2 Sheets--Sheet 1.

C. E. HART & T. JOHNSON.

Combined Burglar Alarm and Indicator.

No. 206,105. **Patented July 16, 1878.**

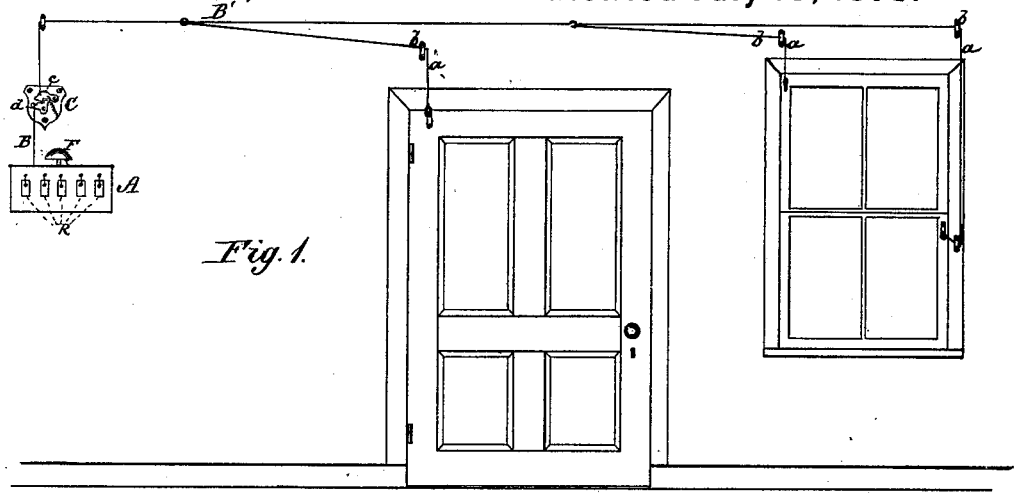
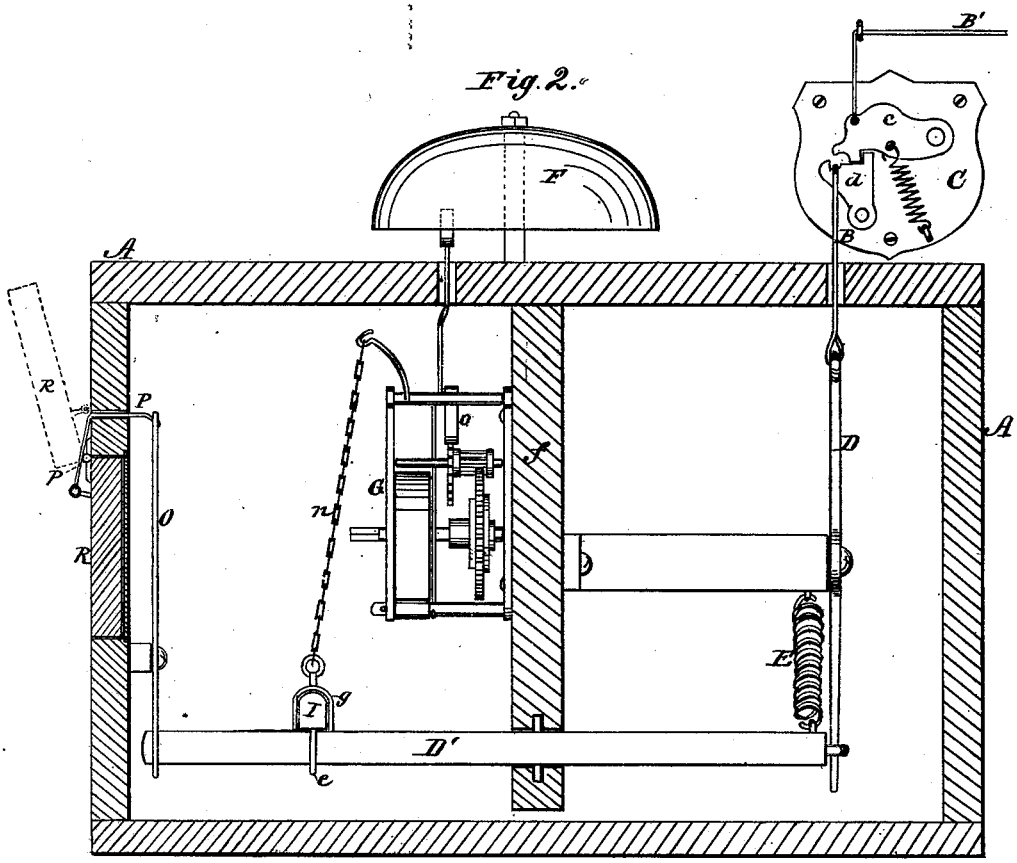


