

(No Model.)

A. ISKE.

DOOR BELL.

No. 378,317.

Patented Feb. 21, 1888.

Fig. 3.

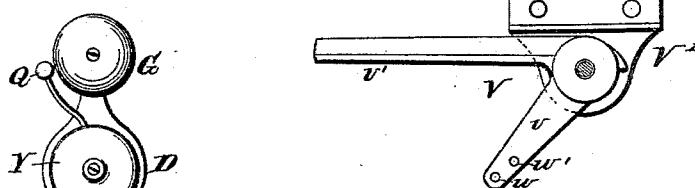


Fig. 1.

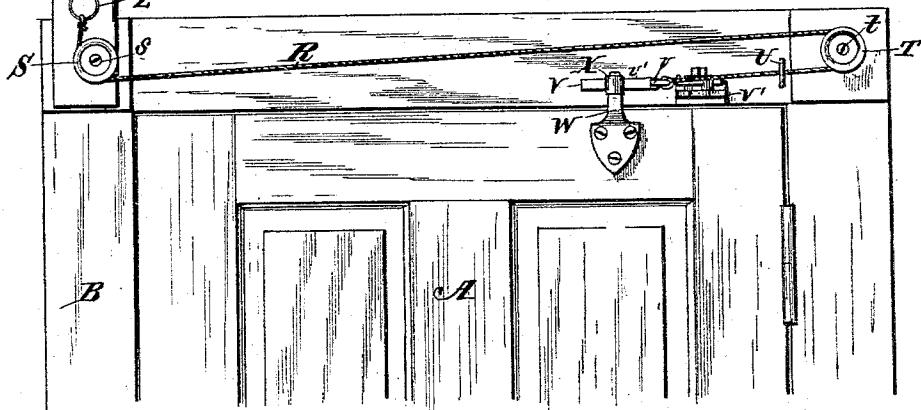
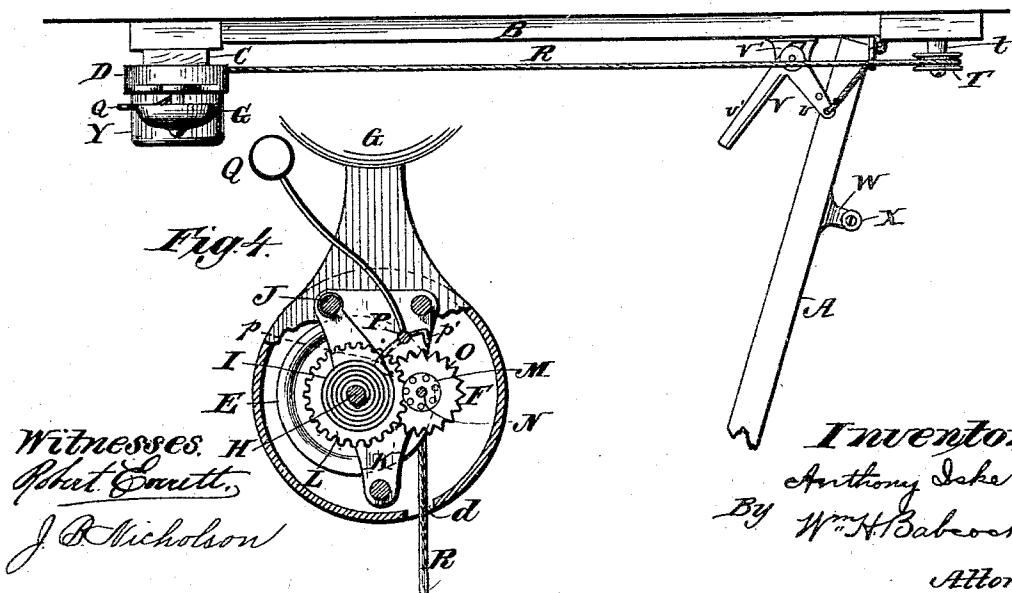


Fig. 2.



Witnesses. H
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UNITED STATES PATENT OFFICE.

ANTHONY ISKE, OF LANCASTER, PENNSYLVANIA, ASSIGNOR TO ISRAEL L. LANDIS, OF SAME PLACE.

DOOR-BELL.

SPECIFICATION forming part of Letters Patent No. 378,317, dated February 21, 1888.

Application filed April 22, 1887. Serial No. 235,758. (No model.)

To all whom it may concern:

Be it known that I, ANTHONY ISKE, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Door-Bells; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it app pertains to make and use the same.

The object of this invention is to provide a bell which will be rung, without any sudden jar or shock, by the opening of a door, and which will continue ringing a predetermined length of time, depending on the adjustment of the parts, which is variable at will.

