

(No Model.)

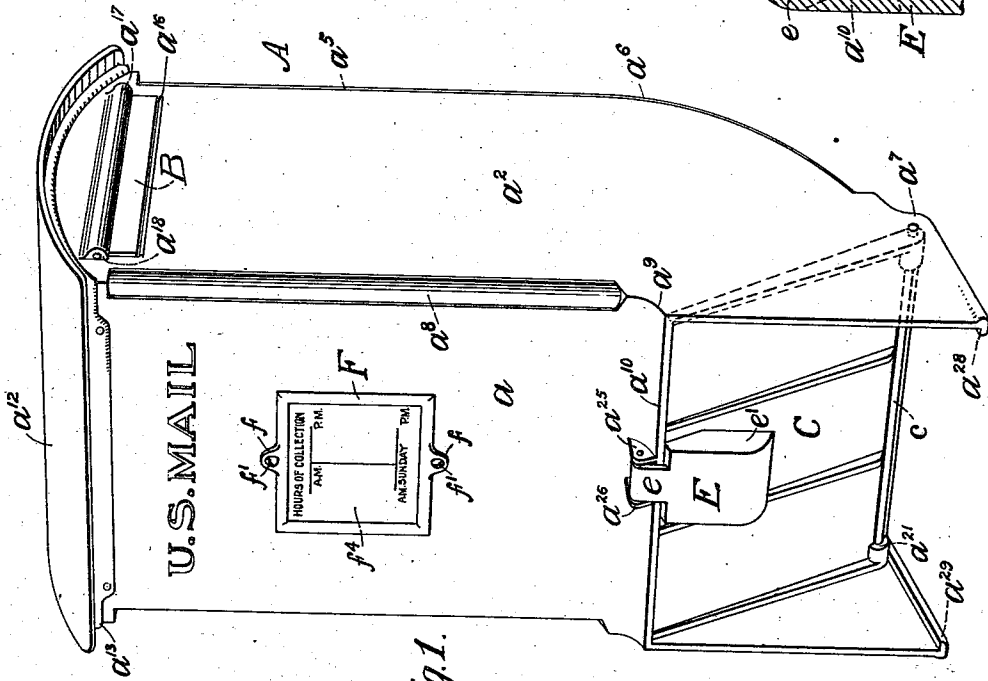
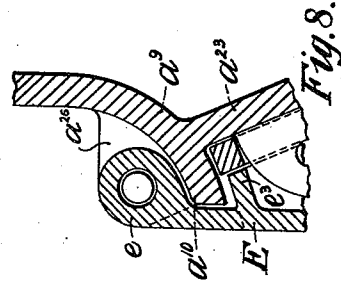
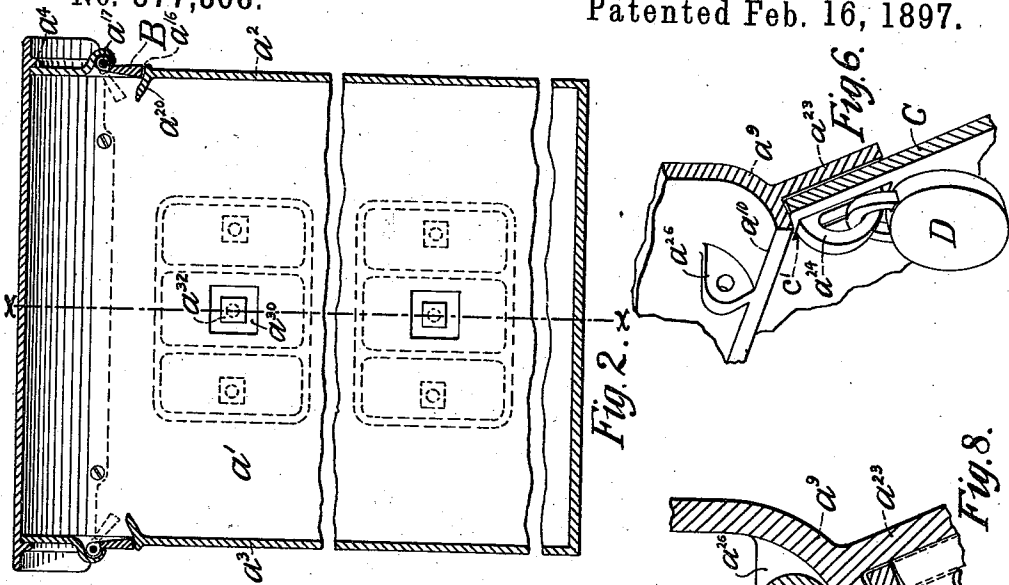
2 Sheets—Sheet 1.

