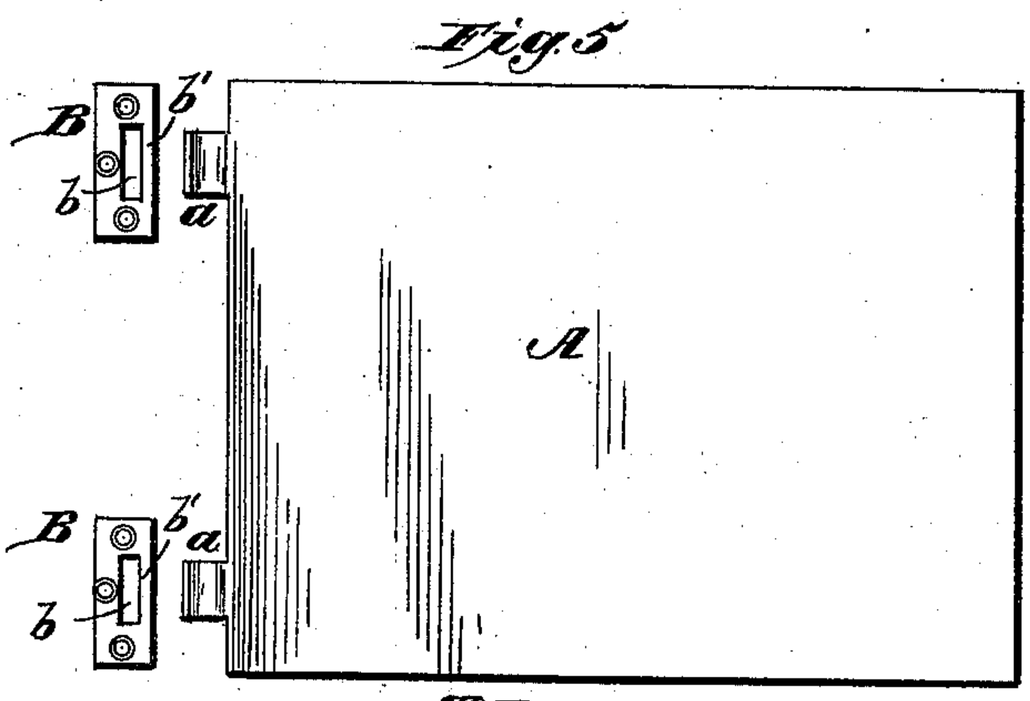
(No Model.)

A. ISKE.

DOOR MAT BELL.

No. 378,962. Patented Mar. 6, 1888.

Fig. 5



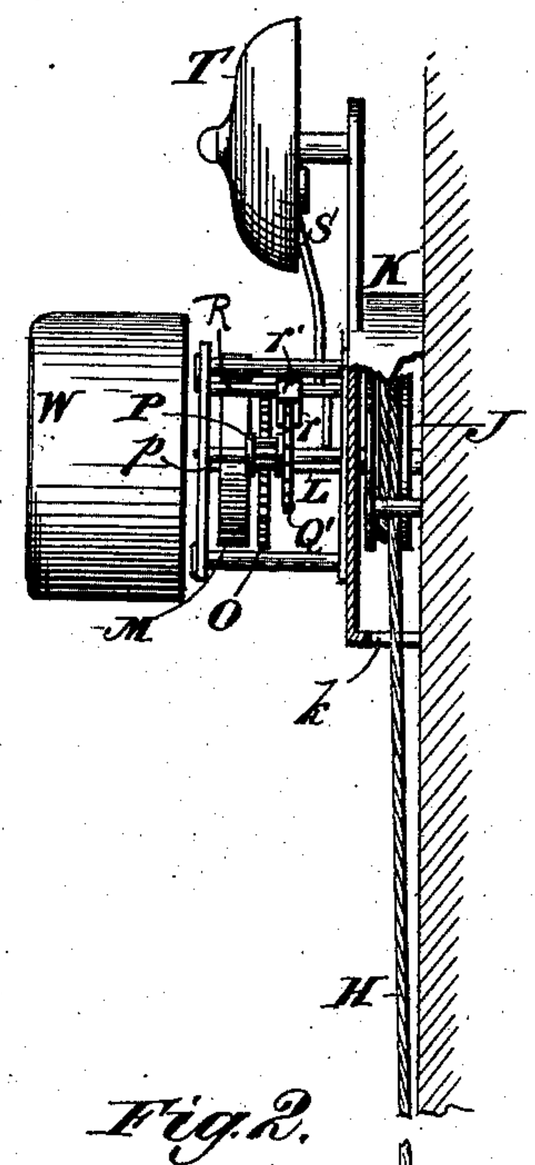


Fig. 2.

