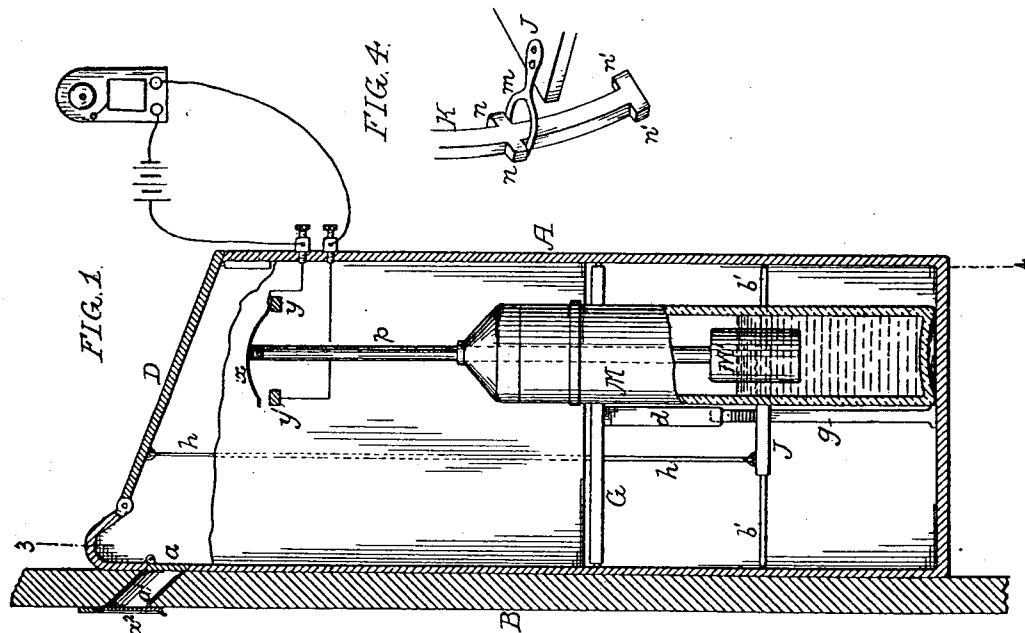
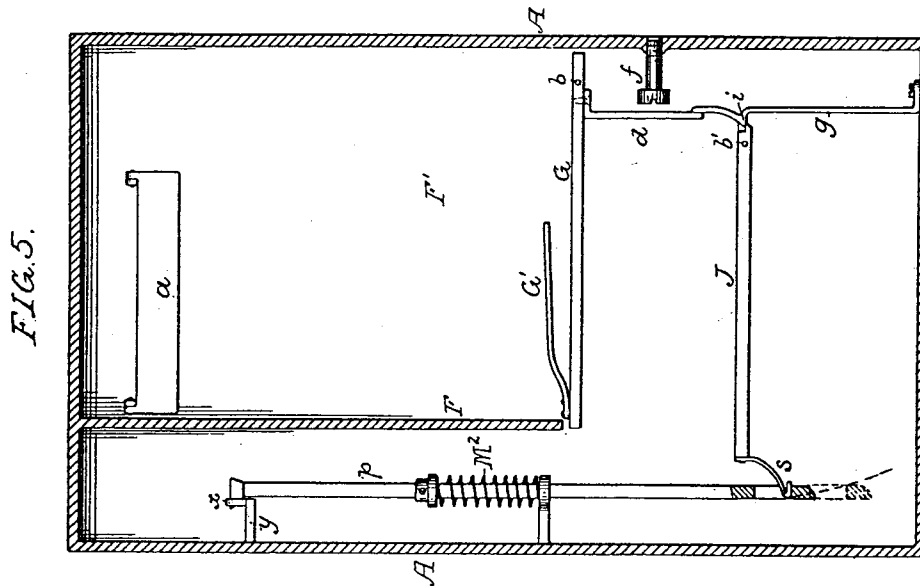


2 Sheets—Sheet 1.

No. 477,091.

Patented June 14, 1892.



Witnesses:
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J. H. Goodwin

Inventor:
Frederick H. Walker
by his Attorneys
Howson & Howson

(No Model.)

2 Sheets—Sheet 2.

F. H. WALKER.
HOUSE DOOR LETTER BOX.

No. 477,091.

Patented June 14, 1892.

FIG. 3.

