

HOLMES & NICKERSON,

Fire Alarm.

No. 62,033.

Patented Feb. 12, 1867.

Fig. 1

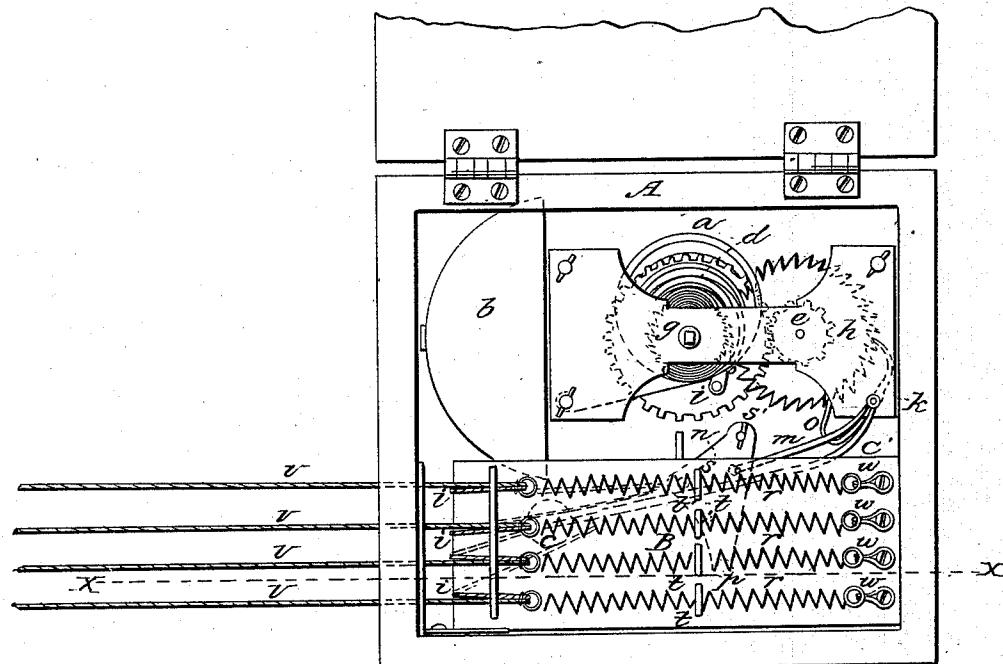


Fig. 2

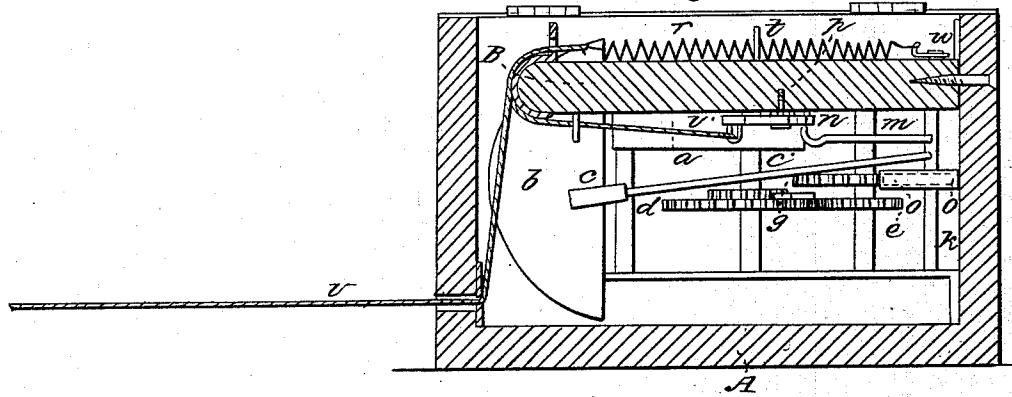


Fig. 3

Witnesses:

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# United States Patent Office.

JOSIAH HOLMES AND CHARLES W. NICKERSON, OF PITTSBURG, PENNSYLVANIA.