# D. C. MCCARROLL & R. M. SEIBEL.

## LETTER BOX.

No. 577,368.

Patented Feb. 16, 1897.



Witnesses,  
*G. C. Bentley*  
*L. C. Hanson*

Inventors,  
*David C. McCarroll*  
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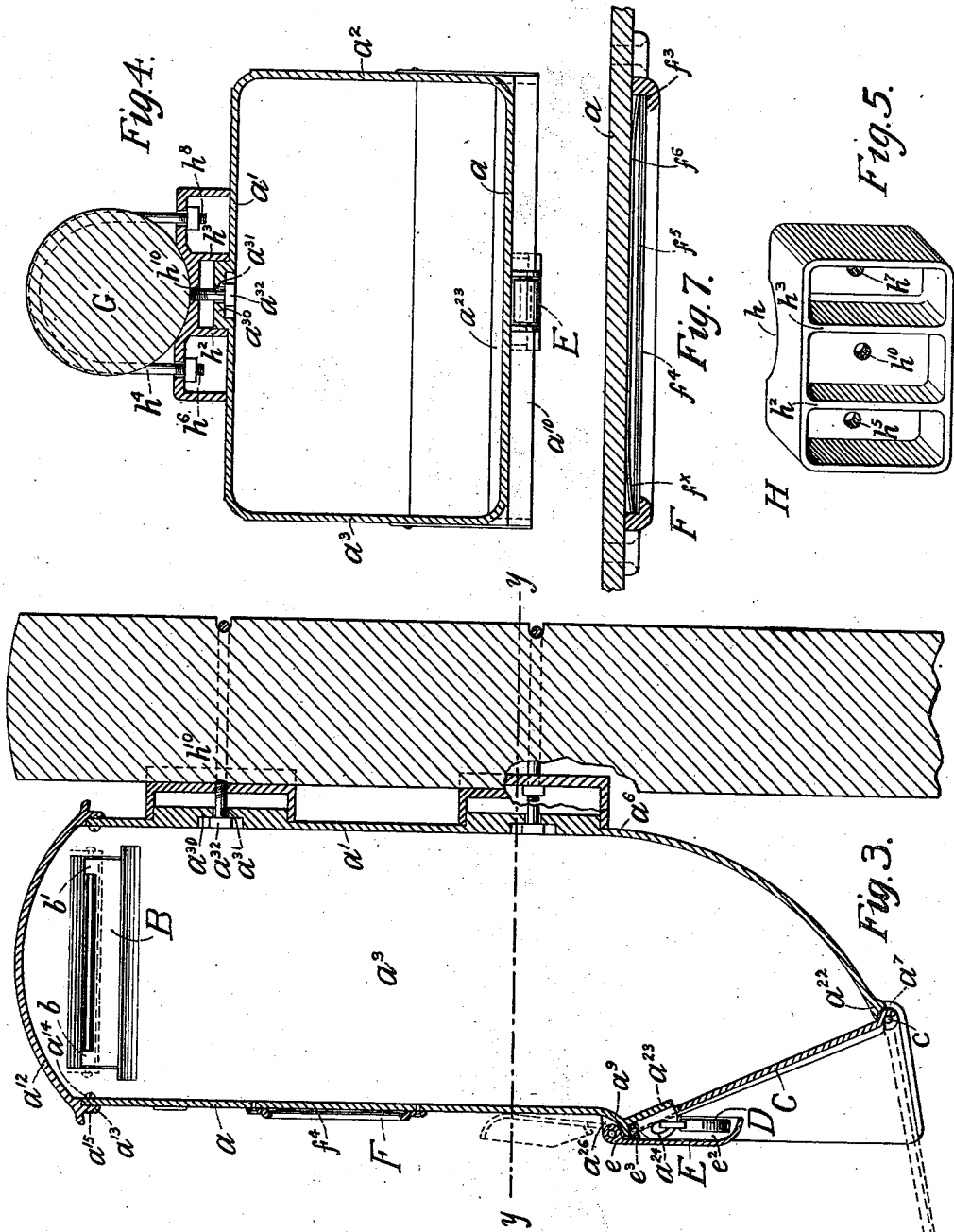
(No Model.)

