

A. J. FOSTER.

MAIL BOX.

APPLICATION FILED NOV. 8, 1910.

Patented Dec. 17, 1912.

1,047,401.

MODEL.

Fig. 1.

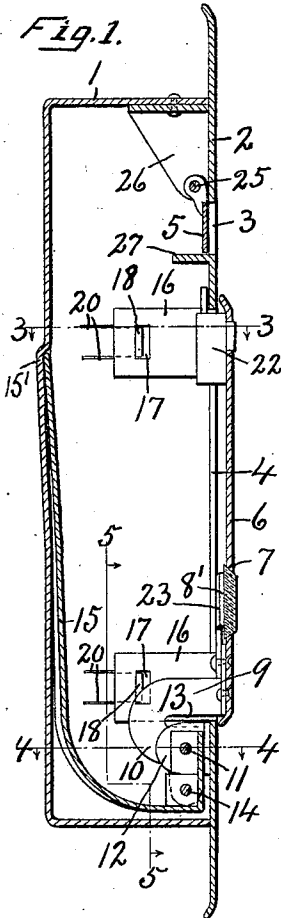


Fig. 2.

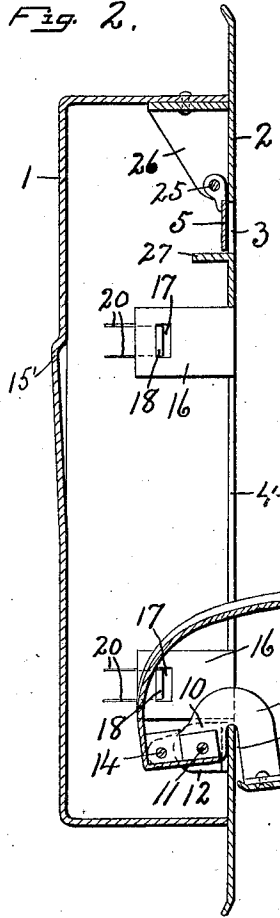


Fig. 3.

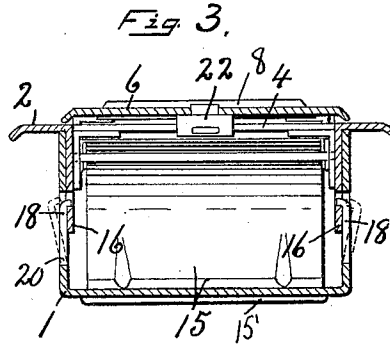
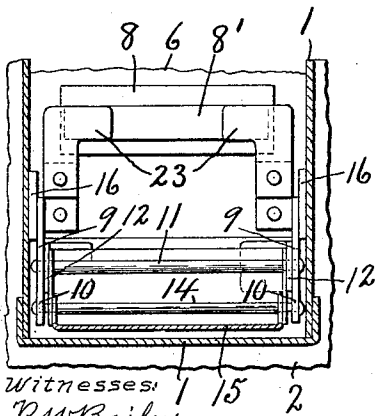


Fig. 5.



Witnesses:
R. W. Bailey.
H. E. Chan

Fig. 6.

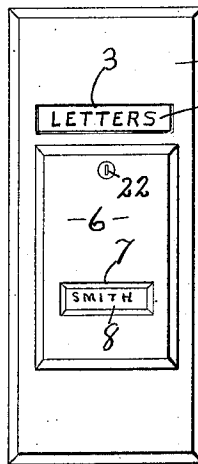
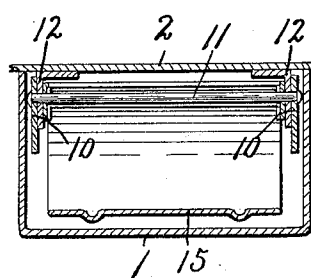


Fig. 4.



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UNITED STATES PATENT OFFICE.

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MAIL-BOX.

1,047,401.

Specification of Letters Patent.

Patented Dec. 17, 1912.

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To all whom it may concern:

Be it known that I, ALVAH J. FOSTER, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and
5 useful Improvements in Mail-Boxes, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to certain improvements in mail boxes adapted more particularly for private use in the vestibules, halls and doors of houses, tenement blocks, office buildings and other places where private letter boxes might be used.

15 One of the objects is to produce a light, strong and durable lock box of sheet metal with a minimum number of parts comprising a face-plate and box proper, capable of being easily and quickly assembled without
20 the use of bolts or screws.

Another object is to provide the box with a drop lid or closure for the exit opening and to attach to said lid or closure an ejector plate forming with the lid a pocket for the
25 reception of the mail and at the same time serving the treble purpose of concentrating the mail in the pocket, automatically opening the door when unlocked and ejecting the mail from the box onto the lid as the latter
30 is forced to its extreme open position, thereby throwing all of the mail into full view of the recipient and permitting it to be readily withdrawn from the lid.

35 A further object is to provide the lid with laterally projecting inturned marginal flanges projecting beyond the marginal edges of the opening for entirely concealing said opening when the lid is closed.

40 A still further object is to hinge the lid in such manner that when opened, it will lie in a plane wholly below the lower edge of the opening so as to afford unobstructed view of the entire interior of the box through such opening.