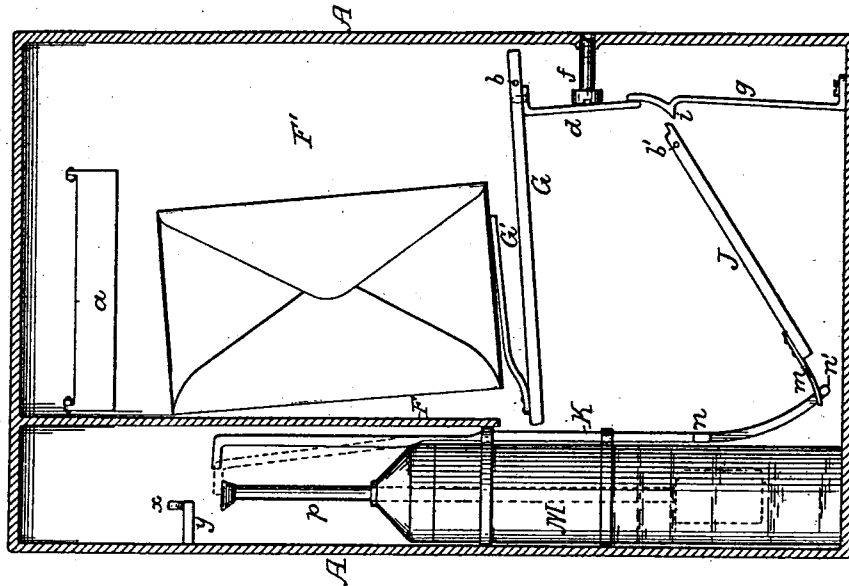
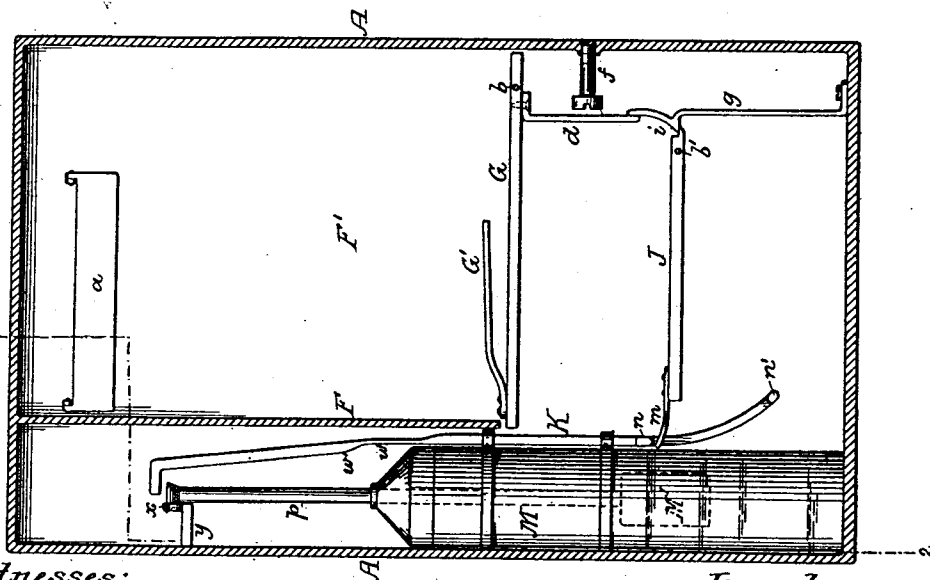


FIG. 2.



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UNITED STATES PATENT OFFICE.

FREDERICK H. WALKER, OF PHILADELPHIA, PENNSYLVANIA.

HOUSE-DOOR LETTER-BOX.

SPECIFICATION forming part of Letters Patent No. 477,091, dated June 14, 1892.

Application filed March 21, 1892. Serial No. 425,756. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK H. WALKER, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Alarm Letter-Boxes, of which the following is a specification.

The object of my invention is to so construct a letter-box for application to a door or for use in the hallway or other convenient place in a residence, office, or other building that an alarm will be sounded whenever a letter is deposited in the box, this alarm continuing for a limited time after the deposit of the letter, so that while it will be amply sufficient to indicate to any one in the vicinity of the alarm that a letter has been deposited in the box it will be free from the objection to an alarm which is sounded continuously from the time a letter is deposited in the box until it is removed therefrom.

