

(No Model.)

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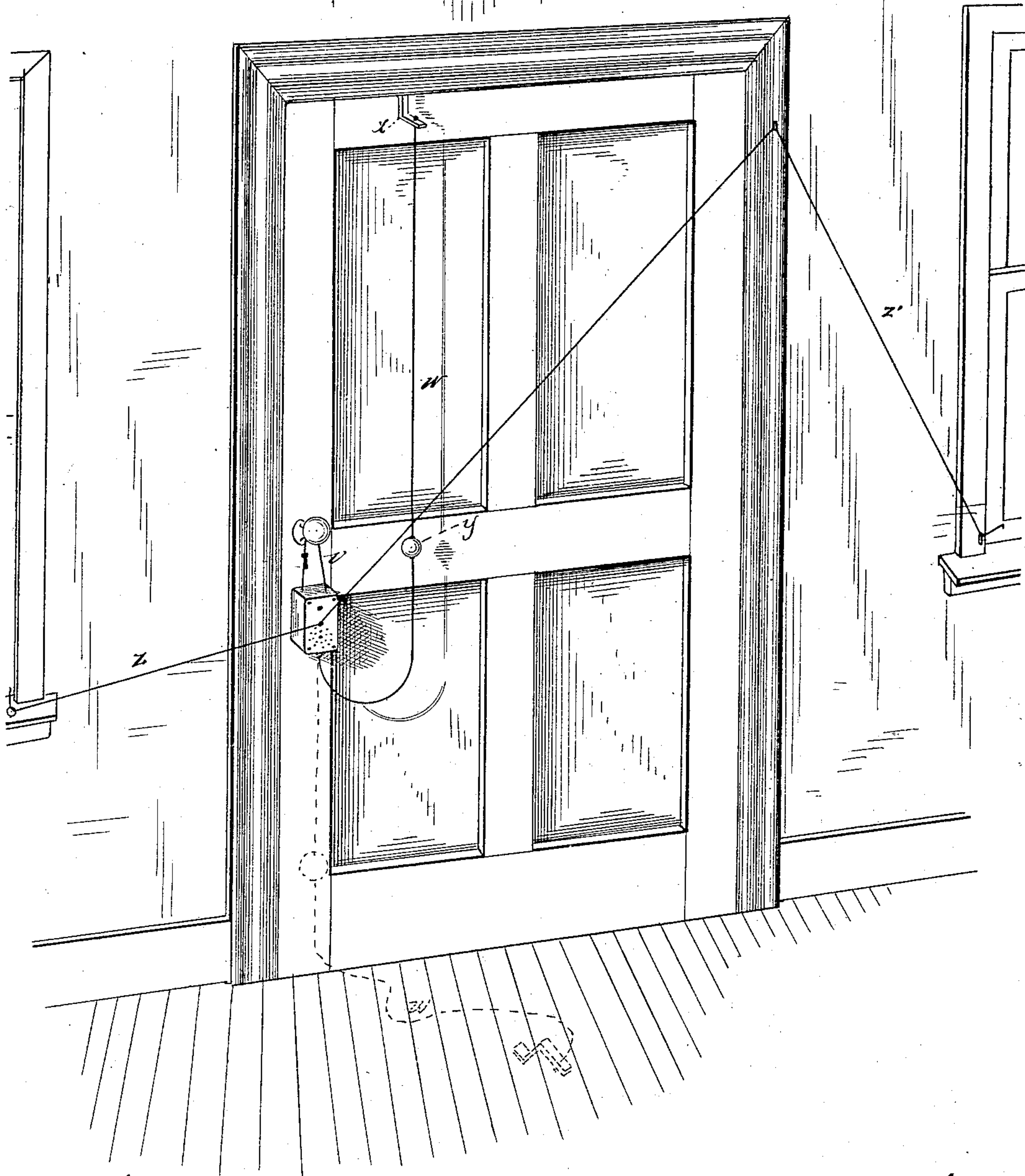
A. C. GIBSON.

