

G. A. BEAVER.
Burglar-Alarms.

No. 149,910.

Patented April 21, 1874.

Fig: 1.

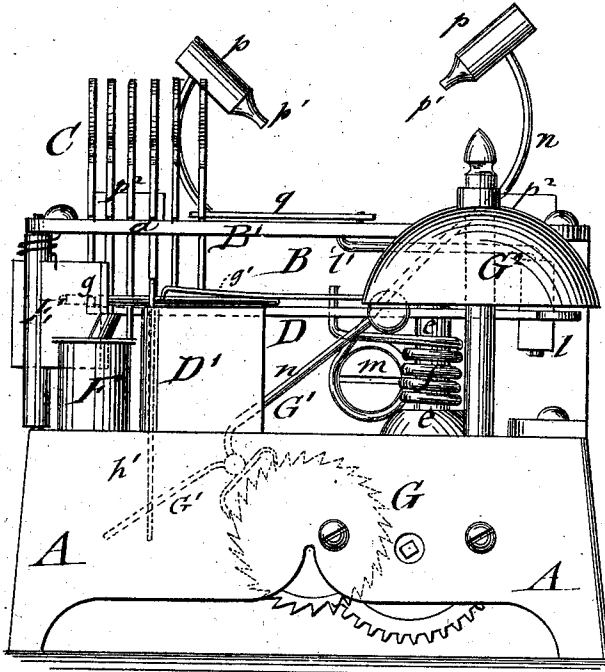


Fig: 2.

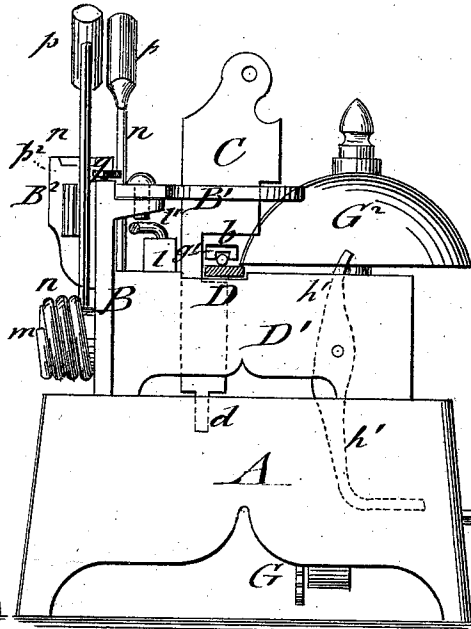
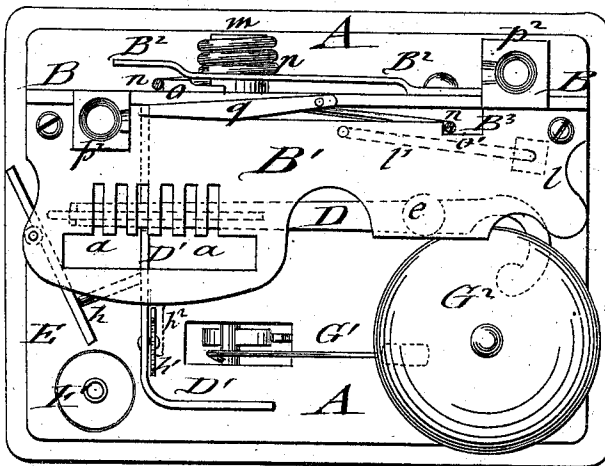


Fig: 3.



WITNESSES:

Chas. Nida
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INVENTOR:

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BY *[Signature]*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE A. BEAVER, OF RICHMOND, INDIANA.

IMPROVEMENT IN BURGLAR-ALARMS.

Specification forming part of Letters Patent No. **149,910**, dated April 21, 1874; application filed March 21, 1874.

To all whom it may concern:

Be it known that I, GEORGE A. BEAVER, of Richmond, in the county of Wayne and State of Indiana, have invented a new and Improved Burglar-Alarm, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a front elevation; Fig. 2, a side elevation, partly in section; and Fig. 3, a top view of my improved burglar-alarm.

Similar letters of reference indicate corresponding parts.

The object of my invention is to construct an improved burglar-alarm, which may be connected to the doors and windows of the house and outhouses, for indicating instantly any attempt to make an entrance, by awaking the occupant of the house by the concussion of caps, ringing of a bell, lighting of a match and lamp, so as to show clearly in what room or part of the house the burglars are at work.

My invention consists of the combination of a series of register-keys, which are connected in suitable manner to the windows, doors, &c., with a spring match-holder, which lights the lamp, sets a clock-train and bell in motion, and discharges percussion-caps as soon as any one of the register-keys releases the spring-holder from the catch-plate. The change of position of the key indicates the room in which the alarm originated.