In the accompanying drawings, Figure 1 is a transverse section of a letter-box constructed in accordance with my invention, the section being taken on the line 1 2, Fig. 2. Fig. 2 is a section on the line 3 4, Fig. 1. Fig. 3 is a similar view showing the parts in different positions from those represented in Fig. 2. Fig. 4 is a perspective diagram illustrating a minor feature of construction of part of the device, and Fig. 5 is a view illustrating certain modifications of the invention.

A represents the casing of the box, which may be of any suitable shape and dimensions, this box being preferably constructed for application to the inner side of a door B, as shown in Fig. 1, although it may be mounted upon a door-post or in a hallway or other convenient portion of a dwelling, office, or other apartment.

When constructed for application to a door, the box has in that side which rests against the door a pivoted flap *a* in line with the opening *a'*, formed in the door, as shown in Fig. 1, said opening *a'* having on the outside of the door the usual flap *a*².

The top of the box is provided with a hinged lid D, retained by means of a suitable lock, so that access to the interior of the box for the purpose of removing mail-matter therefrom can only be had by a person having a proper key.

Extending downward from the top of the

box some distance from one end of the same is a partition F, which forms, with the casing of the box, a chamber F' in the upper portion of said box for the reception of letters passed through the opening *a'* in the door. The bottom of the chamber F' is formed by a tilting platform G, hung by means of pintles *b* to the casing of the box and having adjacent to the pivotal axis of the same a downwardly-projecting tongue or finger *d*, which by contact with a set-screw *f* serves to limit the descent of the platform, a spring *g* acting upon the finger *d* so as to tend to keep the platform G in the elevated position whenever there is no letter resting upon the same.

Beneath the platform G is a trip-plate J, hung by means of pintles *b'* to the casing of the box, and when the platform G is elevated this trip-plate is likewise retained in an elevated position by the engagement therewith of a hook *i* upon the spring *g*, as shown in Fig. 2, the weight of the letter exerted upon the platform G, however, serving to tilt the same, so as to withdraw the hook from engagement with the trip-plate J, and thus permit the outer end of the same to drop, as shown in Fig. 3, it being understood that the outer end of said trip-plate greatly preponderates in weight. The trip-plate J is connected by a cord, wire, chain, or other connection *h* to the hinged lid or cover D of the box, as shown in Fig. 1, so that when the said cover is lifted in order to remove a letter from the box the trip-plate J will be restored to its elevated position and will again be retained by the engagement of the spring-hook *i* therewith. The free end of the trip-plate J carries a forked finger *m*, which embraces the lower end of a sliding bar K, guided in a suitable bearing on a vessel M, located at one side of the box, said forked finger *m* being adapted to act upon lugs *n n'*, formed upon the bar K, so that when the trip-plate J falls the finger *m* will engage with the lugs *n'* and depress the bar K, as shown in Fig. 3, and when said trip-plate is raised the finger will engage with the lugs *n* and raise the bar, as shown in Fig. 2. The vessel M contains a liquid, preferably mercury or other liquid of density, and in this liquid is a float M', connected to the lower end of a rod *p*, which passes through an opening in the top of the vessel M and

normally presses upward a spring *x*, mounted upon a lug *y*, projecting into the box, said finger terminating immediately above another lug *y'*, and these lugs *y y'* being connected to binding-posts on the casing A, which binding-posts receive the wires from a battery or other generator of electricity, an electro-magnetic bell or other alarm or annunciator being introduced at some convenient point into the electrical circuit. The upper end of the sliding bar K is hooked, so as to project over the top of the rod *p*, as shown in Fig. 2, and said bar K has by preference a flexible section *w* and a beveled or cam face *w'*, as also shown in said figure. When, therefore, the trip-plate J is released and permitted to drop when a letter is deposited upon the platform G, the sliding bar K is drawn downward, so that its hooked upper end will engage with the upper end of the rod *p* and likewise depress the same, thus permitting the spring *x* to make contact with the lug *y'*, and thereby complete the electric circuit, so as to ring the bell or sound the other electric alarm employed. As the bar K approaches the limit of its downward movement the cam portion *w'* of the bar by contact with the upper portion of the vessel M causes the hooked portion of the bar to be withdrawn from engagement with the upper end of the float-rod *p*, as shown in Fig. 3, and the float is then at liberty to rise until it again reaches its normal position and the outer end of the rod *p* again lifts the spring *x*, breaks the circuit, and stops the alarm. When the sliding bar K is again lifted, the upper end of the same springs in over the top of the float-rod *p*, so as to be in position to depress the latter when the trip-plate J again falls.

