(No Model.)

B. F. KRAFT

BURGLAR ALARM.

No. 476,945. Patented June 14, 1892.

Fig. 1.

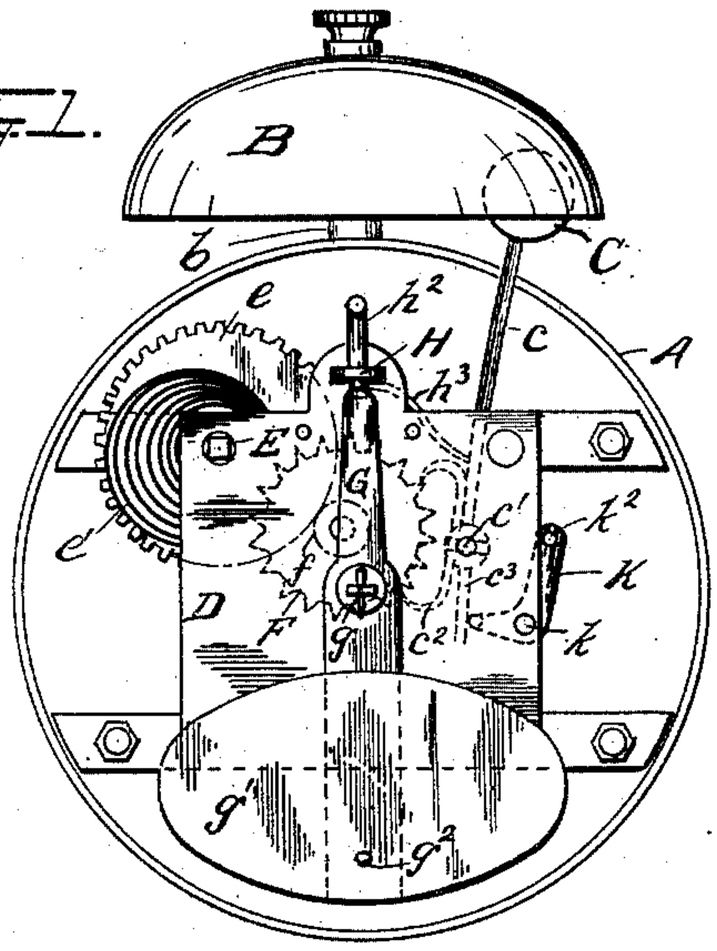


Fig. 2.