BURGLAR ALARM.

No. 315,138.

Patented Apr. 7, 1885.

Fig. 1.



Witnesses:

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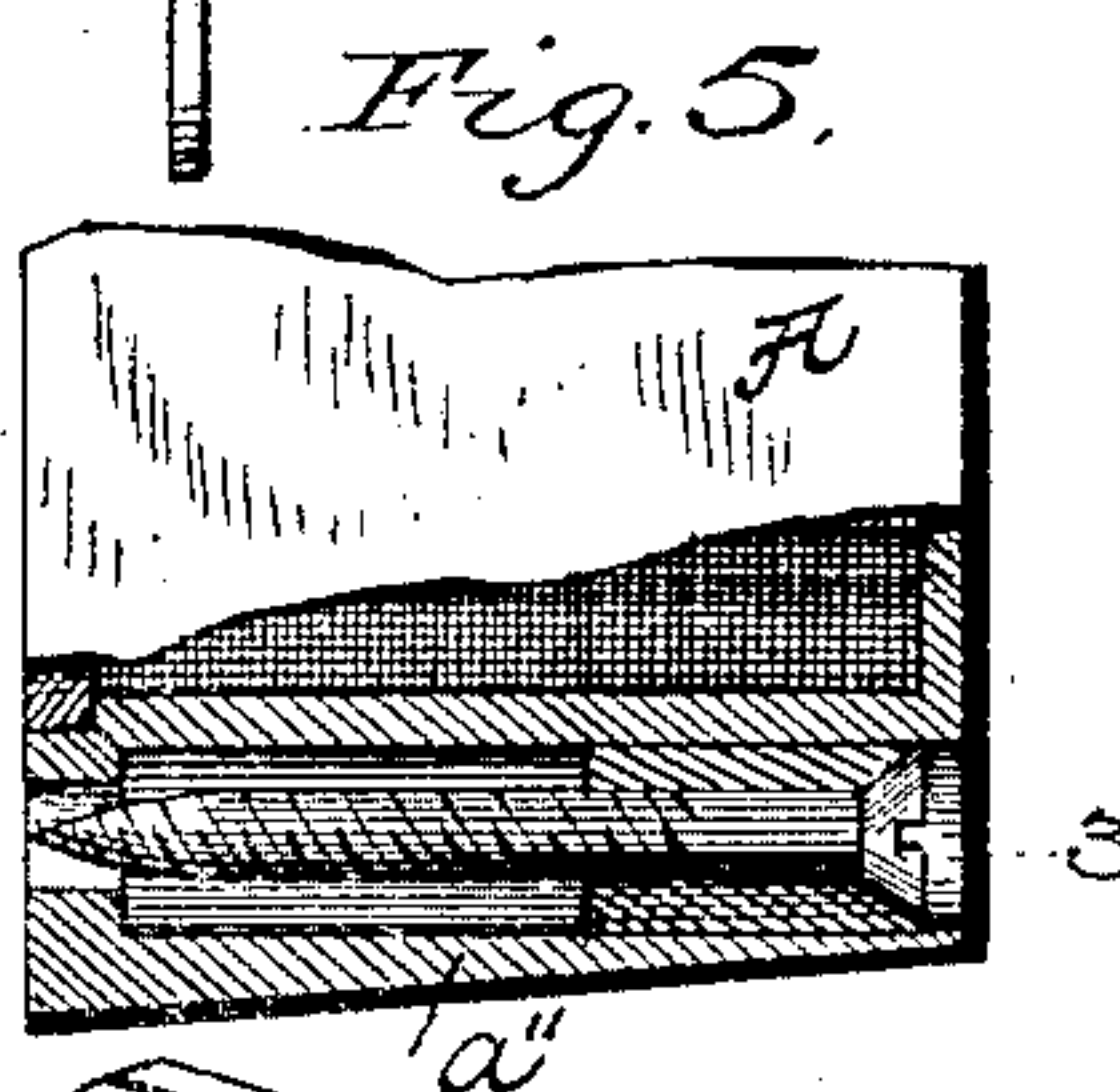
