Oct. 7, 1924. 1,511,169

J. A. JOHNSON

MAIL BOX

Filed June 29, 1923 2 Sheets-Sheet 1

Fig. 1.

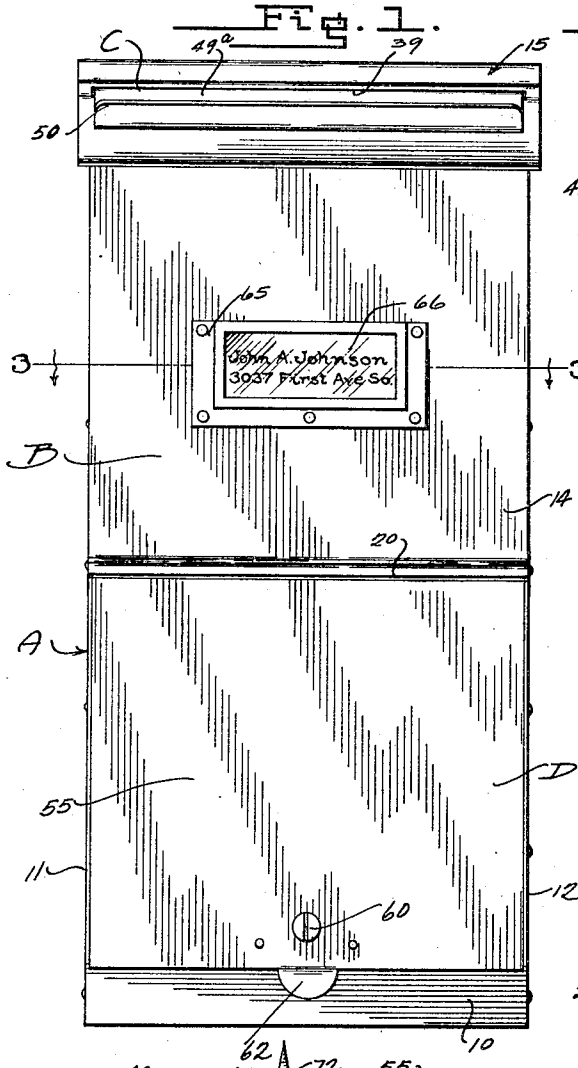


Fig. 2.

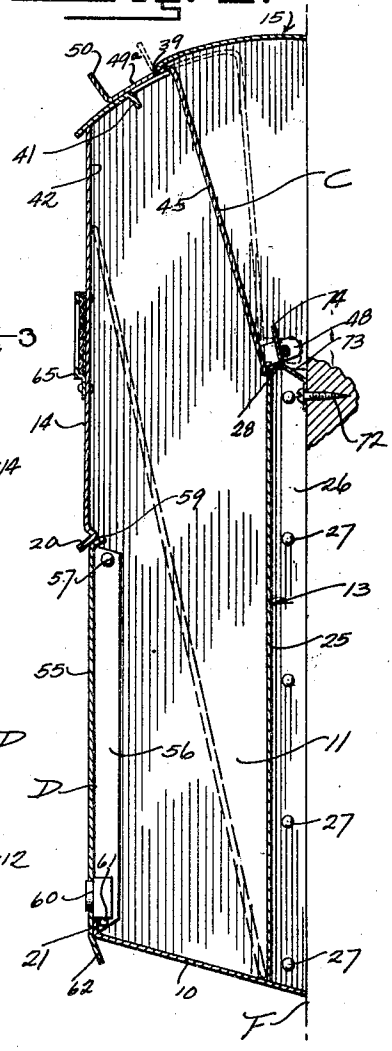
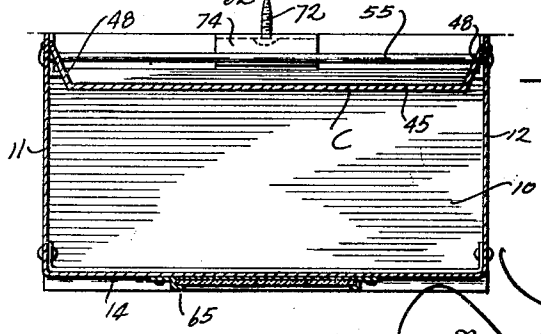


Fig. 3.



