(No Model.)

T. S. WILES & A. G. GOLDTHWAIT.

HOUSE DOOR LETTER BOX.

No. 455,783. Patented July 14, 1891.

Fig. 1.

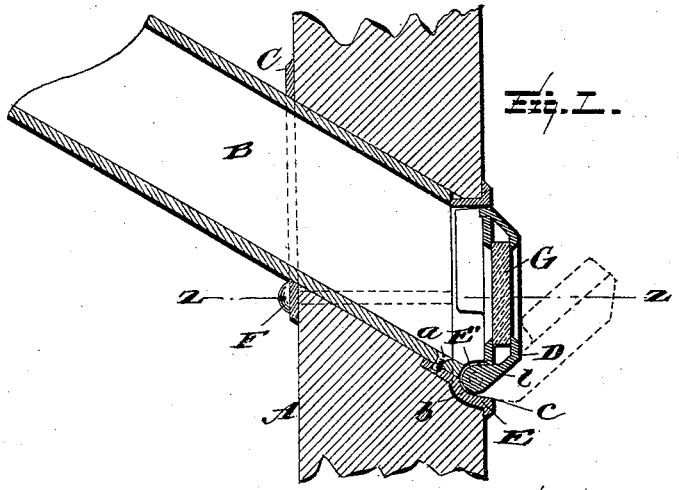


Fig. 4.

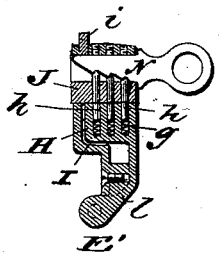


Fig. 2.

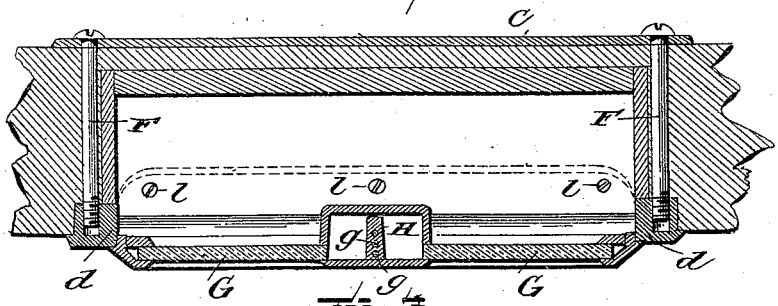


Fig. 3.

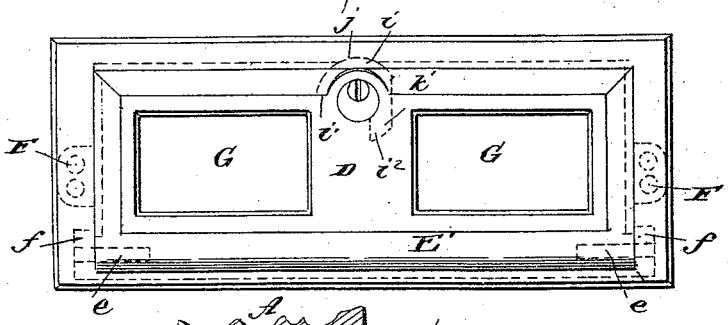
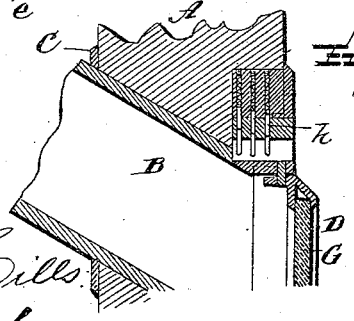


Fig. 5.



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UNITED STATES PATENT OFFICE.

THOMAS S. WILES, OF ALBANY, AND ABEL G. GOLDTHWAIT, OF TROY, NEW YORK.

HOUSE-DOOR LETTER-BOX.

SPECIFICATION forming part of Letters Patent No. 455,783, dated July 14, 1891.

Application filed October 4, 1890. Serial No. 367,078. (No model.)