*Letters Patent No. 62,083, dated February 12, 1867.*

## IMPROVED BURGLAR AND FIRE-ALARM.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, JOSIAH HOLMES and CHARLES W. NICKERSON, of Pittsburg, in the county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Burglar and Fire-Alarms; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan of our improved burglar and fire-alarm.

Figure 2 is a section of the same taken in the line *xx*, fig. 1.

Figure 3 is a view of a setting pin.

Similar letters of reference indicate like parts.

This invention relates to improvements in the construction of burglar and fire-alarms, and consists in the arrangement of devices in connection with inflammable guard-cords stretched throughout a building, whereby, when the guard-cords are burned by fire or broken by the entrance of a burglar through a door or window, an alarm-bell is started, which will awake and notify a person in charge of the building. The advantage of our improved device is simplicity of construction, certainty of operation, and provision for relieving the springs from the strain of tension without slackening the guard-cords attached to them, together with the easy adaptation of the alarm to any number of connections with cords running through extensive buildings.

*A* is a small box containing the apparatus of our improved fire and burglar-alarm, which is provided with an ordinary clock or coil-spring, *a*, alarm-bell, *b*, and bell-hammer, *c*. Upon the arbor of the spring *a* is a spur-wheel, *d*, which engages in a smaller wheel, *e*, and at the same arbor a ratchet-wheel, *g*, lies beside the spur-wheel *d*, held by the pawl *i*. On the arbor of the spur-wheel *e* is a 'scape wheel, *h*, with its pallets, *o o*, set on the long pivot *k*, to which also are fastened the arm *c'* of the bell-hammer *c*, and a rod, *m*, that connects with a plate lever, *n*, which is pivoted at *p* to the under side of the partition *B*, within the box *A*. The free end of the connecting-rod *m* slips into a slot, *s*, that opens in the side of the plate lever *n*, in order to set the alarm, where it is held until a guard-cord is broken, which releases it and starts the alarm by disengaging the pallets *o o* from the 'scape-wheel *h* in the ordinary manner for operating a clock-alarm. On the upper side of the partition *B* are placed a series of spiral springs, *r r*, in any required number, which are held in place by loops, *t t*, through which they pass and move back and forth loosely when extended or contracted. At each end of the springs are rings for attaching them at one end to the guard-cords *v v* and at the other end to pins or hooks, *w w*, when the alarm is set. The guard-cords *v v*, which extend to any part of a building, are fastened to the ends of the springs *r r*, and their ends *v' v'* pass to the under side of the partition *B*, and are all fastened at one point to the plate lever *n* in such manner that when the alarm is set and the guard-cords *v v* are stretched the plate lever *n* will be thrown back and the ends *v' v'* also be taut, as shown in fig. 2. When the cord and springs are thus stretched and connected with the lever plate *n* the end of the connecting or catch-rod *m* is slipped into the slot *s* to set the alarm with a pin, *s'*, on the end of the lever plate projecting above the partition *B*. For extending the spiral springs *r r* and hooking the ends on the pins *w w* with facility, a little detached pin, *z*, fig. 3, is pivoted.

It will be manifest that when the alarm is set, if either of the guard-cords are broken the contraction of the spiral spring, to which it is fastened, will draw upon the end *v'* of the broken cord, and thus move the plate lever *n* forward to release the catch-rod *m* from the slot *s* and start the alarm-bell, as above described. It will also be seen that when the spiral springs *r r* are extended the ends may be detached from the pins *w w* to relieve the strain by the free play through the loops *t t* without starting the alarm or slackening the guard-cords.

Having thus described our invention, we claim as new, and desire to secure by Letters Patent—

1. The plate lever *n*, with the slot *s*, in combination with the catch-rod *m* and 'scape-wheel *h*, when arranged and operated in connection with a clock-alarm, substantially as and for the purposes herein described.
2. The guard-cords *v v*, with their ends *v' v'*, the spiral springs *r r*, and the lever plate *n*, combined, arranged and operating substantially as and for the purposes set forth.

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Witnesses:

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