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Fig. 4.

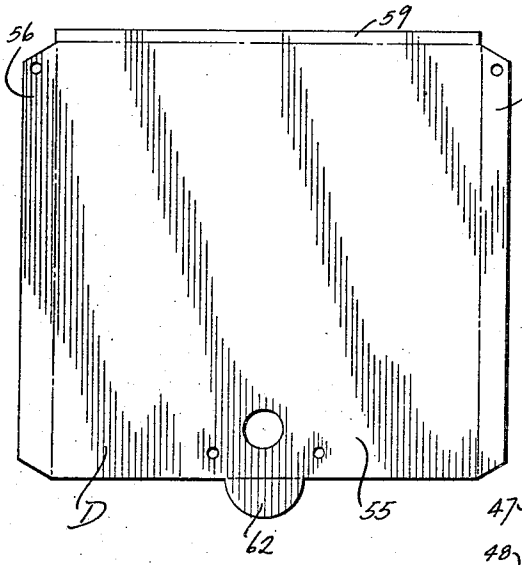


Fig. 5.

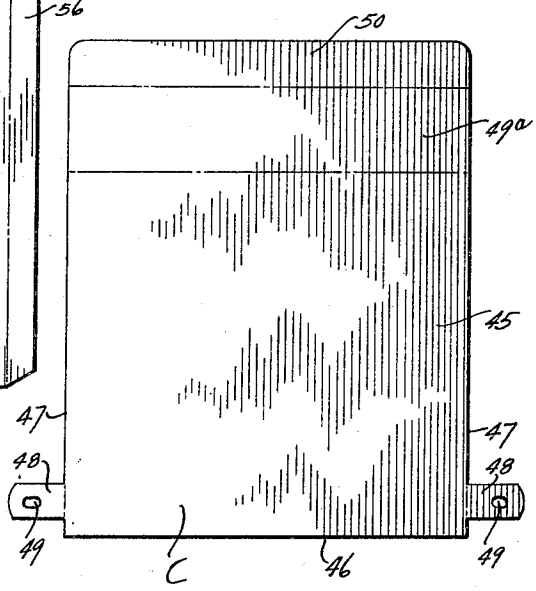


Fig. 6

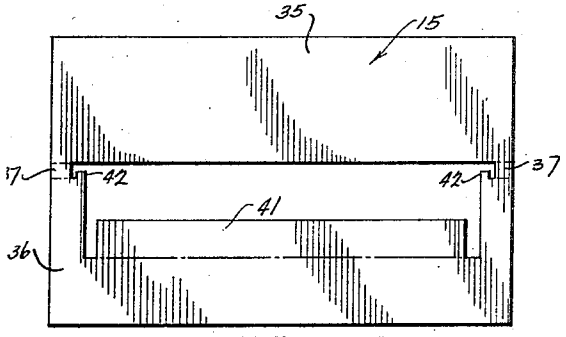


Fig. 7.

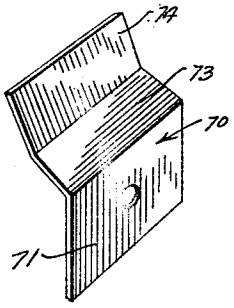
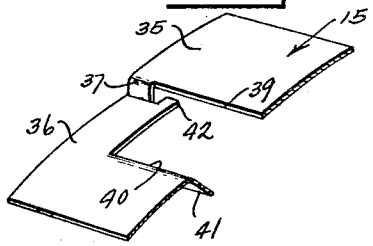


Fig. 8.



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Patented Oct. 7, 1924. 1,511,169

UNITED STATES PATENT OFFICE.

JOHN A. JOHNSON, OF MINNEAPOLIS, MINNESOTA.

MAIL BOX.

Application filed June 29, 1923. Serial No. 648,595.