Fig. 1.

Fig. 2.



WITNESSES:

Solon C. Kemon

Chas. A. Pettit

INVENTOR:

C. E. Hart

Toby Johnson

BY

Munn & Co

ATTORNEYS.

2 Sheets--Sheet 2.

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Fig. 3.

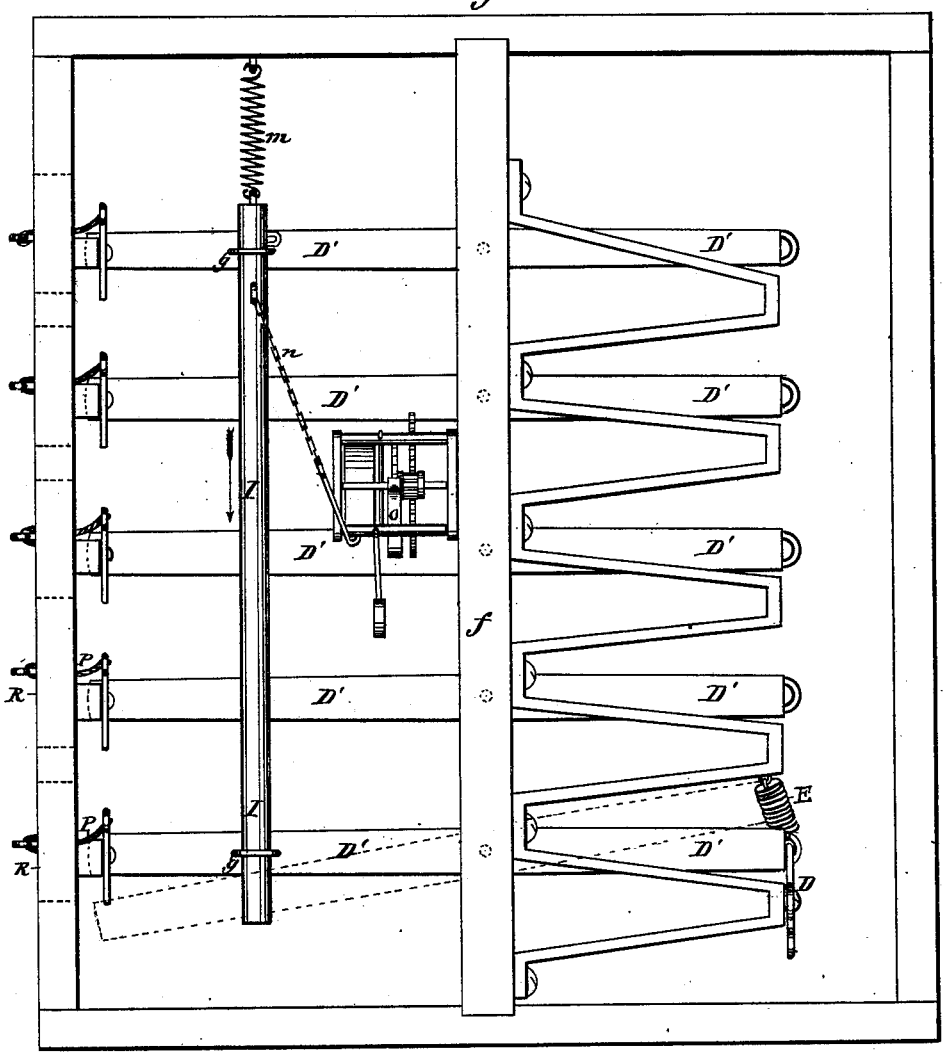


Fig. 4.