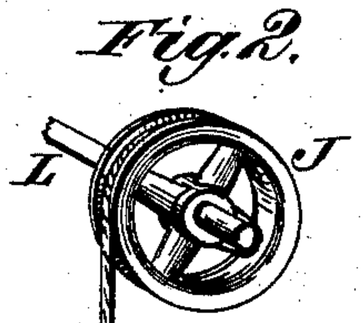


Fig. 1.

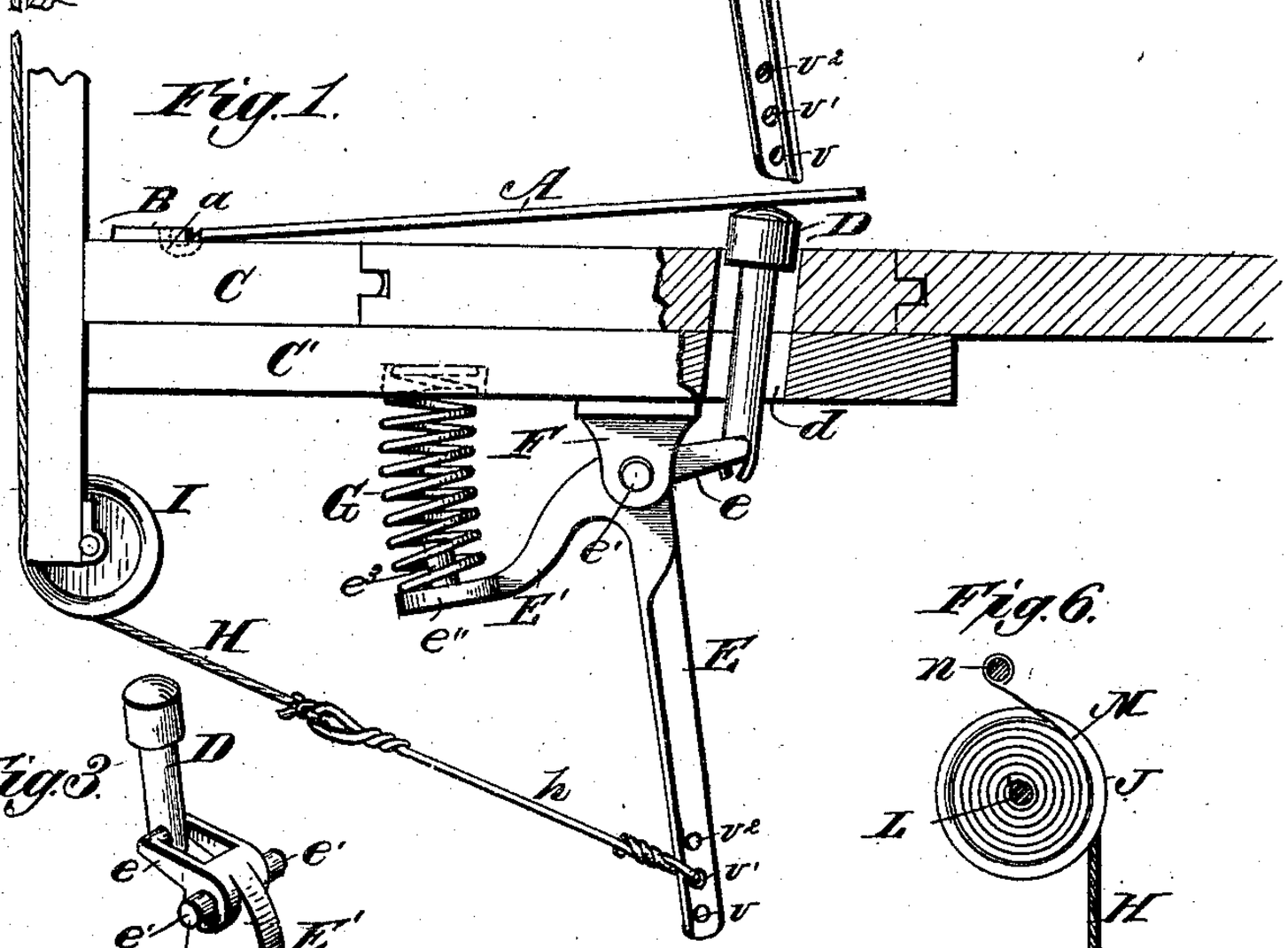


Fig. 4.