To all whom it may concern:

Be it known that I, JOHN A. JOHNSON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Mail Boxes, of which the following is a specification.

This invention relates to improvements in mail boxes.

The primary object of this invention is the provision of an improved closure arrangement for mail boxes which is easily operable to facilitate the work of mail delivery and which is very effective in the protection of the contents of the box.

A further object of this invention is the provision of a mail box such as set forth in Patent No. 1,442,344, granted to me January 16, 1923, embodying practical and simplified improvements thereover, whereby mail may be readily inserted into the mail box and insured of protection therein; the improved box also embodying improved features to permit the extraction of the mail.

Other objects and advantages of this invention will be apparent during the course of the following detailed description.

In the accompanying drawings, forming a part of this specification, and wherein similar reference characters designate corresponding parts throughout the several views.

Figure 1 is a front elevation of the improved mail box.

Figure 2 is a longitudinal cross sectional view taken through the improved mail box, showing the improved features of the construction thereof.

Figure 3 is a transverse cross sectional view, taken substantially on the line 3—3 of Figure 1.

Figures 4 and 5 are developed views of closure arrangements used upon the improved mail box, showing the novel features of construction thereof.

Figure 6 is a developed view of a top wall used in connection with the receptacle portion of the improved mail box.

Figure 7 is a perspective view of a bracket upon which the improved mail box may be supported.

Figure 8 is a fragmentary perspective view of the top wall of the improved mail box, showing the same in its completed form.

In the drawings, wherein for the purpose of illustration is shown but the preferred embodiment of this invention, the letter A may generally designate the improved mail box, which may include a receptacle portion B, embodying a bottom wall 10, side walls 11 and 12, back wall 13; front wall 14, and a top wall 15. The mail box A furthermore includes closures C and D which are respectively adapted for cooperation with mail inserting and receiving mechanism provided in the mail box.

Referring to the receptacle portion B, it is preferred to stamp the front and side walls out of a single sheet of material. The side walls 11 and 12 extend for substantially the full height of the mail box whereas the front wall 14 extends from the top of the mail box and terminates at a lower marginal end portion 20 considerably above the bottom wall 10 of the receptacle B. The bottom wall 10 may be affixed in any approved manner to the side walls 11 and 12 and at its forward end is upturned, as at 21, to cooperate with a locking arrangement of the closure D as will be subsequently described. The bottom wall 10 is inclined from the front of the box or receptacle downwardly toward the rear of the same so that letters will tip in a certain relation when disposed within the mail receptacle, as has been described in my patent above referred to and as will be subsequently mentioned herein. The back wall 13 preferably includes a body portion 25, having the forwardly extending side flanges 26 thereon, which may be connected to the side walls 11 and 12 of the receptacle C, as by means of rivets 27. The body portion 25 of the rear wall 13 thus extends in a plane considerably inwardly from the rear marginal edges of the side walls 11 and 12, substantially as is illustrated in Figure 2 of the drawings, and which is a feature which will prevent moisture and other foreign influences from acting to the destruction of mail within the box A. The rear wall 13 extends from the bottom wall 10 to a top marginal edge 28, which is considerably below the top wall 15 of the receptacle B, permitting a considerable saving of material; the closure member C cooperating within the mail box in

the space between the top of its rear wall 13 and the top wall 15 to protect mail within the box A. If desired, the side flanges 26 of the back wall 13 may incline from their body portion 25 in diverging relation from the plane of said body portion, so that the outer marginal edges of the flanges will only engage the side walls 11 and 12; the rivets 27 so holding said flanges in snug engagement with the side walls 11 and 12 of the receptacle B to provide a leak proof connection therewith. Such arrangement may, however, be done away with.