2 Sheets—Sheet 2.

D. C. McCARROLL & R. M. SEIBEL.  
LETTER BOX.

No. 577,368.

Patented Feb. 16, 1897.



Witnesses

*S. L. C. Hasson*

David C. McCarroll, Inventors.  
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# UNITED STATES PATENT OFFICE.

DAVID C. MCCARROLL AND RICHARD M. SEIBEL, OF KANSAS CITY,  
MISSOURI.

## LETTER-BOX.

SPECIFICATION forming part of Letters Patent No. 577,368, dated February 16, 1897.

Application filed December 17, 1896. Serial No. 616,224. (No model.)

To all whom it may concern:

Be it known that we, DAVID C. MCCARROLL and RICHARD M. SEIBEL, citizens of the United States, and residents of Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Street Letter-Boxes; and we do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

The object of our invention is an improvement in that class of letter-boxes designed more especially for the collection and delivery of letters and ordinary mail taken from the boxes by carriers, and has for its purpose, first, to prevent the ingress of water within the box and facilitate the deposit of letters; second, to enable a rapid delivery from the box to the pouch of the carrier by the gravitation of the mail-matter; third, to shield the lock upon the box from being incased by ice or snow; fourth, to guard against the unauthorized removal of the box from its support, and, fifth, to prevent corrosion of the display or time card upon the front of the box.

Our invention consists in the novel construction and combination of parts, such as will first be fully described, and specifically pointed out in the claims.

In the drawings, Figure 1 is a view in perspective of the improved letter-box. Fig. 2 is a longitudinal sectional view of the improved letter-box. Fig. 3 is a cross-sectional view of the letter-box, taken upon the line X X of Fig. 2 and showing the support for the box, the yoke connecting the box and support being in section. Fig. 4 is a horizontal sectional view of the box and its support, taken upon the line y y of Fig. 3. Fig. 5 is a detail view in perspective of the safety attachment for securing the box to its support. Fig. 6 is a broken detail perspective view of the front of the box and the upper part of the hinged bottom, showing the lug and staple and the slot in the hinged bottom for the reception of the staple. Fig. 7 is an enlarged detail broken sectional view of the front of the box and a sectional view of the time-card

holder, showing the time-card and the transparent front plate and the dished back plate. Fig. 8 is a detail sectional view of the lower end of the front side of the box and the hinged portion of the shield, showing the water-table on the rear side of the shield.

Similar letters of reference indicate corresponding parts in all the figures.

Referring to the drawings, A represents the complete letter-box, which for the purposes designed is rectangular in shape in longitudinal section and is made of considerable length for the reception of a large quantity of mail-matter.

$a$  represents the front side of the box, and  $a'$  the back of the box.

$a^2$  represents one end and  $a^3$  the other end of the box. The end  $a^2$ , which is vertical in position, consists of a smooth flat plate, the upper end of which extends above the upper edges of the respective front and back plates and describes a single upwardly-curved line extending from the horizontal edge of the front plate  $a$  to the horizontal edge of the back plate  $a'$ . The rear edge portion  $a^5$  of the end  $a^2$  extends downwardly and in a slight degree inclined outwardly at an angle to the front side of the box and at a point about two-thirds of the described distance from the upper portion of the end  $a^2$  to the lower portion of the said end. The rear edge of said end is made to describe a single curved line extending downwardly nearly to the lower extremity of the said side and to a point  $a^7$  equidistant from the front and rear lines of the opposite edges of said end  $a^2$ , at which point the lower extremity of said end extends in a direct line to the forward edge of the said end, and also inclined downwardly at a slight angle of inclination to said forward edge. The forward edge  $a^8$  of the end  $a^2$  extends from the upper horizontal edge of the front side  $a$  downwardly in a vertical line to a point nearly upon the same horizontal line extended through the point  $a^6$  upon the rear edge of the end  $a^2$ , at which point the edge of the said side is extended forwardly in a curved line, as at  $a^9$ , and projected a short distance beyond the upper line of said edge, and thence said edge portion extends in a downward direction to the extremity of the said end of the

2  
box. The other end,  $a^3$ , of the box is made precisely in the manner described of the end  $a^2$ .

