(No Model.) 2 Sheets—Sheet 1.

R. M. HAAN.

LETTER BOX.

No. 422,401. Patented Mar. 4, 1890.

Fig. 1.

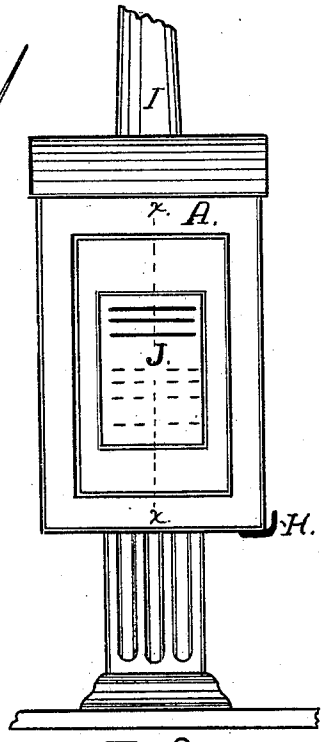
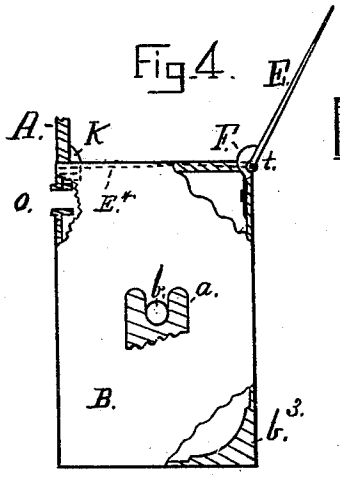


Fig. 4.



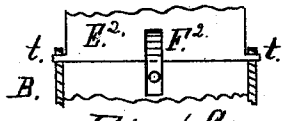


Fig 4a

Fig. 5.

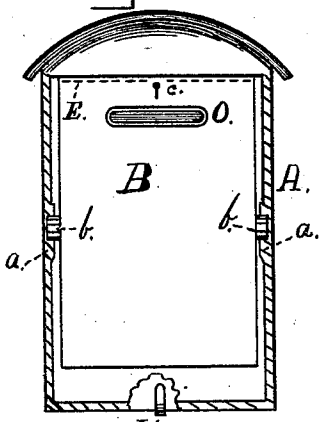




Fig 5a

Fig. 2.

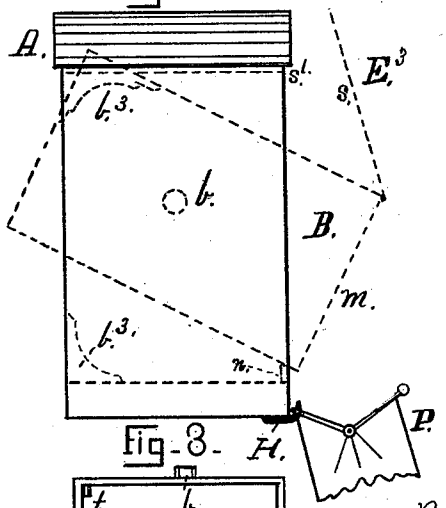
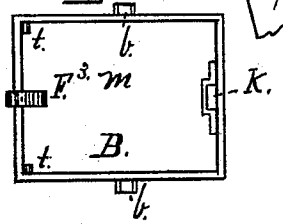


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 6

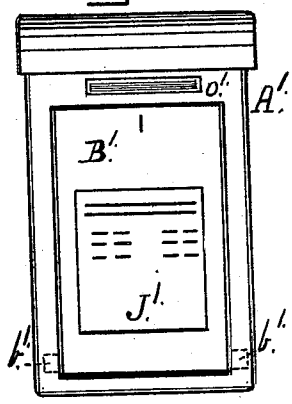
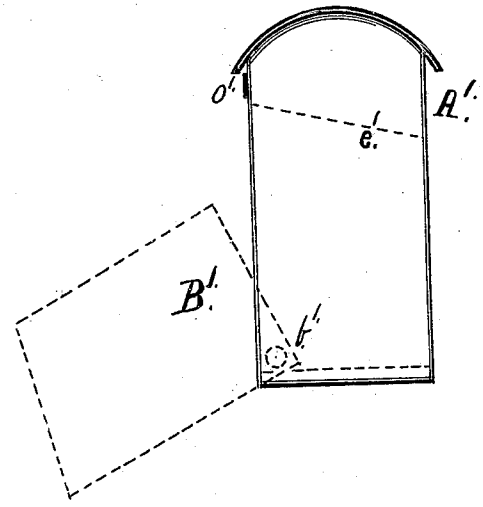


Fig. 7.



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UNITED STATES PATENT OFFICE.

RUDOLPH M. HAAN, OF NEW YORK, N. Y.

LETTER-BOX.

SPECIFICATION forming part of Letters Patent No. 422,401, dated March 4, 1890.

