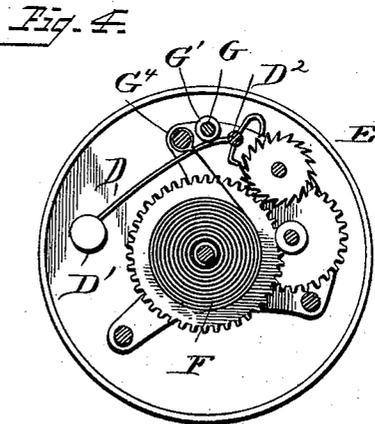
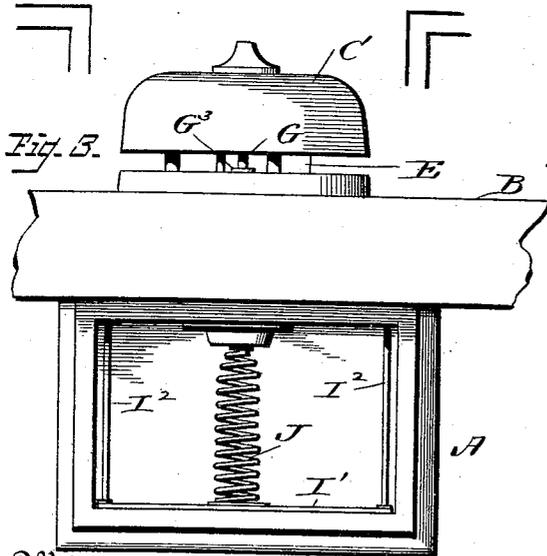
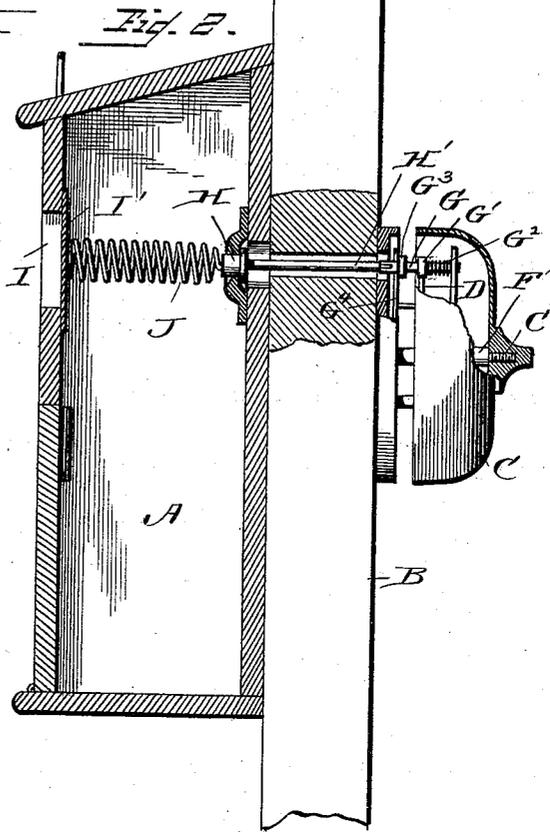
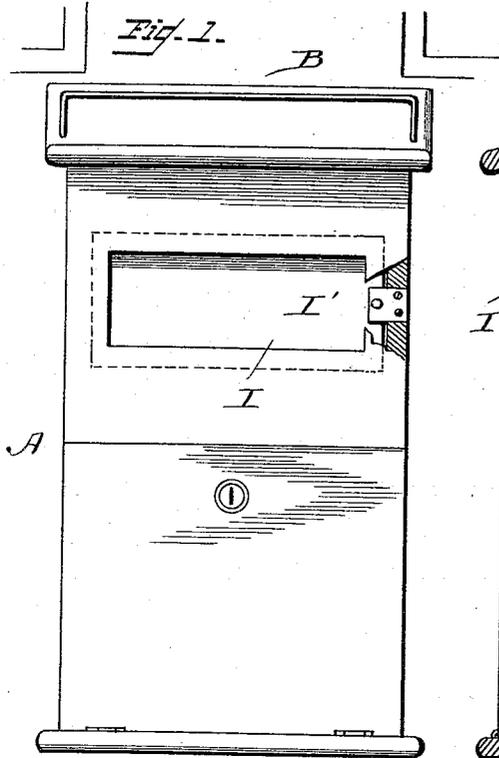


(No Model.)

E. S. DUNAVAN.
HOUSE DOOR LETTER BOX.

No. 450,226.

Patented Apr. 14, 1891.



Witnesses
Wm. S. Steider.
E. E. Hart

Inventor
Emma S. Dunavan
By her Attorney
Franklin H. Douglass

UNITED STATES PATENT OFFICE.

EMMA S. DUNAVAN, OF DAYTON, ILLINOIS, ASSIGNOR OF ONE-HALF TO
WILLIAM J. DUNAVAN, OF SAME PLACE.

HOUSE-DOOR LETTER-BOX.

SPECIFICATION forming part of Letters Patent No. 450,226, dated April 14, 1891.

Application filed December 13, 1890. Serial No. 374,623. (No model.)

