No. 870,963. PATENTED NOV. 12, 1907.

L. G. HOLDEN.

ALARM BOX ATTACHMENT.

APPLICATION FILED MAR. 12, 1906.

Fig. 1.

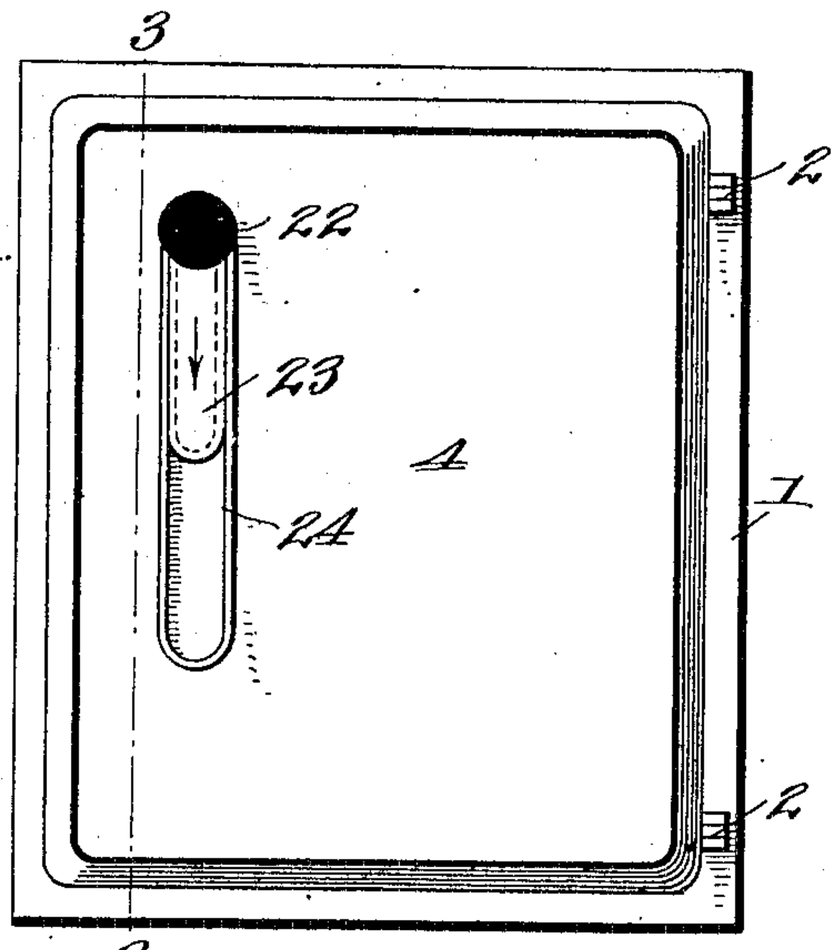


Fig. 2.