5 The front side  $a$  of the box extends downwardly to the point  $a^9$  described upon the forward edge of the end  $a^2$ , and its lower edge curved outwardly, as at  $a^{10}$ , in line with the said curved portion  $a^9$  of said edge. The back  $a'$  of the box extends downwardly in exact  
10 alinement with the rear edge  $a^5$  of the end  $a^2$ , curving inwardly from the point  $a^5$  and terminating at the point  $a^7$  at the extremity of the rear edge of said end  $a^2$ . The edge portion  $a^8$ , at the intersection of the front side  $a$   
15 and end  $a^2$ , is curved outwardly, as seen in horizontal section in Fig. 4, and the lines of said curved portion in extending downwardly terminate in the single curved line at  $a^9$ , at which point the front side of the box projects  
20 outwardly, as at  $a^{10}$ , before described. The forward edge of the end  $a^3$  is constructed in the same manner as the edge  $a^8$ , and the rear edges of the box are also curved outwardly, the curve extending to the point  $a^7$  upon the  
25 said end  $a^2$ .

The top  $a^{12}$  of the box consists of a single plate extending from the front plate  $a$  and projecting outwardly a short distance beyond the said plate, and thence in a single up-  
30 wardly-curved line to the upper edge of the back  $a'$  of the box and a short distance beyond said edge portion, said top portion being also extended over the upper curved edges of the respective ends  $a^2$   $a^3$  and con-  
35 forming to the upper curved portion of said end, and also projecting a considerable distance beyond the outer side portions of said ends at each end of the box. Upon the under side portion of the top  $a^{12}$  is a flange  $a^{18}$ ,  
40 which extends downwardly a short distance and upon the outer surface of the upper end of the front side  $a$  of the box. Upon the inner side of the box and a short distance below the upper edge of the said front  $a$  is inserted a screw  $a^{14}$ , (see Fig. 3,) which extends  
45 into a screw-threaded opening  $a^{15}$  in the flange  $a^{18}$  a considerable distance. The flange  $a^{18}$  also extends from the top  $a^{12}$  externally around the back and end portions of  
50 the box, and is secured at suitable points by screws inserted as described of the screw  $a^{14}$ .

In the end  $a^2$  of the box and a short distance below the described lines of the upper ends of the front  $a$  and back  $a'$  of the box is  
55 the horizontal opening  $a^{16}$ , which is of the usual width for the passage of letters, &c. Above the upper edge of the opening  $a^{16}$  the portion of the plate forming said upper edge is projected outwardly from the line of the  
60 inner surface of said end in a downwardly-curved line, as at  $a^{17}$ , the sides  $a^{18}$  of said projection extending at right angles to the box.

65 Upon the inner side of the end  $a^2$  of the box, within the opening  $a^{16}$ , is the drop-valve B. Said valve extends from the inner portion of the one side of projection  $a^{17}$  to the

other side. At one end and upon the upper side of the valve B is a forwardly-extended  
lug  $b$ , (see Fig. 3,) which is pivotally attached  
70 to one of the sides  $a^{18}$  of the projection  $a^{17}$ , and at the other end of said valve and upper edge portion is a lug  $b'$ , which is the same as  
lug  $b$ , and pivotally attached to the other  
75 side of the projection  $a^{17}$ . The lower edge of the valve extends nearly to the lower edge of the opening  $a^{16}$ . On the inner side of the  
end  $a^2$  of the box, directly in line with the  
lower edge of the opening  $a^{16}$ , is a plate  $a^{20}$ ,  
80 cast with the end of the box and extending the length of the opening  $a^{16}$ . The upper surface of the plate  $a^{20}$  extends rearwardly and upwardly a short distance from said edge  
of the opening  $a^{16}$  and describes a single  
85 curved line in the arc of the circle described by the lower end of plate B.