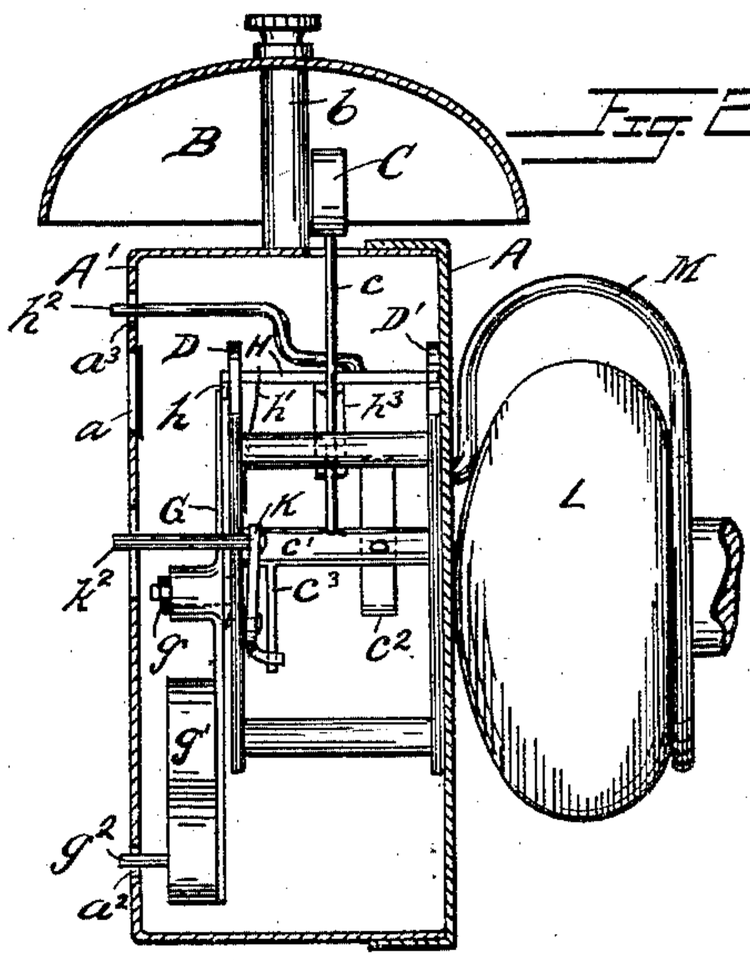


Fig. 4.

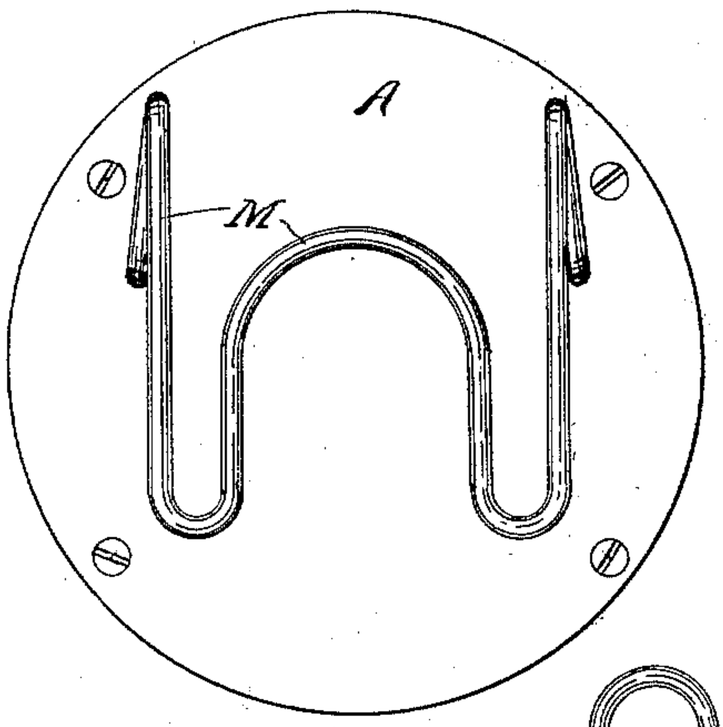


Fig. 3.

