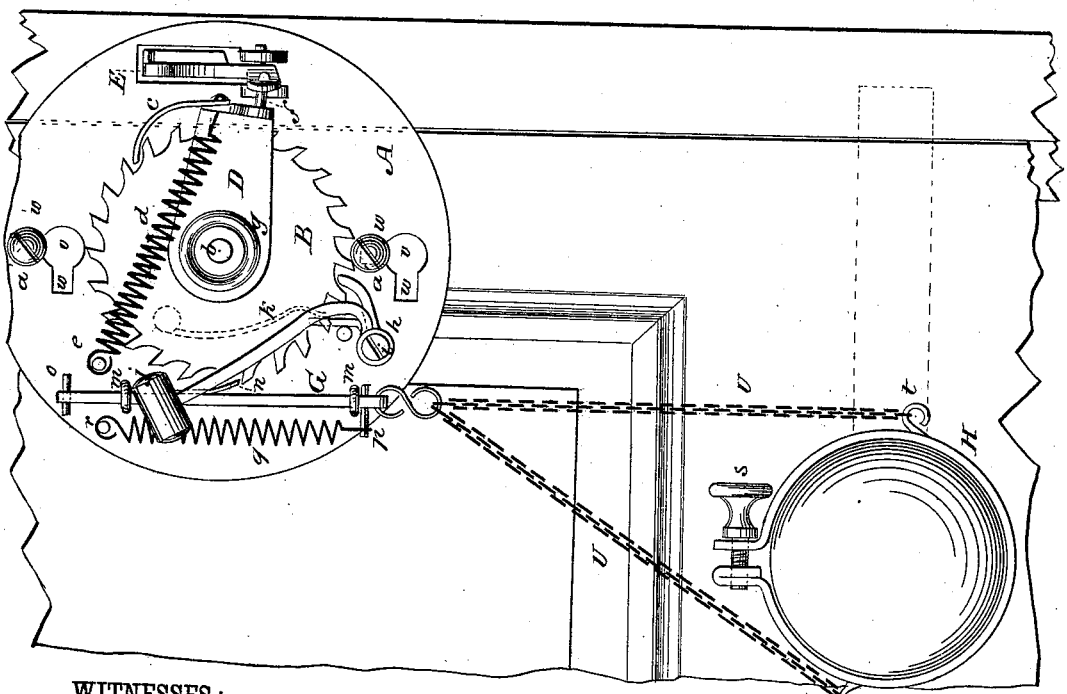

Fig. 1.

WITNESSES:

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UNITED STATES PATENT OFFICE.

AUGUST BECK, OF NEW YORK, N. Y.

IMPROVEMENT IN BURGLAR-ALARMS.

Specification forming part of Letters Patent No. **201,382**, dated March 19, 1878; application filed February 6, 1878.

To all whom it may concern:

Be it known that I, AUGUST BECK, of the city, county, and State of New York, have invented a new and Improved Door-Alarm, of which the following is a specification:

Figure 1 is a side elevation of my improved door-alarm, having the bell removed to show the working parts more clearly. Fig. 2 is a side elevation partly in section.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide a door-alarm that may be operated by turning the knob or by opening the door.

The invention consists in a ratchet-wheel that engages the bell-hammer, and is operated by two pawls, one of which is moved by turning the door-knob, while the other is operated by a spring, which is released by opening the door.

In the drawing, A is a base-plate, from which projects a stud, *b*. Upon this stud is placed a ratchet-wheel, B, which may be turned on the stud, and is kept from contact with the base-plate by a boss, C.

An arm, D, which is placed upon the stud *b*, extends to the periphery of the ratchet-wheel, and is bent outward at right angles to receive a spring-pawl, *c*, that engages the ratchet-wheel B. A spiral spring, *d*, is attached to the arm D, and to a stud, *e*, that projects from the base-plate.

A right-angled lever, E, is pivoted between ears that project from the face of the base-plate A, and is slotted to receive a stud, *f*, that projects from the arm B. The free arm of the lever E is curved, so that it may contact with the door-casing without scratching it, and the base-plate is apertured to admit of the working of the lever.

A gong-bell, F, is secured to the end of the stud *b*, and between the bell and the arm D a spiral spring, *g*, is placed on the stud, and acts as a check on the ratchet-wheel, and prevents retrograde motion.

A three-arm hammer-lever, *h*, is fulcrumed on a stud, *i*, and carries the hammer *j*, which is capable of striking the inner surface of the bell F. One of the shorter arms of the lever *h* is engaged by the ratchet-wheel B, and the other short arm is pressed by the spring *k*, and, when in its normal position, rests against the stud *l* that projects from the base-plate.

On the side of the base-plate, diametrically opposite the lever E, a bar, G, is placed in guides *m*, and carries a spring-pawl, *n*, that engages the ratchet-wheel B. The motion of the bar G is limited by the pins *o p*, and the bar is drawn upward into its normal position by a spiral spring, *q*, which is attached to the lower pin *p*, and to a stud, *r*, that projects from the base-plate A.

A split band, H, which is drawn together by a tangent-screw, *s*, is slightly concaved in its inner surface to adapt it to the periphery of the door-knob, and is provided with eyes *t* at diametrically opposite points, to receive the chains *u*, both of which are connected with the lower end of the bar G.

The base-plate A is apertured at *v v*, and two slots, *w*, are cut at right angles to each other from the apertures *v*, to receive the screws *a'*, by which the alarm is secured to the door.

The split band H is clamped to the door-knob by turning the tangent-screw *s*. By turning the knob in either direction one of the chains *u* is drawn so as to draw the bar G downward a sufficient distance to turn the ratchet-wheel one notch. This movement of the ratchet-wheel trips the bell-hammer and gives an alarm. When the door is closed the lever E is thrown back, so as to bring the spring *d* under tension, and when the door is opened, the lever E being released, the spring *d* draws upward the arm D, which, by means of the pawl *c*, carries the ratchet-wheel forward one tooth and trips the bell-hammer.

It will be seen that either the turning of the knob or opening of the door will ring the bell.

The alarm may be detached from the door by sliding the base-plate, so that it may be removed from the screws *a'*, by which it is retained on the door, and by loosening the tangent-screw *s* the split band H may be removed from the door-knob.

The base-plate A is slotted in two directions, so that it may be placed at the bottom, top, or side of the door, to adapt the alarm to right and left hand doors.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. The right-angled lever E, spring-acted pawl *c*, ratchet-wheel B, and spring-actuated hammer-lever *h*, in combination, for striking the bell, substantially as herein shown and described.

2. The split band H, having eyes *t*, the chains *u*, and the spring-actuated pawl *n*, in combination with the ratchet-wheel B, for tripping the alarm-hammer by the rotation of the knob, substantially as herein shown and described.

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Witnesses:
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