Hitherto bells used for shop-doors or similar purposes have generally been arranged to be struck by some projection, which gives the bell a violent jar and may injure it. In no case, so far as I am aware, has the duration of the ringing been within control. I avoid these objections by means of the devices hereinafter particularly set forth and claimed.

In the accompanying drawings, Figure 1 represents a front elevation of my door-bell and operating mechanism, with part of the door and door-frame to which they are attached, the door being closed. Fig. 2 represents a plan view, the door being open and the alarm in operation. Fig. 3 represents a detail plan view of the lever. Fig. 4 represents a detail view of the mainspring, winding-pulley, and some of the proximate parts.

A designates a door, B a door-frame, and C a broad flat bar attached at one end to the latter near one of its upper corners, the said bar extending upward, as shown, or, if preferred, horizontally over the doorway. This latter end of the bar carries a casing, D, which encloses a pulley, E, and has a train of clock-work, F, and a bell, G, attached to it. The shaft H of pulley E has the inner end of the mainspring I of said train attached to it, said spring being wound around said shaft and attached at its outer end to one of the pillars J of the plates K of said train of clock-work. Said shaft H also carries a gear-wheel, L, which meshes with a pinion or lantern wheel, M, on another shaft or arbor, N, the latter carrying also the escapement-wheel O. Pallets $p p'$ on

rocking escapement-shaft P engage this escapement-wheel. This latter shaft carries also a hammer, Q, which operates against the bell G so long as the clock-work F (comprising said mainspring, gear-wheels, and escapement) is in action. A cord, R, is attached to the pulley E and passed around it, so that a pull on said cord will turn said pulley and wind the spring I. I therefore call this the "winding-pulley." The said cord passes out through an opening, d, in casing D, then down to and around a pulley, S, which is free to turn on a stud, s, attached to bar C near its lower end. Thence said cord R passes again, in a second line at right angles to the first, to the opposite upper corner of the door-frame, where there is another pulley, T, on another stud, t, attached to said door-frame. The said cord, after passing around said pulley T and through a guide-eye, U, is finally attached to the short arm v of a bell-crank lever, V, which is pivoted at its angle to a bracket, V', attached to the upper part of said door-frame. Said lever has horizontal vibration when set free, but is held stationary by contact of its long arm v' with a rigid upwardly-extending finger, W, attached to the door when said door is closed. Under such circumstances the mainspring I is under tension. When the door opens, the finger W is removed from the long arm v' of the lever V, and said mainspring I is left free to operate. The length of this operation and the consequent ringing of the bell are regulated by two or more holes, w w', arranged in series lengthwise in the short arm v of said lever V. By shifting the cord from one of these holes to another the leverage is correspondingly increased or diminished, and the mainspring I is wound thereby to a greater or less extent for the purpose above stated.

To lessen the friction between the finger W and the lever V, the former is provided with an anti-friction roller, X. I also find it convenient to use a sheet-metal cover, Y, for the clock-work F, and to make the cord in two sections connected by a metal ring, Z. There is no novelty in these devices, however, and they are not at all necessary, although it is desirable to protect and hide the clock-work in some way.

The bell-and-alarm operating mechanism

herein described may of course be used without change with a sliding door or a window, as well as with the ordinary hinged door which has been shown.

- 5 1. I am aware that it is not new to provide a door with a finger which, when said door is closed, holds an alarm out of action against the tension of a spring, the opening of the door leaving the alarm mechanism free to sound.
- 10 2. This construction I do not broadly claim; also, I am aware that the combination of the winding-pulley, winding-cord, and clock-work alarm, with tripping devices operated by opening a door, is not broadly new, being shown
- 15 3. in a previous patent granted to Anthony and Albert Iske, therefore I do not broadly claim the same.

Having thus described my invention, what I claim as new, and desire to secure by Letters 20 Patent, is—

1. A lever and a finger attached to the door for holding said lever stationary while the

door is closed, in combination with a winding-pulley, the mainspring of an alarm mechanism, and a cord attached to said lever and attached to and wound around said pulley in order that a pull on said cord may wind the alarm mechanism, substantially as set forth.

2. The bell-crank lever V, having a series of holes, *w w'*, for the purpose stated, the cord 30 R, attached thereto, and the guide-pulleys *t s*, in combination with the winding-pulley E, operated by said cord, the spring I, wound by said pulley, the wheels and bell-hammer actuated by said spring when said cord is released, 35 and the finger on the door which normally engages said lever to hold said cord against such release, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ANTHONY ISKE.

Witnesses:

GEO. W. PINKERTON,
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