C is the bottom of the box, which consists of a plate extending from the inner side portion  
of the curved lower edge portion  $a^{10}$  of the front  
side  $a$  of the box downwardly and inclined  
90 rearwardly to a position at the described point  $a^7$  at the extremity of the rear edge portion  
of the respective ends  $a^2$   $a^3$  of the box, at which  
point and upon the inner side portion is a lug  
 $a^{21}$ , and directly opposite the lug  $a^{21}$ , upon the  
95 inner side of the end  $a^3$ , is a lug  $a^{22}$ , both of which lugs are round in shape and fit closely  
the lower edge of the back  $a'$  of the box. Upon  
the lower edge of the bottom C of the box is  
a round casting  $c$  of the same diameter as the  
100 lugs  $a^{21}$ , which fits between the opposing ends  
of the respective lugs and is pivotally connected with said lugs. The lower edge of the  
back  $a'$  is provided with a curved depression  
 $a^{22}$ , in which is the casting  $c$ . The bottom C  
105 of the box also extends from the inner side of the end  $a^2$  to the inner side of the end  $a^3$ , and  
in the upper part of said bottom at a point  
equidistant from said ends is a slot  $c'$ .

Upon the under side portion of the curved  
110 lower end of the front  $a$  of the box and a short distance on side of the outer edge  $a^{10}$  is a downwardly-extended flange  $a^{23}$ , which is also inclined inwardly and in the direction of the  
pivotal portion of the bottom C and extends  
115 from the inner side of end  $a^2$  to the inner side of the end  $a^3$ , and upon the outer side of said  
flange opposite the slot  $c'$  on the bottom C is a staple  $a^{24}$ , which extends through the said  
slot, and with said staple is connected an ordi-  
120 nary padlock D. Directly above the padlock and upon the upper side of the curved extension  
 $a^{10}$  of the front  $a$  of the box are cast the  
lugs  $a^{25}$   $a^{26}$ , to which is pivoted the upper end  
portion of the lock-shield E. Said shield is  
125 composed of a narrow plate slightly wider than the padlock, upon the upper edge of  
which is the neck  $e$ , extending between lugs  
 $a^{25}$   $a^{26}$ , the lower part being considerably wider  
than the neck and its lower edge inclined  
130 downwardly and extended inwardly in the direction of the inclined bottom C of the box.  
In a curved line on the inner side of the shield C is a flange  $e'$ , which extends at right angles

to the shield in the direction of the bottom C. Upon the other side of the shield is a flange  $e^2$ , extending the same described distance and direction as the flange  $e'$ . From the inner side of the said shield at a position directly beneath the curved extension  $a^{10}$  of the front  $a$  of the box is connected a plate  $e^3$ , which is inclined in an upward direction from the said shield and extends in a transverse direction to the shield above the respective flanges  $e' e^2$ .

Upon the inner side and lower end portion of the end  $a^2$  of the box is a flange  $a^{28}$ , extending at right angles to said box and from the pivotal point of the bottom C to the forward edge of the said end of the box. Upon the lower end portion and inner side of the end  $a^3$  is a flange  $a^{29}$ , which is the same as flange  $a^{28}$ .

Upon the outer surface of the front  $a$  of the box is connected by the screws  $f f'$  in flanges  $f' f'$  a time-card frame F, upon the inner surface of which is a groove or depression  $f^3$ , extending entirely around the sides and ends of the frame. In the groove  $f^3$  is placed a thin sheet  $f^4$ , of celluloid or other transparent material, which is the same size as the frame F within the groove  $f^3$ . Between the celluloid sheet  $f^4$  and the side of the box is placed the time-card  $f^5$ , it being of the same dimensions as sheet  $f^4$ . Between the time-card  $f^5$  and the outer surface of the side  $a$  of the box is a plate  $f^6$ , which is cupped or depressed at the center of the plate, the outer edges being warped forward, as at  $f^x$ , away from the outer surface of the front of the box and caused to bear against the time-card.

G represents a post supporting the box, which is ordinarily employed at the corners of streets.