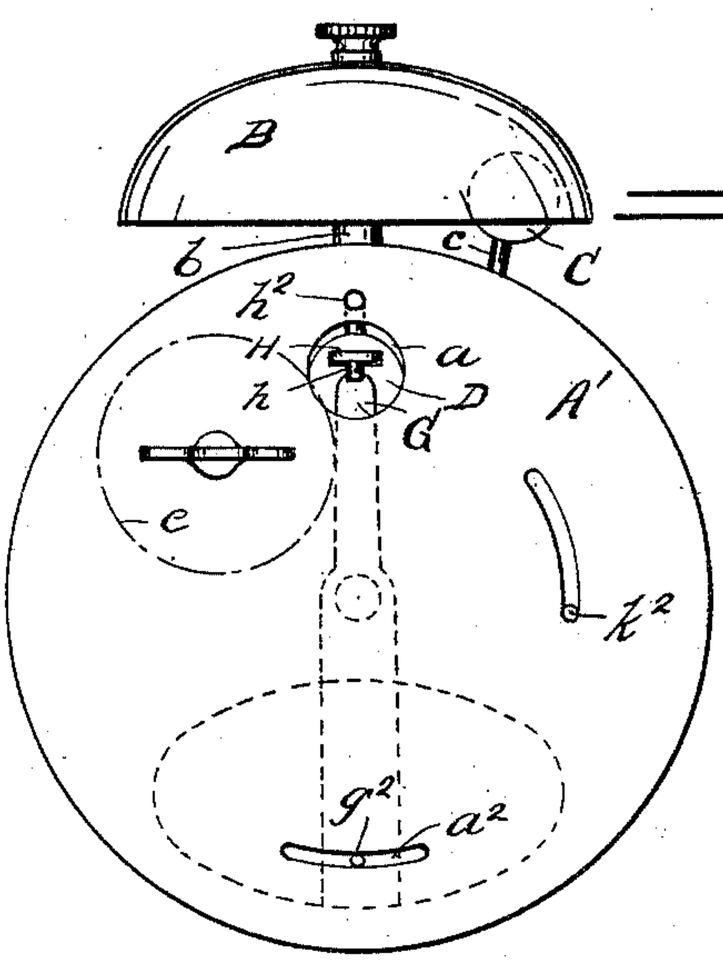
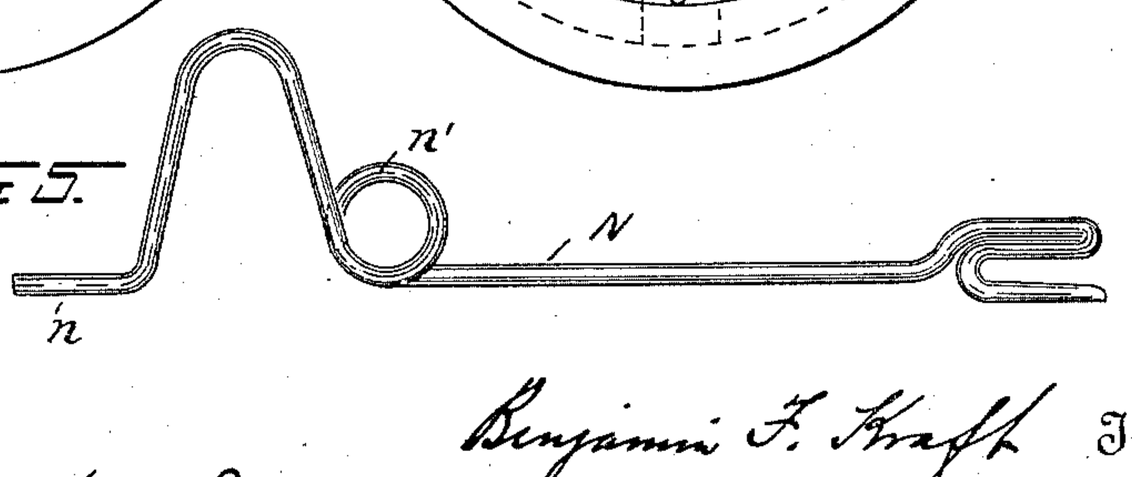


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

BENJAMIN F. KRAFT, OF READING, PENNSYLVANIA.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 476,945, dated June 14, 1892.

Application filed January 21, 1892. Serial No. 418,796. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. KRAFT, a citizen of the United States, residing at Reading, in the county of Berks, State of Pennsylvania, have invented certain Improvements in Burglar-Alarms, of which the following is a specification.

My invention relates to that class of alarms which are adapted to be operated by the turning of a door-knob or an equivalent manner, and the principal purpose of which is to serve as a burglar-alarm, though adapted, also, to be used merely as a call-bell. Heretofore a variety of devices have been provided for this purpose; but so far as I am aware they have been more or less unsatisfactory either on account of complicated construction, imperfect operation, or inconvenience in removing and attaching.

My object has been to provide an improved device which will overcome all these objections, and it is fully described hereinafter in connection with the accompanying drawings.

Figure 1 is a front elevation of my device with the casing removed to show the interior mechanism. Fig. 2 is a side elevation with the casing shown in section. Fig. 3 is a front elevation with the casing in place. Fig. 4 shows the knob-gripping device, and Fig. 5 a modified means of operating the trigger mechanism.

The operating mechanism is all inclosed in a two-part sheet-metal casing A A′, upon which is mounted on a post *b* the alarm-bell B. The alarm-movement is of a well-known form, consisting, mainly, of the winding-arbor E, having a clock-spring *e′*, a main wheel *e*, and a ratchet (not shown) attached thereto, a toothed wheel F, and pinion *f*, the latter meshing with the main wheel *e*, and a verge c^2, meshing with the toothed wheel, pivoted to an arbor *c′*, and carrying the alarm-hammer C by means of its stem *c*. In order to produce my improved device, I have combined with this simple and well-known alarm-movement certain mechanism which I will now proceed to describe.