Application filed August 22, 1888. Serial No. 283,494. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH M. HAAN, a citizen of the United States, and a resident of the city, county, and State of New York, have invented a new and useful Improvement in Letter-Boxes, of which the following is a specification.

The object of this invention is to facilitate the collection of mail-matter.

The invention consists in a pivoted tray arranged to automatically empty the letters into the collector's mail-sack.

Previous to this invention letter-boxes were made so that the collector had to remove the mail with his hands from the tray. My improvement avoids this necessity, and enables the collector to so elevate the tray that the letters are readily deposited in the bag or sack and impossible for any to be left in the mail-box.

Figure 1 represents one of my improved letter-boxes secured to an ordinary street lamp-post I. Fig. 2 is a front view of the letter-box shown in Fig. 1, representing by dotted lines the working of the tray. Fig. 3 is a top view of the tray removed from the box. Fig. 4 is a side view of the tray removed from the box, tray-balance b^3, and spring-cover E. Fig. 5 shows the methods of hinging the tray to the letter-box case A, Fig. 1, on line $x\,x$. Fig. 6 represents a letter-box having my improvement applied in a modified form. Fig. 7 is a side view of Fig. 6, having the tray hinged to one of the lower corners. Fig. 8 shows a substitute for the weight or counterbalance used to automatically shut the tray. Figs. 4^a and 5^a are details.

A and A′ in the various drawings represent the letter-box or outer case to which the tray is attached. This case or box can be of ordinary construction as to shape, or any design may be used found convenient for the street, office, hotel, or private use.

B and B′ represent the tray or its equivalents, which receives the mail as it is deposited in the box A through the opening O. This tray is provided with lugs or hinges b and b', which support the tray as it is swung in and out of the case A A′. That the tray B may turn on the pivot b, so the open end m may be tipped down to admit of the mail sliding out into the collector's sack P, the case A is open on the sides sufficiently to allow the tray to swing, as shown in dotted lines B, Fig. 2.

I have formed bearings $a\ a$ on the inner side of the case A, Fig. 5, on which the pivots b of the tray rest, as shown in Figs. 4 and 5. I have located the hinge or pivot b centrally on the inside of the tray B, as shown in Figs. 3, 4, and 5. The hinge or pivot b is located centrally on the sides of the tray B, Fig. 3.

The tray B, Fig. 3, is open on top, as at m, and is provided with an opening O, Figs. 4 and 5, through which the mail is deposited in the box or tray B.

To avoid the liability, through carelessness or otherwise, of losing the mail by not closing the tray, I weight one end b^3, Figs. 2 and 4. When the tray is tipped to allow the mail to slide out, the weight is raised, which automatically shuts the tray when released by the collector, locking it by means of the spring-lock k, Fig. 4. Any spring-lock of ordinary construction can be used and is too well known to need description.

The stops n, Fig. 2, are to prevent the tray from going too far when opened and shut.

To prevent the mail from falling behind the tray B, I hinge a plate E to the back side of the tray at $t\ t$, Figs. 3 and 4, which is held open while the mail is being removed by aid of the spring F pressing against it, as shown in Fig. 4 and E^3, Fig. 2.

When the tray B, Fig. 2, is swung back into the case A, the plate E^3 at s strikes the case A at s' and forces it back over the top of the tray, as shown by dotted lines E^4, Fig. 4, and end view E, Fig. 5. Thus the action of the spring F and case A on the plate E causes it to open and shut automatically.

That the collector may be assisted in supporting his bag while emptying the tray, I have attached to the bottom of the case A, Figs. 1, 2, and 5, a hook H, on which to hang the mail-bag, as shown at P, Fig. 2.

That the persons using the mail-box may know when the mail is collected, I print on the case A in the space J and J′ a time-table.

The operation is as follows: Place the sack P in position, Fig. 2, unlock the tray B at c, Fig. 5, and swing the tray toward you until it stops at n, as shown in Fig. 2, in which po-

sition the mail will slide into the open sack and the tray when released swing back into the case.

While I have described inner bearings *a* upon the case A for the pivots *b* to rest on, I may let the pivots pass through the case A, as in Fig. 5ª. I also do not limit the pivots *b* to the center of the sides of the tray B, as they can be located in another position. I can also substitute a spring for the weight b^3 for automatically closing the tray, as shown in Fig. 8. I have marked all the modifications A′ B′ *b′* to distinguish them from the corresponding original parts.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The case A, in combination with the tray B, provided with the hinged plate E, and means to open and close it, as and for the purpose specified.

2. The case A, in combination with the inclined surface B, having plate E, spring F, and weight b^3, as and for the purpose specified.

3. The case A, having hook H, in combination with the pivoted tray, as and for the purpose specified.

4. In combination, the case A, tray B, weight b^3, pivots *b*, spring F, and plate E, as and for the purpose specified.

In testimony whereof I hereunto subscribe my name in the presence of the two subscribing witnesses.

RUDOLPH M. HAAN.

Witnesses:
E. T. THOMAS,
THOMAS TIERNEY.