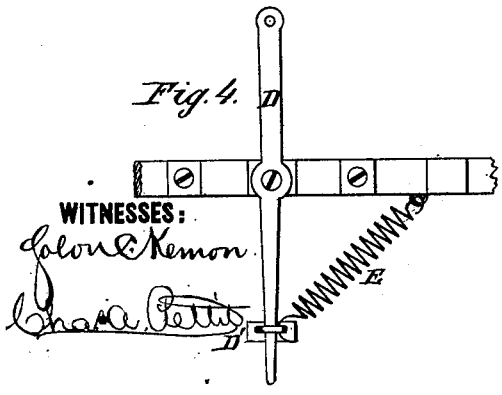
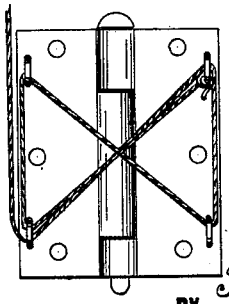


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES E. HART AND TOBY JOHNSON, OF LAKE LILLIAN, MINNESOTA.

IMPROVEMENT IN COMBINED BURGLAR-ALARM AND INDICATOR.

Specification forming part of Letters Patent No. **206,105**, dated July 16, 1878; application filed March 11, 1878.

To all whom it may concern:

Be it known that we, CHARLES E. HART and TOBY JOHNSON, of Lake Lillian, in the county of Kandiyohi and State of Minnesota, have invented a new and Improved Combined Burglar-Alarm and Indicator; and we do hereby declare that the following is a full, clear, and exact description of the same.

The invention is an improvement in the class of burglar-alarms in which the alarm is operated whenever a cord connected with the doors and windows of a dwelling is subjected to tension by the act of opening a door or window to effect an entrance into the dwelling.

In the accompanying drawing, forming part of this specification, Figure 1 shows the mode of connecting the alarm with doors and windows. Fig. 2 is a vertical section of the indicator. Fig. 3 is a plan view of the indicator, the top thereof being removed. Fig. 4 is a detail view. Fig. 5 represents a mode of connecting indicator with the hinges of doors.

The indicator and alarm mechanism proper are inclosed in or attached to a box or case, A, which is located in a chamber or any other apartment where it may be deemed most expedient.

Wires B connect with the indicator, and a releasing device, C, and the other wires, B′, extend to the several rooms of the dwelling, with the doors and windows of which they are connected by branch wires *a*, as hereinafter described, so that if one of the doors or windows shall be opened the wire B′ connected therewith will be subjected to increased tension, and the corresponding wire B at once relieved of tension, so that the alarm will be sounded and the locality of the burglarious entrance indicated.

We will proceed to describe the details of the construction and arrangement of parts.

The main wires B′, only one of which is shown, are attached to a spring-releasing device, C, and extend along the ceiling of apartment, (being supported in suitable guides,) and branch wires *a* connect them with the several doors and windows. The branch wires *a* pass through screw eyes or guides *b*, located in such relation to the windows and doors that when the latter are opened the main wire B′ will be subjected to such tension as to overcome the comparatively weak tension of the spring of the releasing device C, and thereby allow the alarm and indicator to operate.

Device C consists of two parts—a spring-dog, *c*, to which wire B′ is attached, and a pivoted catch, *d*, with which the dog is normally engaged.