Referring to the construction of the top wall 15; the same is preferably formed of a single piece of sheet material. It is arcuated throughout the width of the same and provides rear and forward portions 35 and 36 respectively, which are offset with respect to each other by flange portions 37. The rear portion 35 is uppermost and between the upper and lower portions 35 and 36 and intermediate the connecting flanges 37, a slot 39 is provided in substantially a vertical plane, which is adapted to receive a portion of the closure member C, as will be subsequently described. A slot 40 is provided longitudinally through the forward portion 36 of the top wall 15 which is the letter receiving opening over which the closure member C cooperates. At the forward edge of the mail receiving opening 40, a flange 41 is downturned from the top wall 15 into the compartment 42^a provided by the receptacle C, as a guard flange to properly direct and maintain letters and other material within the mail box A. Adjacent the connecting flanges 37, projecting lugs 42 may extend from the lower or forward portion 36 through the slot 39 and so that the same are located beneath the upper portion 35 of the top wall 15, and which in effect are stop lugs to limit the outer amplitude of movement of the closure C, and as is subsequently described. The top wall 15 may be secured upon the front and side walls of the receptacle B in any approved manner, although preferably so that marginal portions of the top wall 15 extend beyond the planes of the side walls and front wall of the receptacle, substantially as is illustrated in Figures 1 and 2 of the drawings.

Referring to the closure member C and its mounting in the receptacle B, the same includes a plane body portion 45, and adjacent its lower marginal edge 46, although extending outwardly from the side marginal edges 47 thereof is provided with mounting ears 48, which are provided with elongated slots or openings 49 therein. At its upper end the body portion 45 is provided with a lid 49^a which, as to width, is arcuated. At its outer edge the lid portion 49^a is preferably provided with an upstanding flange portion 50 which extends outwardly from the lid portion 49^a in direction opposite to the body portion 45, and is adapted as a finger engaging flange to facilitate opening of the closure C.

With respect to the mounting of the closure member C, a rod or pin 55 is transversely mounted upon the receptacle B just above the back wall 13, having the ends thereof secured in the side walls 11 and 12. The ears or lugs 48 are pivotally secured upon this pin or rod 55, so that the body portion 45 normally extends upwardly in inclined relation within the receptacle B so that the lid portion 49 thereof extends forwardly through the slot 39 to normally overlie the letter inserting opening 40. Normally, the portion 49^a thus overlies the top surface of the outer portion 36 of the top wall 15, so that the finger engaging flange 50 extends upwardly substantially at right angles to the general plane of the top wall. The closure C, adjacent the lid portion 49^a is of sufficient width that the body portion 45 thereof may engage the stop lugs 42 so that the closure C will not ride out of the slot 39. This provides a very desirable arrangement as thereby all liability of leakage through loose joints is obviated. It should be noted that the portions 35 and 36 of the top wall 15 are arcuated. These arcuations have the pivot rod or pin 55 as a center, and when the closure C is mounted upon the pin or rod 55, the lid portion 49^a is likewise arcuate from the rod or pin 55 as a center. The lid portion 49^a of the closure C thus slides in snug, yet not too tight, fitting engagement with the portions 35 and 36 of the top wall 15 and intermediate the same, as can readily be understood. It is to be noted that at its lower end the body portion 45 of the closure C extends downwardly over the inside surface of the body portion 25 of the back wall 13, to provide a leak proof connection therewith.

The closure member C is normally closed incident to its own weight, substantially as is illustrated in Figure 3 of the drawings. This is primarily due to the forward inclining of the same and because of the fact that the center of gravity thereof is considerably above and laterally of the pivot point. The closure lid C has no springs to effect the closing thereof and consequently may be easily shoved open by means of the flange 50. The same flange 50 prevents the closure member C opening too far, so that, as is illustrated in the dotted lines in Figure 2 of the drawings, the closure C when opened will still be positioned so that the center of gravity thereof is offset from the pivot rod 55 to bring the weight of the closure C into play as a means for closing the same after the letter inserting operation has been completed.