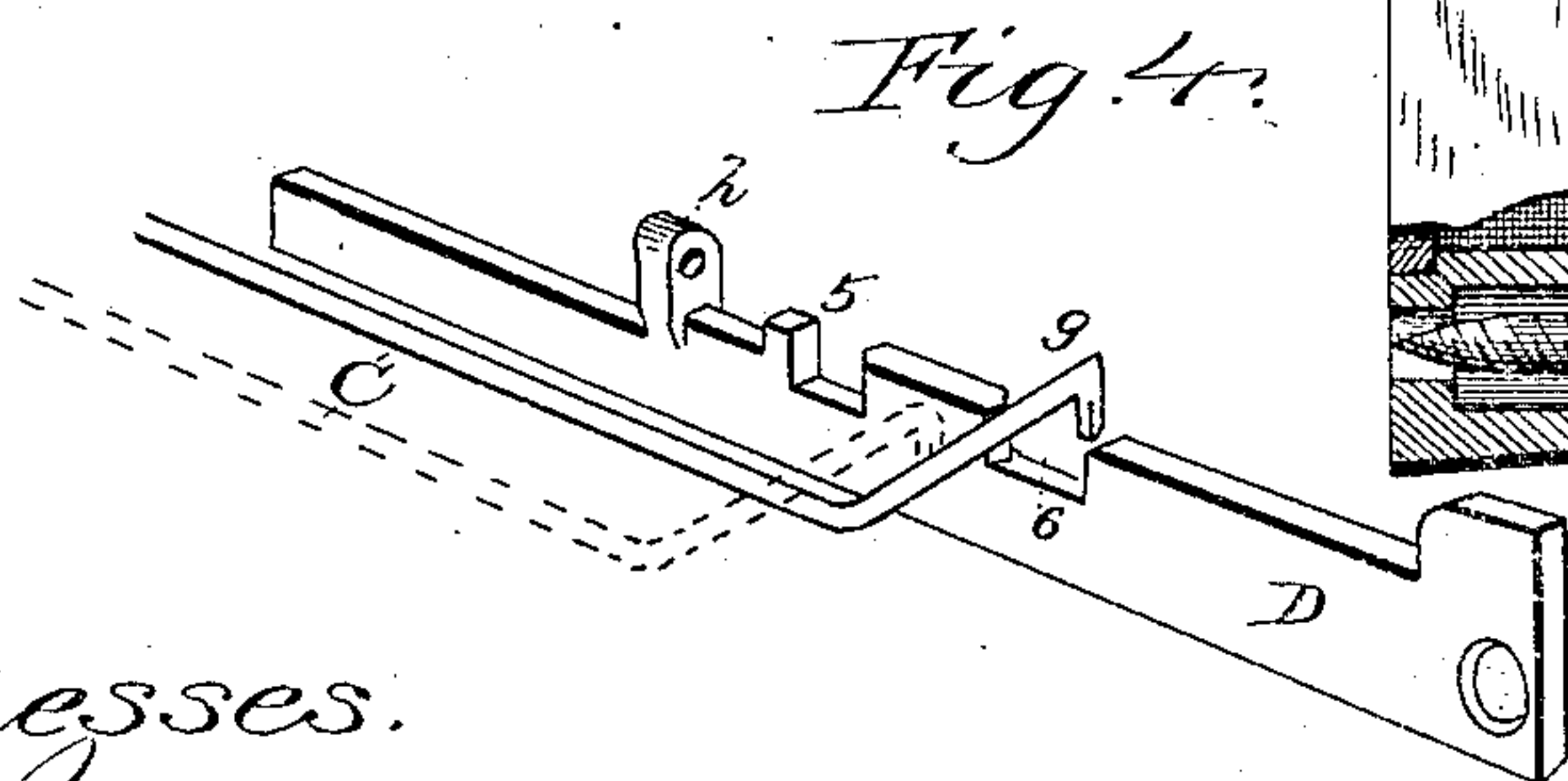
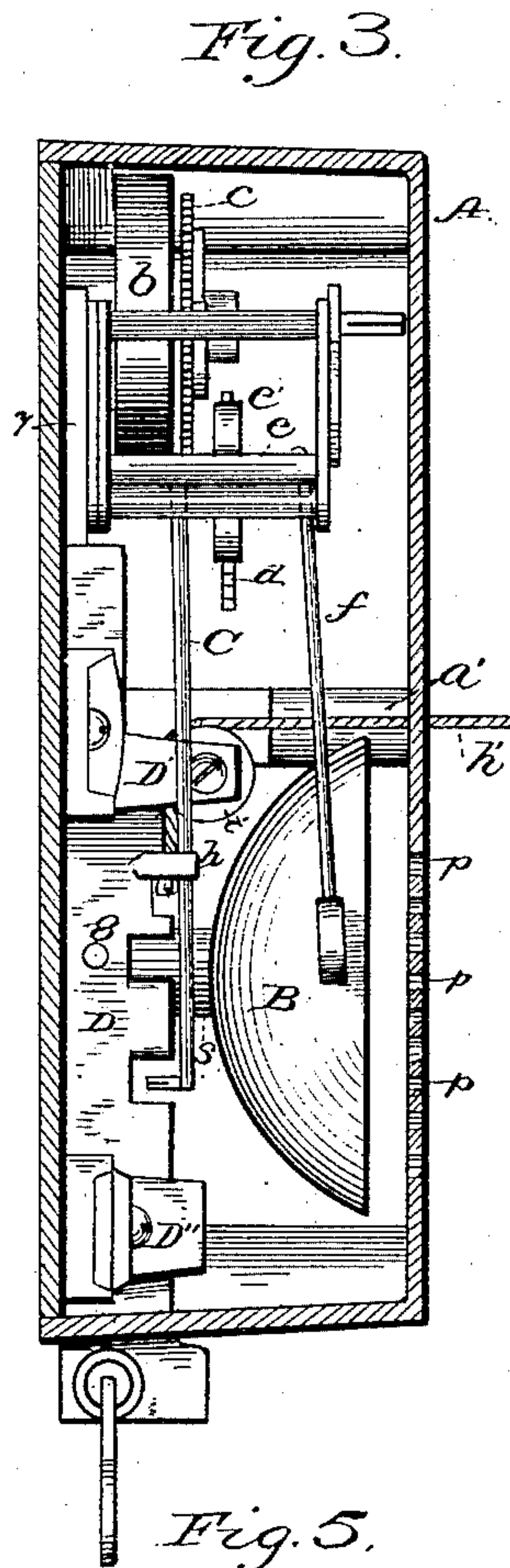