The platform G is preferably provided with a receiving-plate G', secured to the outer end of said platform and projecting inward over the same toward the fulcrum, the object of this plate being to receive the letter when the latter is dropped into the box and to cause the weight of the letter to impart a sudden downward push to the extreme outer end of the tilting platform, so as to insure the withdrawal of the spring-catch from engagement with the trip-plate J.

Although I prefer in all cases to adopt the construction which I have shown and described; there are many modifications of the same which may be adopted without departing from the essential features of my invention. For instance, a spring M² may be used instead of a float M' for raising the rod *p*, especially when only a short ring is desired, and instead of providing for the withdrawal of the hooked upper end of a sliding bar K in order to release the rod *p* the rod itself may be engaged by the trip-plate and released from the control of said plate as the latter swings downward. For instance, the trip-plate may have a spring-catch *s*, which will engage with the rod *p* when the trip-plate is raised, but will be withdrawn from engagement with the rod as the trip-plate falls by

reason of the arc of a circle in which the free end of said trip-plate moves, the catch again engaging with the rod when the trip-plate is lifted. It will be obvious, also, that the bar K can be operated by the trip-plate in this manner, if desired, or that either the rod or bar may be so operated by the platform G by simply providing for such a motion of said platform as to impart the necessary movement to the bar or rod, the spring or float being used for lifting the same after it has been depressed.

For a better understanding of the modifications described reference may be had to Fig. 5 of the drawings.

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

1. A letter-box having a receiving-chamber with movable bottom, a circuit-breaker for controlling an electric alarm or annunciator, a rod for acting on said circuit-breaker, means for first depressing and then releasing said rod on the depression of the movable bottom, and means for restoring the rod after it has been released, substantially as specified.

2. A letter-box having a receiving-chamber with movable bottom, a circuit-breaker, a rod for acting on said circuit-breaker, means for first depressing and then releasing said rod on the depression of the movable bottom, and a float for restoring the rod after it has been released, substantially as specified.

3. A letter-box having a receiving-chamber with movable bottom, a trip-plate, a spring-catch for retaining the same, a tongue on the movable bottom for operating said spring-catch, a circuit-breaker, a rod controlling the same, means for first depressing and then releasing said rod on the fall of the trip-plate, and means for returning the rod after it has been released, substantially as specified.

4. A letter-box having a receiving-chamber with movable platform constituting the bottom of the same, a circuit-breaker, a rod for controlling the same, a slide-bar engaging therewith, a cam for moving the slide-bar out of engagement with the rod as it is depressed, and means for causing the depression of said slide-bar on the movement of the platform, substantially as specified.

5. A letter-box having a receiving-chamber with movable bottom, a trip-plate, a spring-catch for engaging the same, a finger on the movable bottom for operating said catch, a circuit-breaker, a rod for controlling the same, a slide-bar engaging with said controlling-rod, a cam for moving said slide-bar out of engagement, and means whereby the trip-plate is caused to engage with the slide-bar both in falling and in rising, substantially as specified.

6. A letter-box having a receiving-chamber with movable bottom, a trip-plate, a spring-catch engaging therewith, a finger on the movable bottom for operating said catch, a circuit-breaker, a controlling-rod therefor, a slide-bar engaging therewith, a cam for causing disengagement, and a lost-motion connection be-

tween said slide-bar and the trip-plate, substantially as specified.

7. A letter-box having a receiving-chamber with tilting bottom, having a letter-receiving plate secured to said tilting bottom near the free end and projecting inward over the same toward the fulcrum, a circuit-breaker, a rod for controlling the same, means for first depressing and then releasing said rod on the tilting of the letter-receiving platform, and means for restoring the rod after it has been released, substantially as specified.

8. A letter-box having a receiving-chamber with movable lid or cover and movable bottom, a trip-plate, a spring-catch therefor, a catch-releasing finger on the movable bottom,

a circuit-breaker, a controlling-rod therefor, means for first depressing and then releasing said rod on the drop of the trip-plate, means for raising the rod after its release, and a connection between the trip-plate and the lid or cover of the box, so as to provide for the resetting of said trip-plate, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK H. WALKER.

Witnesses:

WILLIAM D. CONNER,
HARRY SMITH.