To all whom it may concern:

Be it known that we, THOMAS S. WILES, of Albany, in the county of Albany and State of New York, and ABEL G. GOLDTHWAIT, of Troy, in the county of Rensselaer and State of New York, citizens of the United States, have invented certain new and useful Improvements in Letter-Boxes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in letter-boxes, the objects and advantages of which will hereinafter appear, and the novel features thereof specifically 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, and in which—

Figure 1 is a vertical section through our improved box applied to a door. Fig. 2 is a horizontal section on the line *z z* of Fig. 1. Fig. 3 is a front view with the door closed. Fig. 4 is a central vertical section through the door and lock. Fig. 5 is a section similar to that of Fig. 1, showing a slightly-modified form.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings, the letter A designates a portion of a door, preferably the latch-rail, or it may be some other part of a door or the wall of the building. It is formed with an inclined opening, inclined preferably at about thirty degrees from the horizontal, so that matter placed in the box from the inside shall tend to slide toward the door of the box; but this inclination may be varied at pleasure.

B is the letter-box, which in this instance is shown as constructed of wood, although it may be of metal or of any other preferred material. It is simply a tube, preferably of rectangular cross-section, and is fitted to the inclined opening in the door, as shown. The inner end may project any desired distance beyond the inner face of the door and may or may not have a cover, as preferred.

C is a marginal frame around the interior aperture, as shown in Figs. 1 and 5, and is for the purpose of giving a neat finish thereto. It may be as ornamental as desired.

D is the door, preferably of metal, and hinged at its lower margin or corners to a metallic frame E, which forms a marginal finish to the exterior of the aperture, said frame being connected to the box by suitable means, such as screws *a*, said frame being set into a recess formed in the outer face of the door, as seen in Fig. 1, and at its lower edge or wall being formed with a rounded depression *b* to receive the hinge of the door, the outer inclined portion *c* of this frame serving as a stop to limit the downward movement of the door, arresting the same at such an angle with the bottom of the box as to prevent mail-matter contained in the box from falling to the ground when the door is opened, while at the same time the opening will be sufficient for the insertion or withdrawal of mail-matter. The plates or frames C and E are connected by means of screw-threaded rods F, as seen best in Fig. 2, which pass through the door and engage with female threads formed in lugs *d* upon the inner face of the frame E, as seen best in Fig. 2. Two sets of these female threads are provided, as seen in Fig. 3, the upper two being used on two and one-half-inch doors and the lower two on two-inch doors. Further similar provisions might be made, if desired, for various thicknesses of doors.

The hinges of the door D in this instance are constructed as follows: The lower edge of the door is formed with a continuous roll or cylindrical portion E′, cored at the ends, and into which are engaged the pins *e*, which are held in the ears or flanges *f* on the back of the plate or frame E, as shown by dotted lines in Fig. 3. The plate or frame C is made to fit snugly around the box B, and it, in conjunction with the screws *a* and the frame E, serves to maintain the box in position.

The door D is provided with glass panels G, through which the interior of the box is visible from the outside. The door is also provided with a lock of suitable construction. In Fig. 4 we have shown the preferred form in which the Yale system is employed. The body H of the lock is preferably formed in-

tegral with the door upon the inner face, as seen in Fig. 4. It is provided with cavities *g*, as seen in Fig. 4, in which work the pins *h*, the ends of which rest upon the springs I. J is a cylinder working in an aperture in the body portion of the door, and is provided with a mutilated annular flange *i*, having a curved face *j* and a straight side *k*, as seen best in Fig. 3. The frame E is provided at its upper portion with an opening to receive this flange, as shown by dotted lines in Fig. 3. The cylinder as well as the glass panels of the door are retained in position by the plate I, which is secured to the inner surface of the door by suitable means, such as screws *l*. (See Fig. 4.) The cylinder J has openings coincident with the openings in the body portion of the lock, as seen in Fig. 4, and in these openings are fitted so as to move easily the pins M of varying length to correspond with the notches in the key N. A portion of the flange *i* is cut away, as shown at *k'*, so that when the key is turned to the left the door is unlocked. When the door is locked by the turning of the key to the right, the portion i^2 of the mutilated flange stops against the body portion H. When the door is unlocked, the portion *i'* of said flange strikes against the other side of the body portion. Thus the cylinder is permitted to make only about one-quarter a revolution.