Fig. 3.

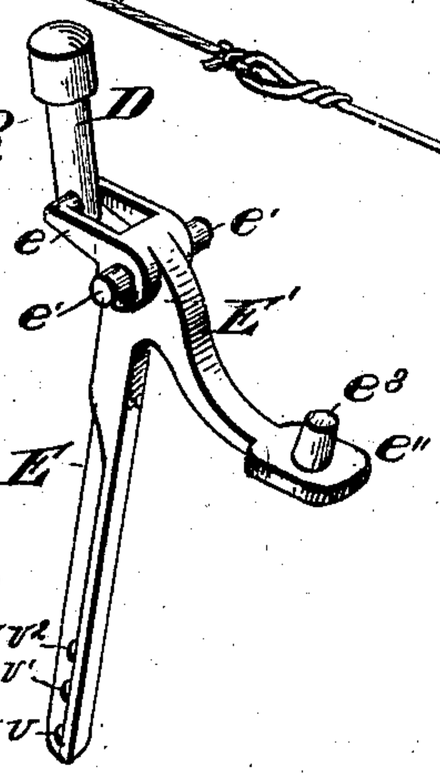


Fig. 6.

Witnesses.
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UNITED STATES PATENT OFFICE.

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

DOOR-MAT BELL.

SPECIFICATION forming part of Letters Patent No. 378,962, dated March 6, 1888.

Application filed April 22, 1887. Serial No. 235,757. (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-Mat 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 appertains to make and use the same.

This invention relates to door-mat bells and mechanism for operating the same when the door-mat is stepped on. The devices hereinafter shown and described are also, in part, capable of being used for general purposes as an alarm without the door-mat.

It consists in a train of alarm mechanism provided with an actuating-spring and bell, in combination with a cord and pulley, whereby said spring is wound and held under tension, a lever to which said cord is attached, a door-mat having a stiff hinged base supported by said lever, and a counteracting spring which holds said lever in position to maintain such tension, and thus prevent the operation of the alarm until the lever and counteracting spring are forced to yield by external pressure.

The said invention also consists in certain additional details of construction and combination, hereinafter more particularly set forth and claimed.

In the accompanying drawings, Figure 1 represents a side elevation of the invention, the cover for the alarm mechanism being detached and the winding-pulley exposed by breaking away the side of the case which incloses it. The flooring is also broken away to show the pin or stud between the door-mat and the lever. Fig. 2 represents a detail perspective view of the winding-pulley and part of the cord. Fig. 3 represents a detail perspective view of the lever and pin. Fig. 4 represents in detail a modified form of lever having two pins or studs. Fig. 5 represents a detail plan view of the hinged door-mat and the slotted plates to which it is attached. Fig. 6 represents a detail partly-sectional view showing the main-spring, winding-pulley, shaft, pillar, and cord.

A designates a door-mat having a stiff base or lining, from the rear edge of which two upwardly-curving claws, *a a*, extend backward. These claws enter from below the slots *b* of plates B, which are secured to the flooring C. These slots leave the front part of each plate in the form of a narrow bar, *b'*, which serves as a pivot for the claw *a*, that enters the slot *b* behind it. The mat A is therefore hinged to said plates B by said claws *a* and bars *b'*, so as to be allowed a certain amount of vertical motion. The forward end of said mat rests on a movable pin or stud, D, which works up and down through an opening, *d*, in the flooring. The lower end of this pin is bifurcated to fit over the front part of a stirrup-shaped arm, *e*, formed on the upper part of a long downwardly-extending lever, E. This lever is hung on side pivots, *e'*, to brackets F, which are attached to the under side of the flooring or, as shown, to a piece, C', attached thereto. The stirrup-shaped arm *e* extends forward from above the pivotal line formed by the axis of said gudgeons. Below said pivotal point a longer arm, E', extends to the rear and downward, terminating in a broad flat disk, e^2, from the center of which a pin, e^3, rises. A strong spring, G, is interposed between the said disk e^2 and the piece C' or the flooring C. The pin e^3 helps to keep said spring in place, and the action of the latter is to rock said lever on its pivots and raise the stud or pin D and the front part of the mat. The lower end of lever E is of course moved forward by the same motion and draws on a cord, H, which is attached thereto. This cord passes backward over a guide-pulley, I, and up to a winding-pulley, J, within a casing, K, said casing and pulleys and the parts attached to said casing being supported by a wall of the building, as shown, or by any upright stationary device suitable to such use. Said cord enters casing K through an opening, *k*, and is attached to the periphery of winding-pulley J after passing around the latter, so that when the lever E pulls on the cord H the winding-pulley J is rotated. This pulley is mounted on and turns with a shaft, L, to which the inner end of a coiled spring, M, is attached. The outer end of said spring is made fast to one of the pillars *n*, connecting the front and back plates N of a clock-work movement attached