To all whom it may concern:

Be it known that I, EMMA S. DUNAVAN, a citizen of the United States, residing at Dayton, in the county of La Salle and State of Illinois, have invented certain new and useful Improvements in Mail-Boxes; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in mail-boxes; and it has for its object to provide a mail-box of that class which are adapted to be secured to the face of a door of a building, with suitable connections whereby a bell located upon the inside of the door to which the box is attached will be caused to automatically ring upon the insertion of mail into the box.

To this end and to such others as the invention may pertain the same consists in the peculiar construction and the novel combination, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then particularly defined in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, like letters of reference indicating like parts throughout the several views, and in which drawings—

Figure 1 is a front view of a mail-box constructed in accordance with my invention, the same being shown as attached to a door. Fig. 2 is a central vertical section through the box, the door to which it is attached, and the alarm-bell and its actuating mechanism secured to the inside of the door. Fig. 3 is a top plan view with the top of the box removed. Fig. 4 is a rear view of the mechanism for sounding the alarm.

Reference now being had to the details of the drawings by letter, A represents a mail-box of ordinary construction, such as is commonly used as a receptacle for mail, and is usually secured to the door or outer wall of a building.

B represents the door to which the box is attached. Upon the inside of the door, directly in the rear of the box, is secured an alarm-bell C, which is adapted to be struck and to sound an alarm upon the release of the arm D, carrying the striker D', which is effected by the insertion of mail into the box, as will be more particularly specified.

The bell-actuating movement E is a simple escapement movement, in which the spring F is wound around a central horizontal shaft F', said shaft being screw-threaded at its outer end to receive a bell or gong C, a central screw-threaded opening C' being provided in the gong for the purpose. The striker-arm D is attached at one of its ends to the shaft D², which shaft is connected with the shaft F' by the ordinary train of escapement-gearing.

G is a shaft which is arranged parallel with and adjacent to the shaft D², said shaft G being movable in its bearings in the direction of its length, and is provided with a collar G'. Between the collar G' and the outer end of the shaft G is sleeved a coiled spring G², which spring bearing against the outer face of the collar serves to force the shaft inwardly, so that the periphery of the collar will normally rest against the upper face of the striker-arm D and serve to hold the same against movement. The inward movement of the shaft G is limited by a collar G³, which is adapted to bear against the outer face of the inner plate G⁴ of the frame of the movement.

H is a push-button, which is attached to outer end of the movable shaft H', which shaft extends directly through the door B and through the rear wall of the mail-box, the shaft being loosely seated in the opening within which it is placed, so as to permit it to be moved freely when acted upon by the push-button within the mail-box. The rear end of the said shaft H bears against the end of the shaft G, and is adapted, when pressed inwardly, to force said shaft outward, thus releasing the collar G' from its engagement with the striker-arm D and permitting it to operate in sounding an alarm upon the bell.

The opening I in the front face of the mail-box is for the reception of mail, and placed over this opening upon the inside of the box

is a metallic plate I', the ends of the said plate being sleeved upon the horizontal rods I², which rods extend from the front to the rear walls of the box, as shown. Secured at one of its ends to the center of the inner face of the plate I' is a spiral spring J, the opposite or rear end of the said spring bearing against the push-button H.

The operation of the device will be readily understood. Normally the arm D is prevented from vibrating by means of the collar G' being directly over the same, as seen in full lines in Fig. 2. When mail is placed within the opening I in the box, the plate I' will be forced inward, thus pressing the spring J against the push-button, which pushes the shaft G endwise and removes the collar G' from out of the plane of vibration of the striker-arm D, and, releasing the striker-arm, permitting the striker to sound an alarm upon the bell. As soon as pressure upon the plate I' has been relieved the plate I' will return to its normal position, and the pressure being thus relieved upon the push-button the shaft G will be thrown forward by the tension of the spring G² and the collar G' will again engage the striker-arm and hold the same against movement.

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

1. The combination, with a mail-box the opening in which is provided with a movable plate, of a bell upon the inside of the door to which the box is attached, spring-actuated mechanism for sounding the bell, and connections, substantially as described, between the

movable plate and mechanism, including an endwise-movable shaft provided with a collar for operating the bell, whereby the bell will be caused to sound an alarm upon movement of the plate, substantially as shown and described, and for the purpose specified.

2. The combination, with a mail-box, of the bell at the rear of the box, spring-actuated mechanism for striking the bell, a push-button, a shaft leading from the push-button to the bell-actuating mechanism and adapted when depressed to release the striker-arm of the movement, a spring arranged to return the shaft connected with the push-button and lock the striker-arm against movement when pressure upon the button is removed, a movable plate within the box and covering the opening therein, and a spiral spring connecting the said plate with the push-button, substantially as shown and described, and for the purpose specified.

3. The combination, with a mail-box, of alarm mechanism, apparatus for actuating the alarm, a push-button within the box, and connections, substantially as described, between the aperture in the box for the reception of mail and the push-button and between the button and the alarm-actuating mechanism, whereby the insertion of mail into the box will serve to depress the push-button and sound an alarm, substantially as described.

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

EMMA S. DUNAVAN.

Witnesses:

E. S. ALLEN, Jr.,
P. G. SCHOCH.