The operation will be readily understood. The occupants of the house deposit what matter they wish to mail in the box, where it is visible from the outside through the glass panels. The postman, seeing this, opens the door B, (to which he alone has the key,) when the matter in the box follows the door as far as permitted and is easily withdrawn. The postman then inserts any mail he has to deliver and locks the door. Owing to the angle at which the box is arranged, any long pieces of mail-matter do not fall to the floor, but remain within the box until removed from the inside.

Various modifications in details may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages. For instance, the lock may be placed upon the house-door and the mutilated flange arranged to engage a portion of the door of the box, as indicated in Fig. 5.

The locking mechanism provided has certain advantages in use, whereby the letter-box is made convenient. For example, only a quarter-turn of the key is required to lock or unlock the door, and the key is retained within the lock when it is unlocked, so that it serves as a handle. It will be seen that by the use of only one hand a postman can unlock and open the door, collect any mail-matter in the box, deposit the mail to be delivered, and close and lock the door, the whole being accomplished with one hand only.

What we claim as new is—

1. As an improved letter-box, an upwardly-inclined chute adapted to project through and beyond a door or other support and having at its lower outer end a door pivoted to swing downwardly in opening, substantially as described.

2. The combination, with the door and the box projecting through an opening therein in an inclined direction, of the plate or frame surrounding the aperture through which the box passes and detachably secured to the box, substantially as described.

3. The combination, with the door and the box projecting through an opening therein in an inclined direction, of the plate or frame surrounding the aperture through which the box passes and detachably secured to the box, and a door pivotally supported in said frame, substantially as described.

4. The combination, with the box arranged in an inclined position, of the front plate connected to the box, the rear plate surrounding the box, and the screwed rods connecting the two plates, substantially as described.

5. The combination, with the box arranged in an inclined position, of the plate or frame E, having at the lower edge of its opening a depression and an inclined portion, and the door pivotally supported by said plate or frame and adapted to be arrested in its movement by said inclined portion, substantially as described.

6. The combination, with the box arranged at an inclined position, of the plate or frame E, having at the lower edge of its opening a depression, the inclined portion, and ears, the door having a rounded portion working in the depression and the pins passed through said ears into the ends of said rounded portion, substantially as shown and described.

7. The combination, with the inclined box, of the frame C, surrounding the same at the interior aperture through which the box passes, the frame E, seated in a recess and embracing the box at the exterior aperture and provided upon its rear face with screw-threaded lugs, and the threaded rods connecting the two frames and engaging said lugs, substantially as described.

8. As an improved letter-box, an inclined chute adapted to project through and beyond a door or other support and having at its lower end a door constructed to be stopped in its downward movement at a point to prevent falling out of matter placed therein at either end, substantially as described.

9. The combination, with the box, of the front plate having an inclined flange extending upwardly from its lower edge, and means for securing the box to the flange, substantially as specified.

10. The combination, with a door or other support, of a chute or box, an inner plate encircling the chute, an outer plate provided with a glazed door, and a bolt for binding the plates and chute to the door or support, substantially as specified.

11. In a letter-box of the class described, a front plate having at its lower edge a recess,

in combination with a door hinged in said recess and adapted to bear upon the same for the purpose of retaining the door in a partially-open position, substantially as specified.

12. The combination, with a door or other support, of a frame surrounding an opening in said door or support and having at its lower edge a recess, a door provided with a hinge adapted to rest in said recess and to be supported partially open thereby and provided with a glazed opening, and means for securing the door in a closed position, substantially as specified.

13. A letter-box for a door or other support, having an opening therethrough, comprising a frame having an inwardly-projecting flange which surrounds said opening, and which flange at the lower portion of said frame is inclined inwardly and upwardly for the purpose of connection therewith of a chute and for supporting the door in a partially-open position, substantially as specified.

14. As an improved letter-box, an upwardly-inclined chute adapted to project through and beyond a door or other support, and having at its lower end a door constructed to be stopped at its downward movement at a point to prevent the falling out of matter placed therein from either end, and having a transparent plate, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

THOMAS S. WILES.
ABEL G. GOLDTHWAIT.

Witnesses:
JOHN RATIGAN,
WM. H. MORAN.