In the drawing, A represents a base-frame, of suitable size and material, to which the various parts forming the burglar-alarm are attached. An upright supporting-plate, B, is attached to base A, and has a horizontal bracket-plate, B¹, on which the register-keys C are arranged by passing through slotted recesses *a* of the same. Any desired number of register-keys C may be arranged thereon, to connect with the doors, windows, &c., of any part of the house or outhouse, the connecting strings or wires being applied to the upper part thereof. The keys C are recessed, as shown in Fig. 2, to project over the bracket-plate B¹, and have a second recess, *b*, below the same, for admitting the spring match-holder D. The pointed lower ends of keys C fit into a narrow slot, *d*, of the base frame or plate, so that, on raising any one of the keys by the string connection, the same will not re-

turn to slot *d*, but indicate, by being detached therefrom, the window or room from which the alarm was given. The match-holder D turns on a pivot, *e*, and is acted upon by a strong spiral spring, *f*, wound around the pivot. Its recessed front lug *g*, together with an additional spring-bar, *g*¹, also recessed, serves to hold firmly the match which is inserted therein. The front end of match-holder D slides on the upper edge of guide-plate D', which extends between the keys C to the upright plate B, reaching up to the height of recesses *b* of keys C. Guide-plate D' is recessed slightly at the point of passing along the recesses of the keys, forming thereby a catch for the match-holder D, which extends thus through the recesses of all the keys, and is instantly detached by the upward motion of any one of them. A spring friction-plate, E, is pivoted sidewise of plate D', held in position by a contact-stop, *h*, of the same, so as to ignite the match on the release of the holder D. A stop-lever, *h*¹, pivoted near the front part of plate D', arrests the forward motion of holder D, and lights, in that position, the lamp F by the burning match. Stop-lever *h*¹ passes through a slot, *h*², to the under side of base-plate A, and engages there the arm of a hammer, *g*¹, of clock-train G, releasing the same, however, by the forward motion of the match-holder, and ringing thereby bell *g*², attached to base-frame A above the clock-train G. The curved rear arm of match-holder D is cushioned off by a rubber block, *l*, or other elastic material, which rests against upright plate B, being pivoted to bracket-plate B¹ by a wire arm, *l*'. The upright plate B is further provided with projections *m*, to which are firmly applied the spiral springs *n*, one at each side, to whose elongated ends hammers *p*, with nipples *p*¹, are attached, for placing percussion-caps thereon. The spring ends are guided in opposite directions to each other along plate B—the outer one by guide-plate B², the inner one by a slot, B³, of bracket-plate B¹. The nipples *p*¹ strike anvil-shaped sockets *p*², arranged at the upper end of plate B, and corresponding to the hammers, so as to discharge the caps by the concussion. The spring end of the outer hammer *p* is set into cocked position by a projection, *o*—the inner hammer by an extension, *o*', of slot B². The wire arm *l*' of

cushion *l* passes below extension-slot *o'*, and releases the inner spring end as soon as the curved arm of match-holder *D* forces the cushion against plate *B*. The downward motion of the spring-lever acts on a pivoted arm, *g*, forces arm *g* sidewise against the outer spring-wire, releases the same from its catch *o*, and produces thereby the almost instantaneous discharge of the caps.

The rapid succession of the different operations—viz., lighting the lamp, ringing the bell, and discharging the caps—wakens the occupants of the house, and shows instantly, by the displacement of the key, the place from which the alarm was communicated, forming thereby a very effective device for protection of dwellings of all kinds.

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

1. The improved burglar-alarm, composed of the register-keys, pivoted match-holder, lighting device, clock-train and bell, and detonating mechanism, the whole being combined and arranged substantially as and for the purpose described.

2. The pivoted match-holder *D*, set into

catch-recess of guide-plate *D'*, in combination with recesses *b* of register-keys *C*, to be released on the raising of any key, as described.

3. The match-holder *D*, with grooved end lugs *g* and spring-plate *g'*, for securing the position of the match, combined with pivoted friction-plate *E*, stop-lever *h'*, and lamp *F*, for lighting the same on the release of the holder, as set forth.

4. The sliding match-holder *D*, combined by pivoted stop-lever *h'*, clock-train *G*, hammer *G'*, and bell *G''*, for setting the train in motion and ringing the bell, as specified.

5. The combination of curved rear arm of match-holder *D* with cushion *l*, pivoted arm *l'*, and inner spring end *n* of hammer *p*, for releasing the spring-hammer, as described.

6. The combination of inner spring-hammer *p*, retained and guided in slots *o* and *B'*, and pivoted arm, with outer spring-hammer *p'*, retained by catch *o*, and guided by plate *B'* and socket *p''*, for detaching the spring end and discharging the caps, as set forth.

GEORGE A. BEAVER.

Witnesses:

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GEORGE G. SHELLY.