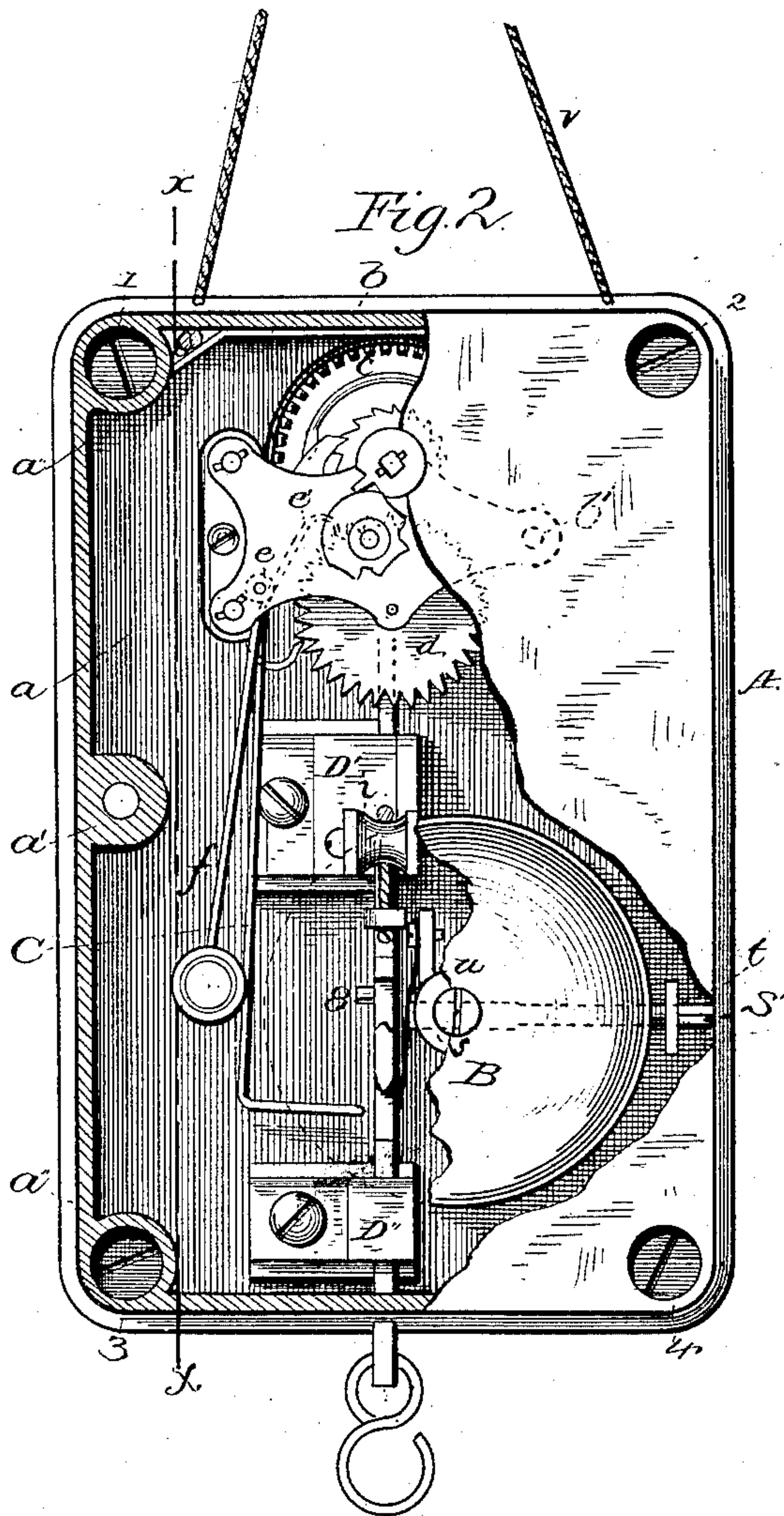
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