to casing K. This clock-work consists, besides spring M, of a gear-wheel, O, carried by shaft L, a pinion or lantern wheel, P, with which said wheel O meshes, an escapement-wheel, Q′, carried by the shaft *p* of wheel or pinion P, and the escapement-pallets *r r′*, mounted on a rock-shaft, R. There is no novelty in this clock-work, and any other suitable to my purpose may be substituted.

The rock-shaft R carries a hammer, S, which operates against a bell, T. An arm, *s*, which is also attached to said rock-shaft, acts as a stop by striking one of the pillars aforesaid to prevent said hammer from moving too far.

The lower end of the lever E is provided with several holes, *v v′ v²*, arranged in vertical series. A wire, *h*, passed through some one of these holes, serves for the attachment of said cord to said lever. The amount of forward or backward motion of said cord consequent on the vibration of door-mat A and lever E will be varied by shifting the wire *h* from one hole to another. Thus, when the said wire is in the lowest hole, *v*, a given amount of depression of the door-mat will cause the cord H to be allowed a greater amount of backward motion than when the wire *h* is in the hole *v′*, next above it, and so on.

The spring G, which more than counterbalances the mainspring M of the clock-work, operates to hold the latter spring normally wound and ready for action and the door-mat A slightly raised. When the door-mat is depressed by a person's foot, the said lever is rocked backward, compressing spring G and leaving spring M free to act for a period of time corresponding to the rearward motion of the cord, which, as before stated, depends on the hole, *v*, *v′*, or *v²*, which may be chosen for attaching said cord or its terminal wire *h*. A sheet-metal cover, W, is preferably employed to give protection to the clock-work and a better appearance to the entire mechanism.

As shown in Fig. 4, I sometimes employ a lever having two arms, *e*, and two studs or pins, D. This is of course a simple duplication of the former construction and operates in the same way.

The claws *a* and slotted plates B allow the mat to be conveniently removed when that is desired, although securely hinging it when in position. It is of course obvious that the form of the lever and the construction and arrangement of the spring and pin in contact therewith, as well as some other parts, may be considerably varied without departing from my invention. The wire *h* is not at all necessary, being used merely to give a stronger and more durable attachment of the cord to the lever.

I am aware that it is not new to connect a depressible stud by arms and levers with the pintle of a furnace-door for the purpose of opening and closing the latter. I am also aware that it is not new to combine depressible water-closet seats with movable signal-boards and intermediate levers and rods. I am also aware that it is not new to combine a depressible part of the floor near the seat of a water-closet with a signal-board and intervening connections, a replacing-spring being also used. I do not claim any of these combinations; but,

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

1. An alarm mechanism provided with a mainspring and a winding-pulley, a cord passed around said pulley and attached thereto at one end, a lever to which the other end of said cord is attached, a door-mat having a stiff-hinged base supported by said lever, and a spring operating against said lever to hold said mainspring normally under tension, substantially as set forth.

2. A lever having an arm, E′, and the holes *v v′ v²*, arranged in series, as shown, in combination with alarm mechanism having a winding-pulley and a mainspring, a cord passing from one of the holes of said lever to and around said pulley, and a spring operating against arm E′ to hold said mainspring normally under tension, substantially as set forth.

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

ANTHONY ISKE.

Witnesses:

GEO. W. PINKERTON,

I. H. RYON.