45 Other objects and uses relating to specific parts of the mail box will be brought out in the following description.

In the drawings, Figures —1— and —2— are longitudinal vertical sectional views of a
50 mail box embodying the various features of my invention, the lid and ejector being shown in their normal closed positions in Fig. —1— and in their extreme open positions in Fig. —2—. Figs. —3— and —4—
55 are horizontal transverse sectional views of

the same box taken respectively on lines 3—3 and 4—4 Fig. —1—. Fig. —5— is a transverse vertical sectional view of the lower portion of the box taken on line 5—5 Fig. —1— showing particularly the hinge
60 connections for the lid and spring retaining plates for the glass in the sight opening. Fig. —6— is a front elevation of the same letter box on a smaller scale.

As shown in the drawings, this mail box
65 comprises a vertically elongated rectangular box section —1—, and a face plate —2— covering the open side of the box section —1— and provided with an inlet —3— and an exit opening —4—, the inlet opening be-
70 ing provided with an inwardly swinging closure —5— while the exit opening —4— is provided with a drop lid or closure —6— having a sight opening —7— in which is placed a sight glass —8— and name plate
75 —8'—.

The lower end of the lid —6— is secured by rivets or other suitable fastening means to a pair of inwardly projecting hinge sections —9—, having forwardly returned
80 arms —10— normally in a plane below the lower end of the exit opening —4— and mounted upon a hinge rod —11—, the latter having its opposite ends mounted in fixed bearings or ears —12— which are secured
85 to and project inwardly from the face plate —2— below the exit opening —4—. These hinge plates or sections —9— are formed with slots —13— opening inwardly from the face plate —2— for receiving the por-
90 tion of the face plate at the lower edge of the exit opening and is of sufficient depth from front to rear to allow the lid —6— to rock from its normal vertical position
95 shown in Fig. —1— to nearly a horizontal position as shown in Fig. —2—, the lower sides of the slots or upper edges of the return arms —10— forming limiting stops adapted to engage the inner face of the ad-
100 jacent portion of the face plate —3— to limit the downward rocking movement of the lid to the position shown in Fig. —2— and for this purpose the distance between the upper edges of the return arms —10— and axis of the pivotal bolt —11— is sub-
105 stantially the same as the distance between said axis and inner face of the adjacent portion of the face plate —6—. The upper ends of the arms —10— are extended downwardly some distance below the pivotal bolt
110

—11— for receiving an additional rod or pin —14— which is also spaced some distance apart from the rod —11—. An ejector plate —15— of spring sheet metal is secured at its normal lower end to the rods —11— and —14— and is extended therefrom in the direction of length of and nearly to the opposite end of the lid, leaving its normal upper end supported and free to spring forwardly and rearwardly toward and from the lid. This ejector plate —15— is spaced some distance apart from the lid —6— and is rigidly secured to the hinge sections —9— which in turn are also rigidly secured to said lid and therefore the plate may be said to be rigidly connected to the lid ejector except for its resiliency or spring action previously mentioned, the upper end of said ejector plate which is comparatively thin being spring pressed under its own tension into a recess —15'— and against the inner face of the back of the box section —1— so as to allow letters and other mail matter which may be inserted through the inlet —3— to readily fall to the bottom of the ejector plate without liability of being caught in their descent by its upper edge.

The interior width of the front open side of the box section is substantially the same as that of the exit opening —4— while the length of said fixed section is considerably greater than the corresponding length of said opening and when the box section —1— is placed in operative position, its open side registers exactly with the exit opening —4— in the face plate —2— while its upper and lower ends extend above and beneath said opening, the front edges of the box section —1— being in direct contact with the inner face of the face plate. In order that this box section —1— may be secured to the face plate without rivets, screws or bolts, said face plate is formed with integral inwardly projecting flanges or lugs —16— arranged in pairs one above the other at opposite sides and near the upper and lower ends of the opening —4—, said flanges or lugs being formed with slots or apertures —17— for receiving suitable spring catches —18—. These spring catches —18— are preferably integral with and formed from the sides of the box section —1— as more clearly shown in Figs. 1, 2 and 3, by slitting said sides at —20— so as to form tongues, the free ends of which are bent inwardly as shown in Fig. —3— to enter the slots —18— and interlock with the inner edges thereof.

The ejector plate —15— is of nearly the same width as but slightly less than that of the exit opening —4— through which it is adapted to pass when the lid —6— is opened and for this purpose the distance between the axis of the pivotal axis of the bolt —11— and upper extremity of the ejector plate is slightly less than the distance be-

tween said axis and upper end of the exit opening —4—.

When the lid is opened and the tension of the spring ejector relaxed as shown in Fig. —2—, said lid and ejector are disposed in planes diverging toward their free ends so that the distance between said free ends under such conditions is greater than the distance between the lid and back of the box section —1— when the lid is closed. It is therefore evident that during the final closing of the lid, the ejector plate —15— is compressed or rather its upper end is spring pressed by its own tension against the back of the case section —1— for the purpose previously described, the lid being held in its closed position by a suitable lock —22— preferably engaging the upper edge of the opening —4—. It is also evident that when the door is unlocked as for instance in the operation of removing the mail, the ejector plate —15— which is then under its own spring tension automatically opens the door or lid and at the same time follows such open movement to eject any mail which may be interposed between said ejector plate and lid, said ejector serving as a follower to carry the mail forward and to throw the same flatwise down upon the open door from which position it may be readily inspected and withdrawn by the operator, whereupon the door and ejector may be returned to their normal positions and there held by means of the lock —22— which is preferably automatic.