ALEXANDER C. GIBSON, OF CHICAGO, ILLINOIS.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 315,138, dated April 7, 1885.

Application filed April 11, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER C. GIBSON, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful
5 Improvements in Ringing Burglar-Alarms; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use
10 the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to ringing burglar-
15 alarms for stores, warerooms, banks, dwelling-houses, and such like places; and it has for its object to supply an automatic device that will, when properly connected to the doors, windows, or blinds, effectually operate
20 to arouse sleeping occupants of rooms, and warn them of any attempts being made to enter by unauthorized persons.

To this end the invention consists in the combination, with the ordinary striking train
25 or gear of clocks, of sliding or adjustable means for retaining the escapement in engagement with the escape-wheel, thereby preventing its movement and maintaining the alarm in a set condition, and when adjusted in either
30 direction to the proper points to immediately release such engagement and cause a continuous vibration of the hammer against the sounding body, thus producing the alarm.

It further consists in devices for regulating
35 the ease of movement of such sliding or adjustable means, and, finally, in other details of construction and combinations of parts, as will hereinafter be distinctly pointed out.

Referring to the annexed drawings, Figure
40 1 represents a closed door in perspective, having my device suspended to the knob thereof, and showing one manner of its operation by a cord and weight, additional cords being attached thereto and passed through screw-eyes
45 on the door and frames of adjacent windows, thus showing how by proper connections one device may be made to serve for all the doors and windows of a room. Fig. 2 represents a
50 vertical front elevation of the device itself, having the front of the casing almost entirely

broken away in order to more clearly show its interior construction. Fig. 3 is a vertical side view in section on the line *xx* of Fig. 2, and clearly showing the manner in which the slide-bar effects its ascribed functions; Fig. 55 4 represents a detail view in perspective of the slide-bar, to more thoroughly illustrate its construction; and Fig. 5 represents a detail view in section of a corner of the casing, to show the construction by which the wood- 60 screws are held therein.

Reference being had to the letters marked on the drawings, A represents the casing in which the operative parts of the device are inclosed, said parts being secured to the back plate, *a*, 65 which is removable, and said back plate being provided with screw-holes, by which it is secured to the casing by screws that are inserted in interiorly-screw-threaded projections *a'*, extending from the inner sides of said casing. 70 Across each corner or angle of the casing, and within the same, are similar projections or increased thicknesses of material, *a''*. These are hollow, and are for the purpose of insertion therethrough of wood-screws 1 2 3 4, by which 75 the entire device can be secured to an object, and made stationary.

In some instances the casing will be manufactured from light pressed brass or heavy tin-plate, so that it will be much lighter, in which 80 case there may or may not be provision of places for the wood-screws.

With reference to the operative parts of the device, the train of wheels located at the upper part thereof are of ordinary clock-work 85 structure, and are, more generally speaking, that part of a clock termed the "striking-train."

The motive power is derived from the spring *b*, that is secured to and coiled around 90 the arbor of the "first" or "great" wheel *c*, and whose free or outer end is secured by an eye (not shown) to the pin *b'*.

d represents the scape-wheel, having a pinion (not seen) on its arbor, that gears with the 95 teeth of the wheel *c*.

e denotes a loose arbor that has its bearing in the frame-work of the train, and secured to which is the escapement *e'*. Also secured or attached to the said arbor is the pendant or 100

hammer *f* by which the gong or bell B is sounded, and a retaining-wire, C, by which the escapement *e'* is by suitable operation of the slide-bar made to automatically engage with the scape-wheel, to maintain it against movement when the device is wound up, thus holding it set, and become automatically released from such engagement when said slide-bar is caused to move in either direction, as will be more fully described hereinafter. The sliding or adjustable means by which these latter automatic results are obtained consists of a slide-bar, D, that moves between and is supported by metal guideways or plates D' and D". This slide-bar is provided at its upper edge and at suitable intervals of its length with slots or recesses 5 and 6, so that when moved in either direction to retain the crooked or right-angle portion *g* of the wire C against or behind the division or side portions of the slots 5 and 6 it serves to prevent movement of said wire, and consequently retains the arbor *e* against oscillation that would be caused by the force exerted on the escapement by the scape-wheel. When the device is wound up and thus set, it is ready for use. When the slide-bar is moved, as soon as one of the slots is brought to the branch *g* the wire is released, and the train thus set in motion causes a continuous striking or vibration of the hammer *f* against the gong B. The edges of the slots are beveled from each side, as shown, and the end of the angle portion *g* is made square in cross-section, so that should the bar D only be pushed enough to bring an edge of one of the slots to the portion *g* the said portion will easily and readily glance off and through the slot. The bar D at near its inner end is provided with a small upright extension, *h*, having an eye formed therein, by which a cord or chain, *h'*, is attached thereto, and then lead out through an opening in the front of the casing (see Fig. 3) and attached to the sash or blinds of a window, while the opposite or outer end of said bar is also formed with an eye, in which an additional cord is fastened, and attached to a small angle-plate which is to be placed in the upper crevice of the door. With reference to Fig. 1 it will be seen that, by the attachment of cords as therein shown, one device can be made to connect with all the doors and windows of a room. The cord *h'* moves in a grooved pulley, *i*, that has its bearing in the metal guideway D'. By means of this pulley the cord is held in place, and thus does the said cord act to draw in the bar from a pull in any direction. The slide-bar is prevented from too far an inward movement by contact at its inner end with plate 7, and is provided with a pin, 8, at about the center of its length, by which it is prevented from too far an outward movement.