Referring to the construction of the clo-

sure D, the same preferably includes a plane body portion 55, which, at the sides thereof, is provided with flanges 56 bent inwardly from the inside surface of the body 55 and preferably at right angles thereto. This closure D is preferably pivoted, as by rivets or pins 57, to the side walls 11 and 12 of the receptacle B; said closure D being so connected at the upper ends of the side flanges 56 which extend inwardly in abutting relation over the side surfaces of the side walls 11 and 12. The closure D has an upwardly inclined flange 59 extending inwardly from the plane of the body 55, which cooperates with the lower end 20 of the front wall 14 in providing a leak proof connection when the closure D is in a shut position, substantially as is illustrated in Figure 2 of the drawings. It is thus to be noted that the pivot axis of the closure D lies inwardly of the receptacle B from the plane of the front wall 14, so that the lower end of the front wall 14 may depend over the forward surface of the closure D. A lock device 60 may be positioned in the body portion 55 of the closure D adjacent the free swinging end thereof, which may include a bolt 61 adapted for cooperation behind the upwardly extending flange 21 of the bottom wall 10, substantially as is illustrated in Figure 2 of the drawings A finger engaging lug 62 may depend from the closure D beyond the plane of the bottom wall, to facilitate the outward swinging of the closure D.

Upon the front wall 14, a card frame 65 of any approved type may be positioned, adapted to receive a name card 66 as in ordinary mail box construction.

Referring to the mounting of the receptacle or mail box A upon a wall F, a bracket 70 may be provided, much of the same construction as the bracket utilized in the patent above referred to. This bracket 70 is preferably struck of sheet material including a wall portion 71 adapted for lying upon the wall F and for securing thereto as by a screw element 72. Outwardly and upwardly inclined flanges 73 and 74 integral with the wall 71 provide a hook portion adapted to have the pin 55 disposed therein so that the mail box A may be supported in snug engagement against the wall F.

From the foregoing description of this invention, it is apparent that a mail box has been provided, which is relatively simple in construction, and which may be produced at very low cost. It may effectively receive and protect mail matter. A mail man desiring to insert letters pushes open the closure member C with the letter to be inserted or with the hand. Incident to its sensitive mounting, the closure member C will readily swing open and be positioned substantially as is illustrated in the dotted lines in Figure 2 of the drawings. The letter may then be readily inserted into the mail box and will slide freely downwardly into the mail box, as there are no abrupt projections upon which the same can catch.

It is to be noted that in this connection, the lower end of the closure C extends downwardly below the top edge of the rear wall 13, so that the rear wall 13 cannot prove to be an impediment to the insertion of mail. Once having dropped into the mail box A, the letter will fall upon the bottom wall 10 so that the lower end of the letter will be guided to the rear corner at the bottom wall and the letter will tip forwardly against the front wall 14, substantially as is illustrated by the dotted lines in Figure 2 of the drawings. In this position, the letter will be disposed in the mail box A against liability of removal from the letter inserting opening 40, the guard flange 41 playing an important part in preventing unauthorized persons from reaching into the mail box to secure a hold upon the top of the letter. When it is desired to remove the letter, authorized persons may open the closure D and by swinging the same upwardly, the lower portion of the letter is exposed, so that the same may be readily removed. It should be noted that after the letter has been inserted, the closure C will swing to a closed position. This is illustrated in the cross sectional view in Figure 2 of the drawing. The supporting ears 48 of the closure C are mounted in inclined relation to the side walls so that the same only engage said side walls at the very tip edges thereof. This prevents undue frictional engagement so that there is no binding action between the closure C and the rest of the mail receptacle B, as to cause liability of the sticking of the closure C when opened.

Various changes in the shape, size and arrangement of parts may be made to the form of invention herein shown and described, without departing from the spirit of the invention or the scope of the claims.

I claim:

1. A mail box comprising a receptacle portion, a top wall including upper and lower portions connected by a slotted flange arranged transversely to said upper and lower portions, said lower portion having a mail inserting slot therein, and a closure for said mail inserting slot connected to said receptacle and adapted to slide adjacent said top wall thru the slot in said flange.

2. A mail box comprising a receptacle portion including a top wall, the top wall including upper and lower portions disposed at different elevations and connected by a flange having a slot transversely thereof, the lower portion of said top wall having a mail inserting slot therein, and a closure pivoted in said receptacle and extending

thru the flange slot to normally close said mail inserting slot and adapted to slide beneath the upper portion of said top wall when being swung to expose said mail inserting slot.