The fact that the ejector plate —15— is of nearly the same width as that of the interior of the box section —1— prevents any mail from being caught or lodging between the edges of said ejector plate and box and at the same time forms with the lid —6— a pocket open at the top for receiving the mail and concentrating it on the bottom of the ejector plate.

The inner face of the sight glass —8— which is arranged in the opening —7— is of slightly greater area than said opening and is spring pressed against the inner face of the adjacent portions of the lid —6— by spring retaining arms —23— which are riveted or otherwise secured to the front of the lid, preferably at opposite ends of the sight opening as best seen in Fig. —5—, leaving their free ends free to yield inwardly to permit the removal or replacement of the glass —8— when necessary, or for inserting a name plate.

The closure —5— for the inlet —3— is preferably hinged at —25— to a suitable bracket —26— just above the opening and in such manner as to normally fall to its closed position and at the same time be free to swing inwardly.

The lower side of the opening —3— is provided with an inwardly projecting ledge

—27— of sufficient depth rearwardly to prevent malicious interference with the inclosed mail or interior mechanism by the insertion of the hand or any other instrument.

The hinge sections —9— and ears —12— to which they are pivoted are located at the extreme sides of the lid and ejector plate to allow the mail to readily fall between them onto the bottom of said plate but it is clearly evident that if any mail should lodge on any of these parts, it will not affect the opening operation of the lid and ejector nor interfere in any way with the removal of the mail because the hinge sections move with the lid and ejector, the lower end of the latter being extended forwardly and upwardly at the front side of the plates —11— and —14— to obviate any liability of the lower edges of letters and similar mail matter being caught between the said ejector plate and adjacent portion of the face plate —2—.

It will be observed that when the lid is opened to its extreme position, the lower or inner edge thereof drops some distance below the lower edge of the exit opening —4— but is prevented from engaging and marring the front face of the face plate —2— by reason of the engagement of the upper edges of the return extensions —10— of the hinge sections —9— with the inner faces of the adjacent portions of the face plate, the lid being secured to the hinge sections —9— in such manner as to accomplish this result, otherwise the contact of the lower edge of the lid might mar the finish on the front face of the face plate which marring effect would be visible when the door is closed.

The operation of my invention will now be readily understood upon reference to the foregoing description and the accompanying drawings and although the mechanism shown and described is preferable, it is evident that the various features may be somewhat modified without departing from the spirit of this invention.

What I claim is:

1. A letter box comprising a rectangular receptacle embodying an integral back, side walls and end walls, a face or front plate secured to the receptacle and provided with an exit opening, inwardly-projecting lugs carried by said face plate below and at each side of the exit opening, a hinge rod mounted in said lugs, a swinging lid for said exit opening, hinge-sections secured at one end to the inner face of the swinging lid and having return arms extending through the

exit opening and connected to said hinge-rod, said hinge-sections having slots opening inwardly to receive the face plate at the lower end of the exit opening, extensions carried by the pivoted ends of the return arms, a rod mounted in said extensions, and an ejector plate hung at its lower end on said rods and of a width to move freely through said exit opening, said ejector plate curved forwardly at its lower end to form a mail receiving pocket and having its free end curved rearwardly to lie in a recess provided therefor in the back wall of the receptacle, said ejector plate being of spring material and held under tension by the lid when the latter is in closed position.

2. A letter box having relatively fixed front and back plates, the front plate being provided with a mail inlet and a mail outlet below the inlet, a rocking support pivoted within the box below the outlet, a drop lid and an ejector plate both having their lower ends rigidly secured to said rocking member at opposite sides of its pivot and extending toward the inlet in diverging planes, the upper end of the ejector plate extending nearly to the plane of the top of the opening, and spring pressed against the back of the box when the lid is closed.

3. A letter box having a relatively fixed front plate provided with a mail inlet and a mail outlet below the inlet, the outlet extending from a point some distance above the bottom of the box, a rocking frame pivotally mounted on the inside of the front plate below the opening, a drop lid for the outlet having its lower end rigidly secured to said frame at one side of its pivot, an ejector plate of spring sheet metal having its lower end rigidly secured to said frame at the opposite side of its pivot and extending upwardly therefrom nearly to the upper end of the lid, the width of the ejector plate being nearly equal to the transverse width of the outlet, the upper ends of the lid and ejector plate being normally spaced apart a distance greater than the distance between the front face of the plate and back of the box whereby the upper end of the ejector plate will be spring pressed against the back of the box when the lid is closed.

In witness whereof I have hereunto set my hand on this 28th day of September 1910.

ALVAH J. FOSTER.

Witnesses:

H. E. CHASE,
E. S. SPEARING.