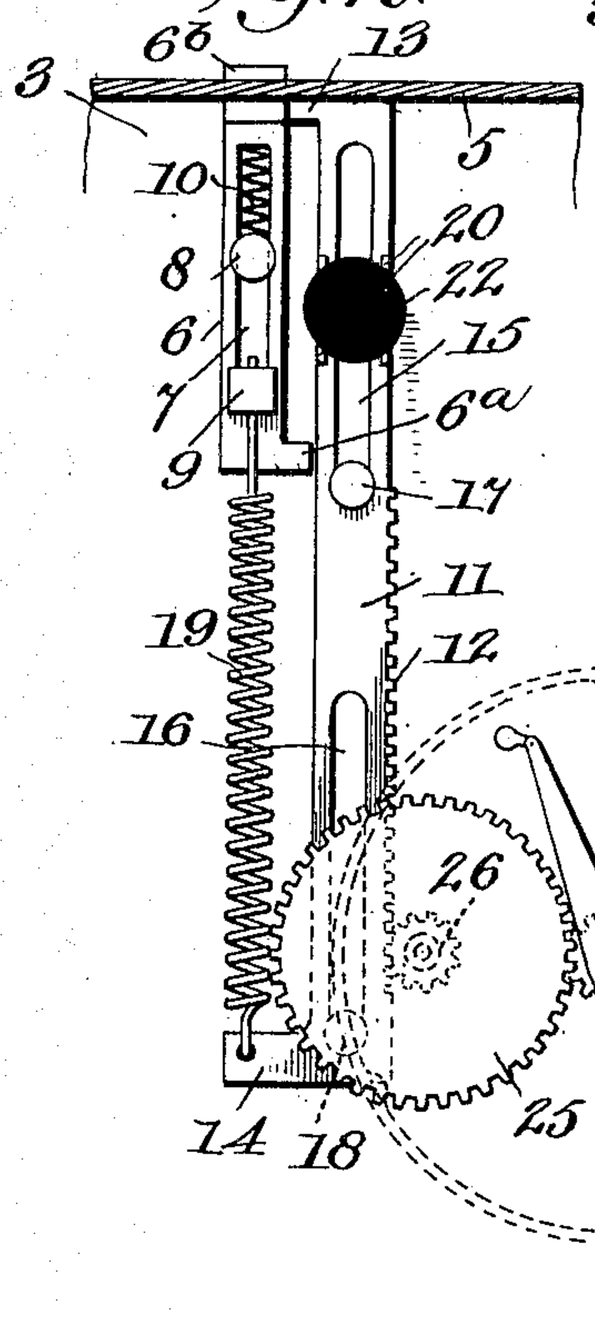


Fig. 4.

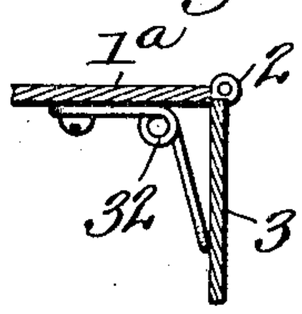
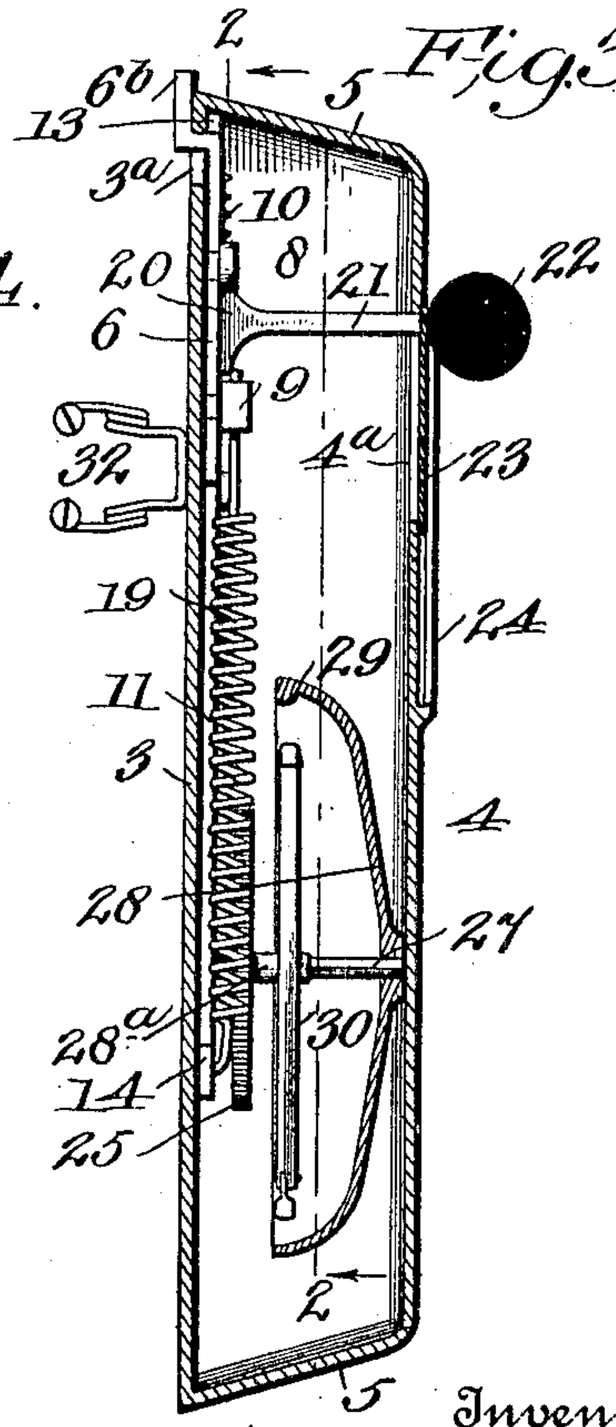


Fig. 3.