A wire, B, is attached to the catch *d*, and to a lever, D, for operating the alarm mechanism, and when the dog *c* releases the catch *d* the lever D is retracted by a strong spring, E, and allows the alarm to sound.

The alarm proper consists of a gong or bell, F, and clock-work G.

The clock-work G is shown attached to the side of a vertical partition, *f*, of box or case A, but may be otherwise located, if desired.

Beneath the clock-work G is a series of levers, D′, pivoted horizontally in slots in the partition *f*.

A bar, I, is supported on one end of the levers D′, and held in guides *g*, and also provided with pendent fingers *e*, one of which projects between each two of the levers.

A weak spiral spring, *m*, Fig. 3, is attached to the left-hand end of this bar I, and a chain, *n*, also connects it with the pallet *o* of the clock-work G.

The opposite ends of the levers D′ are, in practice, all jointed to separate and corresponding vertical pivoted levers D; but in this instance we show but one of them so connected.

A strong spiral spring, E, is also attached to each of the levers D′, to retract them when released, as hereinafter described. When the apparatus is set ready for operation the levers D′ are held in the position shown in full lines, Fig. 3—that is, at nearly right angles to the partition *f*—by the vertical pivoted levers D, with which the wires B connect. When catches *d* are released (by reason of the dog *e* being raised by tension on wire B′) the levers D cease to hold the levers D′ against the tension of springs E, and the alarm is at once sounded.

The operation may be more particularly described as follows: When a window is raised or door opened, the branch wire *a*, attached thereto, and the main wire B′, with which it is connected, are subjected to increased tension. The dog *c* is thereby raised and the catch *d* released. Wire B then slackens, lever D releases

lever D′, and its spring E throws the latter into the position shown in dotted lines, Fig. 3, thus overcoming the tension of spring *m*, and drawing the bar T, by contact with pins *e*, in the direction indicated by the arrow, which allows the chain *n* to slacken, and releases the escapement, so that the clock-work will operate freely and sound the alarm.

The proximate means for indicating the apartment the door or window of which has been opened are vertical pivoted levers O, cords P, and small shields or doors R, hinged to the outer side of the box or case, and covering the respective names or numbers of the apartments. The upper ends of the said levers are connected with the hinged shields R by said cords P, and the lower ends of the levers are in such position that they are struck by the horizontal levers D′ when the latter are retracted by springs E. Hence, when an apartment is entered, the lever D, to which a corresponding wire, B, is attached, will be released, also the levers D′, and the latter will then throw the corresponding vertical lever O into an inclined position and raise the shield R, covering the name of said apartment, so that it may be instantly known where the burglar is seeking, or has made, an entrance.

Fig. 5 represents a plan view of the inner side of a butt-hinge having a cord or wire passed through screw-eyes attached to its leaves in the manner we propose. The woodwork where the hinge is applied will be recessed to receive the cords and screw-eyes. When the door is opened the leaves of the cord will be subjected to tension.

What we claim is—

1. In combination with the doors or windows of a dwelling or other building, the wires B′, releasing devices C, wires B, levers D and D′, springs E, chain *n*, spring *m*, and clock-work and gong, substantially as shown and described, to operate as specified.

2. In combination with the doors or windows of a dwelling or other building, the main wires B′ and wires B, the pivoted spring-dog *c*, and catch *d*, as shown and described.

3. The combination of the levers D′, the bar I, provided with fingers, the spring *m*, chain *n*, and alarm mechanism, all as shown and described.

4. The combination of the vertical levers O, cords P, hinged name-shields R, and horizontal levers D′, substantially as shown and described, for the purpose specified.

5. The combination of the name-indicating shields, the alarm mechanism, the levers D′, and means for connecting said parts, and wires for connecting with the doors and windows of a building, substantially as shown and described.

CHARLES E. HART.
TOBY JOHNSON.

Witnesses:
JNO. W. ARCTANDER,
C. L. OVID.