3. As an article of manufacture, a mail box comprising a receptacle portion which includes a top wall, said top wall having portions thereof relatively offset by connecting flange portions having a slot therebetween, the lower of said portions of the top wall having a mail inserting slot adjacent said flange portions, said mail inserting slot opposite said flange portions having a guard flange extending inwardly of the receptacle, and a closure member movably mounted in the receptacle including a lid portion adapted for sliding engagement through the slot between the flange portions, said lid portion of the closure member adapted to normally cover the mail inserting slot.

4. A mail box comprising a receptacle portion having a mail inserting slot therein, and a closure arrangement including a body portion disposed within the receptacle at its lower end having laterally extending lugs for pivotal connection to the receptacle, said body portion of the closure member at its upper end having a lid portion cooperating with said mail inserting slot, said closure member normally being disposed over the mail inserting slot to close the same, and means for limiting the amplitude of movement of the closure member so that the same is always in position to automatically close upon manual release of the same.

5. A mail box construction including a receptacle having a top wall thereon, said top wall including upper and lower offset portions connected by spaced flanges, the lower portion of said top wall having a mail inserting slot therein, and a closure member pivotally connected within the receptacle at its lower end and extending upwardly within the receptacle in inclined relation toward the top wall thereof, said closure member at its upper end including a lid portion normally cooperatively extending outwardly from the top lid between the connecting flanges of the upper and lower portions of said top wall to close the mail inserting slot of said top wall.

6. A mail box construction including a receptacle including bottom, side, front, rear and top walls, one of said walls having a mail receiving slot therein, said back wall extending but a part of the distance between the top and bottom walls thereof, and a closure member adapted for cooperation over said mail receiving slot movably connected in said receptacle adjacent said back wall cooperating with said back wall in providing a wall construction which extends from the bottom wall to the top wall of said mail box.

7. As an article of manufacture, a top wall construction for mail boxes including upper and lower offset portions connected by flanges in spaced relation which extend in planes substantially at right angles to the planes of said upper and lower connected portions, said lower portion having lugs which extend inwardly from the connecting side flanges of said top wall beneath a portion of said top wall.

8. A mail box construction including a receptacle portion having a top wall which includes upper and lower wall portions in connected relation by side flanges disposed transversely to the normal planes of said upper and lower portions, said lower portion of the top wall having lugs adjacent the side flanges which connect said upper and lower portions which extend inwardly beneath the upper portion of said top wall, and a closure member pivoted within said receptacle including a lid portion which extends outwardly between the side connecting flanges of said top wall, said closure member adapted for contacting said lugs to limit the amplitude of outward movement thereof.

9. As an article of manufacture, a mail box including a top wall, a closure member pivoted within the receptacle, said top wall including upper and lower relatively offset portions struck on an arcuation from the pivot axis of the closure member as a center, said closure member extending upwardly from within the receptacle and including a lid portion which extends transversely from between the upper and lower portions of said top wall. the lower portion of said top wall having a mail inserting slot therein over which said closure member cooperates to normally close.

10. A mail box comprising side walls, a front wall, a rear wall, a bottom wall, and a top wall having a mail inserting slot therein, a pin transversely carried by the side walls of said receptacle, and a closure arrangement pivotally connected to said pin and extending upwardly within the receptacle for cooperation with the mail inserting slot of said top wall, and means for supporting the mail box from said pin.

11. A mail box construction comprising a receptacle portion including side walls, a bottom wall, a front wall, a rear wall connected to said side walls and offset in a plane from the rear edges of said side walls, and a top wall having a mail inserting slot therein, a pin carried by said side walls rearwardly of the plane of said rear wall, and a closure arrangement pivotally connected to said pin and extending upwardly within said receptacle in inclined relation toward the top wall thereof for cooperation over the mail inserting slot of said top wall.

JOHN A. JOHNSON.