Witnesses

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ALARM-BOX ATTACHMENT.

No. 870,963. Specification of Letters Patent. Patented Nov. 12, 1907.

Application filed March 12, 1906. Serial No. 305,681.

To all whom it may concern:

Be it known that I, LEE G. HOLDEN, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Alarm-Box Attachments; 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 attachments for alarm boxes, and is designed to provide a keyless door and local alarm mechanism adapted to be operated upon opening the door.

The object of the invention is to prevent tampering with the alarm box proper by sounding a local signal.

Another object of the invention is to provide means for throwing open the door when unlatched and while the local alarm is sounding, which will call the operator's attention to the hook or handle necessary to operate the distant or central alarm, or signal.

While the invention may be applicable to all forms of signal boxes, including fire and burglar alarms, messenger calls, etc., for the purpose of brevity, I simply use the term alarm box.

To more fully understand the invention, reference is had to the accompanying drawings, illustrating a practical embodiment of the same, in which:—

Figure 1 is a front elevation of my improved door, forming part of the invention, applied to an alarm box. Fig. 2 is a longitudinal section on the line 2—2 of Fig. 3, a portion of the back plate of the hollow door being broken away, the operating handle and internal mechanism being shown in elevation and the bell being indicated in dotted lines. Fig. 3 is a longitudinal section through the door, taken on the line 3—3 of Fig. 1 and looking to the right, and Fig. 4 is a detail fragmentary sectional view, illustrating the method of interposing a spring between the side wall of the alarm box proper, and the back plate or wall of the hollow door.

Any suitable manner of hanging the door to the alarm box may be employed, but for the purpose of illustration, in the drawings 1 designates the casing of the alarm box proper (1ª, Fig. 4, designating the side wall thereof) to which is hinged as at 2 the improved hollow door containing the coöperating local alarm mechanism.

As clearly illustrated in Fig. 3, this hollow door comprises the rear wall 3 suitably spaced from the front wall 4 by the top and bottom webs 5.

6 is a latch bolt slotted as at 7 and provided at its lower end with the laterally projecting lug 6ª and at its upper end bent rearwardly and upwardly to form the latch member 6ᵇ. This latch bolt is held in position on the rear wall 3 of the hollow door by the headed studs 8 and 9, the shanks of which are disposed in the slots 7, and secured to the wall 3. The transverse web of the latch member 6ᵇ rides in a slot 3ª, formed in the rear wall of the casing, so that the main portion of the latch bolt rests against the inside face of the rear wall with the latch member 6ᵇ on the outside face of said wall.

10 designates a coil spring interposed within the slot of the latch member between the stud 8 and the upper end of the slot for normally holding said latch member in operative position. The latch member has not been shown beveled on its rear face as is customary to permit of the bolt being forced downwardly upon closing the door, to allow the latch to automatically pass below the wall of the alarm box.

11 designates a rack bar provided with the laterally disposed teeth 12 along one edge thereof and on the other edge at opposite ends provided with the laterally disposed lugs 13 and 14. This rack bar is slotted as at 15 and 16, in which slots are disposed the headed studs 17 and 18 secured to the rear wall 3.

19 designates a spring interposed between the fixed stud 9 and the lug 13 of the rack bar and normally tends to hold the rack bar in the relative position shown in Fig. 2.

The rack bar is provided with an operating handle comprising the spaced plates 20 merging into the shank 21 provided at its outer end with a suitable insulated knob 22. The outer end of the shank 21 rides in the slot 4ª of the front wall and is supported and guided by the movable plate or apron 23 riding in the channelway 24 formed on the front face of the front wall 4.

Suitably journaled on a stud shaft extending inwardly from the rear wall 3 is a ratchet wheel 25 carrying on its rear face the pinion 26 (shown in dotted lines, Fig. 2) engaging with teeth 12 of the rack bar.