To one side of the bar D on the back plate is a small pillar or standard, *s*, having a screw-threaded opening in its top, by which the gong B is screwed thereto, and a similar opening through its side, in which works an adjust-

ing-screw, *s'*, that rests at near its outer end in a small guide, *t*. This screw is by the same key that is used in winding up the device adjusted to bear against a spring, *u*, secured by a screw to the standard and pressing against the slide-bar, and thus can the ease of movement of the said slide-bar be regulated to a nicety. A round opening is provided in the side of the casing, by which the key can be inserted and fitted to the outer end of the adjusting-screw to regulate it. In some instances I have been able to use the screw *s'* bearing directly against the slide-bar, thus dispensing with the spring; but for all general purposes I prefer to use it, and which may be either coiled or flat. The face of the casing is provided with perforations *p*, to allow escape of the sound produced by the alarm.

Having described the general construction and operation of the parts of the device, I will now describe some of the manners in which it may be located in a room and made to be operated by the opening of either one of the doors or windows thereof. In one instance the device is suspended by the cord *v* to the knob, latch, or key of a door, and the cord *w*, that is fastened at one end to the outer end of the slide-bar, is supported at its upper end in the upper crevice between the door and jamb by the angle-iron *x* or equivalent, the said cord *w* being provided with a weight, *y*, so that when the door is opened the angle-iron falls out and the weight descending causes the slide-bar to be pulled and the alarm sounded. At the same time additional cords *z z'* may be attached to the upper or inner end of the slide-bar and passed through screw-eyes secured in the frame of the doors and windows, as shown, and connected to the sashes or blinds, so that an attempt to open the same would act to sound the alarm the same as would the door alone.

It is obvious that the device could be placed in many other positions and by the proper connections made to sound the alarm on an attempted entrance to the room.

It will further be obvious that the forms of construction of the device herein shown can be very materially changed without departing from the spirit of my invention.

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

1. In a burglar-alarm, the combination, with the gearing-train and motive-power mechanism herein described, of the retaining-wire secured to the escapement-arbor and formed with the portion *g*, the slotted slide-bar having a cord attached to one or both ends, the guide-plates D' D" between which said bar moves, the former bearing a pulley and the clapper and gong, all substantially as described.

2. In a burglar-alarm, the combination, with the gearing-train and motive-power mechanism, and the retaining-wire formed with the square right-angle portion *g*, of the slide-bar formed with slots 5 and 6, having beveled

sides and provided with the pin 8, the guides D' D'', the pulley bearing in said guide D', the cords attached to each end of the slide-bar and the bell, all substantially as set forth.

5 3. In a burglar-alarm, the combination, with the slide-bar D, formed substantially as described, of the tightening or regulating screw s', said screw adapted to be adjusted, as set forth.

10 4. In a burglar-alarm, the combination, with the slide-bar, formed substantially as described, of the tightening or regulating screw s' and spring u, said screw having its bearing in standard s and guide t, and said spring secured to said standard, all constructed and
15 operated substantially as set forth and shown.

5. In a burglar-alarm, the combination of

the motive-power mechanism and gearing-train herein described, secured to a back plate formed with screw-box projections and in- 20 closed in a perforated casing, the guide-plates D' D'', the adjustable slotted bar adapted to move between said plates, and stops for limiting its movement in either direction, and the wire C, for retaining the escapement in en- 25 gagement with the scape-wheel, substantially in the manner and for the purpose described.

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

A. C. GIBSON.

Witnesses:

F. W. E. HENKEL,
BRUNO H. GOLL.