A trigger mechanism controls the alarm-hammer. This consists of a slide-bar H, mounted on the front and rear plates D and D′ of the alarm-movement and provided with an arm h^3, which when the bar is pushed inward by means of a stem h^2, projecting through an opening a^3 in the front of the casing A′, engages the stem *c* of the alarm-hammer, as shown in Fig. 1, so as to prevent oscillation of the latter, but which is normally pressed forward by a spring *h′*, thus releasing the hammer. A stop *h* on the end of this slide-bar is engaged by the upper end of a lever G when the trigger is set and the hammer thus held. This lever is pivoted at *g* to the plate D and weighted at its lower end *g′*, so that it normally assumes a vertical position. In addition to this trigger mechanism a positive locking device K is provided, consisting of a bell-crank pivoted at *k* to the plate D and arranged to engage or release an arm c^3 on the verge arbor or sleeve by which the hammer is carried. This bell-crank is operated by means of a lever k^2, which projects through the front casing A′.

The means for attaching the device to door-knobs preferably consists of a clamp M, of spring-wire, which is forked to span the knob-shank and hugs the knob L, so as to cause the whole alarm device to turn with it.

When the spring is wound up, the alarm-hammer is ordinarily prevented from oscillating by the positive locking device K. In order to use the device on a door, it is hung upon the knob by means of the spring-clamp, as heretofore described. To set the alarm, the sliding bar H is pushed in by means of its projecting stem h^2, and the upper end of the weighted lever G is swung in front of the stop *h*. The locking device K is then moved out of engagement, and the hammer is held only by the arm h^2 of the slide-bar and is ready to act upon any movement of the outside knob. The effect of such movement is to turn the whole alarm device with the knob. The weighted lever, however, tending always to remain plumb, releases the slide-bar H, which is moved outward by its spring *h′*, thus leaving the hammer free to swing against the bell, which it continues to do until the mainspring *e′* is run down or the locking device K is again thrown into engagement with it.

An opening or glass *a* may be provided in the casing to facilitate setting the trigger mechanism; but this may be readily dispensed with. The lever G may be swung to one side

by means of a projection g^2, which extends through a slot a^2 in the casing.

Though my device is more especially adapted to be applied to door-knobs, it may obviously be used elsewhere. It may, for instance, be applied to the meeting-rail of a window-sash, so as to be operated by an attempt to lift the same. In this case a device such as is shown in Fig. 5 may be employed to turn the lever G and release the hammer. This consists of a wire N, shaped at one end to engage the shank g of the lever G and at the other end n to engage the window-frame, being preferably bent at n' to form a spring and passing through a slot in the side of the casing A'.

Having thus described my invention, I do not limit myself to the exact construction shown; but

What I claim is—

1. In an alarm device, the combination, with the alarm-movement having a verge carrying the alarm-hammer, of a trigger mechanism comprising a spring-retracted slide-bar having an arm arranged to engage the alarm-hammer and a pivoted lever adapted to engage a stop upon said slide-bar, and means for operating the lever to release the hammer, substantially as set forth.

2. In an alarm device, the combination, with the alarm-movement having a verge carrying the alarm-hammer and provided with an arm, of a trigger mechanism, means for operating the same to release the hammer, and a locking mechanism for said hammer, consisting of a pivoted bell-crank having means at one end for operating it and adapted to engage at its opposite end said arm of the verge, as specified.

3. In an alarm device, the combination of the casing, alarm-bell, an alarm-movement having a verge carrying the alarm-hammer and provided with an arm, a spring-retracted slide-bar having a stem projecting through a wall of said casing and an arm adapted to engage the bell-hammer, a pivoted weighted lever adapted to engage a stop on said slide-bar, a pivoted bell-crank having one of its ends adapted to engage said arm of the verge and its opposite end provided with operating means extending through a wall of the casing, and means for releasing the bell-hammer.

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

BENJAMIN F. KRAFT.

Witnesses:

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HENRY MILLER.