27 designates a stud or post extending inwardly from the front wall, which post serves as a support for the bell 28 provided with the projections 29. On the inner free end of the post 27 is suitably journaled a short hollow shaft 28ª carrying at one end the clapper support 30 and at the other end provided with the pinion 31 meshing with the gear wheel 25.

32 (Figs. 3 and 4) designates a spring suitably interposed between the side wall 1ª of the alarm box and the rear wall 3 of the hollow door, tensioned to force the door open when unlatched.

In operation when a signal is to be turned in to the central station, the operator pulls down on the handle 21, which forces the rack bar out of its normal position, and through means of the interposed pinion 26, gear 25 and pinion 31, the bell clapper is rapidly revolved, sounding a local alarm. When the lug 13 reaches the lug 6ª, a further movement of the rack bar will move the latch bolt from the normal, releasing the latch member, and the spring 32 forcing the door open, when the hook within the alarm box proper may be operated to send a signal to the distant station.

It will be observed that when the rack bar is initially

operated, it is against the tension of the spring 19 and also the latch bar when operated compresses the spring 10, so that when the handle 21 is released, the spring 19 will force the rack bar to its initial position, again ringing the bell in its reverse direction of travel and permitting the latch bolt to be returned to its normal position by the spring 10.

What I claim is:—

1. The combination with a door for an alarm or similar box, of a latch bar carried by said door, a straight sliding bar mounted on said door, means for operating same, a mechanical alarm, means so coöperating between said alarm and said sliding bar as to continuously ring said alarm upon the downward movement of said sliding bar, means provided on said sliding bar and said latch bar cooperating to trip said latch bar at the end of the downward stroke of said sliding bar, means for returning said latch bar and sliding bar to their normal positions upon the release of the sliding bar and means to continue the sounding of said alarm after said latch bar has been released, substantially as described.

2. The combination with a door for an alarm or similar box, of a spring controlled latch bar carried by said door and provided at its lower end with a lateral lug, a spring controlled sliding bar mounted on said door, and means for operating same, said sliding bar being provided at its upper end with a lateral lug in vertical alinement with said latch bar lug, mechanical alarm mechanism so constructed and coöperating with said sliding bar as to be operated thereby upon said sliding bar's movement in either direction, whereby said alarm is continuously sounded a predetermined length of time prior to the unlatching of said door and after same has been unlatched, substantially as described.

3. The combination with a door for an alarm or similar box, of a latch bar carried by said door, a straight rack bar slidingly mounted on said door, and directly connecting means between said latch bolt and rack bar to directly move said latch bolt by said rack bar from the normal, a revolving clapper and bell therefor, gearing interposed between said clapper and rack bar, and means for returning said operating parts to their normal positions when moved therefrom, substantially as described.

4. The combination with a door for an alarm or similar box, of a spring controlled sliding latch bar carried by said door and provided at its lower end with a lateral lug, a spring controlled substantially straight sliding bar mounted on said door, and means for operating same, said sliding bar being provided on one edge at the upper end thereof with a lateral lug in vertical alinement with said latch bar, and on the opposite edge thereof with rack teeth, a bell and revolving clapper therefor, gearing interposed between said clapper and the rack teeth of said sliding bar, and means for returning said operating parts to their normal positions when moved therefrom.

5. The combination with a door for an alarm or similar box, of a slotted sliding latch bar and rigid studs disposed in said slot for guiding same, a slotted rack bar and guiding studs therefor, said latch bar being provided with a lateral lug at its lower end and said rack bar being provided at its upper end with a lateral lug in alinement with said latch bar lug, and also provided at its lower end with a lateral lug, a spring interposed between the upper portion of said latch bar and one of its guiding lugs and tending to hold said latch bar in its uppermost position, a spring interposed between said lower lug on said rack bar and one of said rigid guiding studs and tending to hold said rack in its uppermost position, a mechanical alarm, gearing interposed between said alarm and said rack bar, and means for forcing said rack bar downwardly, whereby said alarm is continuously sounded a predetermined time in advance of the unlatching of said door and is also sounded after said door has been unlatched and during the return of the parts to their normal position, substantially as described.

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

LEE G. HOLDEN.

Witnesses:
A. H. MAEGLY,
E. J. WOLCOTT.