H represents a hollow rectangular-shaped casting or base-plate, in the back of which is a curved depression  $h$ , which is made to receive the curved surface of the post or support G. Between the outer sides of the hollow casting are cast separate partitions  $h^2 h^3$ , which are arranged at equal distance from each other and the respective sides of the casting.

In the back  $a'$  of the letter-box A is a rectangular-shaped depression  $a^{30}$ , which extends beyond the surface of the outer side of the back  $a$  at a point equidistant from the opposite ends of said box and a short distance downwardly from the top of the said box, which depression is made to fit within the hollow casting H between the partitions  $h^2 h^3$ . Around the support G is extended a yoke or strap  $h^4$ , both ends of which are screw-threaded. One end of the strap is inserted through an opening  $h^5$  on the back of the casting H between one side of the casting H and the partition  $h^2$  and within the base-plate or casting is fitted with a nut  $h^6$ . The other end of the strap extends through an opening  $h^7$  in the back of the casting between the outer side portion and the partition  $h^3$  and fitted with a nut  $h^8$ .

In the depression  $a^{30}$  is an opening  $a^{31}$ , through which is inserted a screw-bolt  $a^{32}$ , which enters a screw-threaded opening  $h^{10}$  in the back of the casting H. Beneath the casting H is a casting  $H'$ , which is constructed precisely the same as the casting H, and upon the letter-box is an outward depression, which is fitted within the casting and secured there- to from within the box in precisely the same manner as described of the casting H.

In placing letters within the box the valve B is raised a sufficient height by the letters and pass flatwise through the opening  $a^{16}$  and over the surface of the plate  $a^{20}$ , and thence in falling to the bottom of the box have a tendency to turn once and dispose themselves in position flatwise against the bottom C. The inner surface of the letter-box being free from all obstructions, as clearly shown, and the internal breadth of the box in the direction of the bottom being greater at the point through the box upon a line drawn through the points  $a^9 a^6$ , the liability of the letters striking the sides of the box is lessened, and in meeting the curved portion of the back of the box the natural assortment of the letters is occasioned at the point where the free delivery is essential when the bottom C is opened. The plate  $a^{20}$  during the time the letters are deposited in the box and at the other times prevent the water from reaching the letters, and in the introduction of the letters the liability of blurring the address is diminished, as the inner edge of the opening  $a^{16}$  is extended when the valve B is raised in position to the inner edge of the plate  $a^{20}$ , and thus away from the moisture upon the outside of the box.

In the collection of the letters the shield E is raised in position, exposing the padlock D. The mail-pouch is placed in position by the carrier directly opposite the hinged bottom C and the padlock removed, permitting the hinged bottom to fall with its accumulation of letters into the open pouch. The ends of the box which extend on each side of the bottom C beyond the opening prevent the letters from falling to the ground. It will be observed that the inclination of the bottom C is such as to form a chute and permit the letters by gravitation to discharge themselves into the pouch and at the same time the interior of the box is disclosed to enable the carrier to inspect the box. When the bottom is raised in position and locked, the shield is lowered in position, as seen in Fig. 1, while during the operation of removing the letters it remains in the position in which it is placed, as seen in dotted lines, Fig. 3. In the position as seen in Fig. 1 the water collecting upon the surface of the front of the box and running down between the lugs  $a^{25} a^{26}$  falls upon the upper surface of the plate  $e^3$  and is discharged upon each side of the shield, thus protecting the padlock. In cold climates the ice and snow are therefore kept from the padlock. In order to protect the time-card  $f^5$

from the water which ordinarily finds entrance between the card and the outer surface of the box, the plate  $f^6$  is curved in such a manner as to remove nearly all parts of the plate from contact with the box except at the bearing-point, the water thus passing between the plate and the box, preventing corrosion of the plate and injury to the time-card.

In securing the box to its support it will be observed that the casting H and its strap are first connected with the support G. The box A is then arranged so as to permit the depression  $a^{30}$  to enter between the partitions  $h^2 h^3$ . The hinged cover C is then opened and the screw-bolt  $a^{32}$  inserted into the casting H, and securing the box to the casting thus prevents removal of the box from its support except by an authorized person in possession of the key opening the letter-box A. The angular position of the bottom C of the box may be increased or extended as far forward as the lines of the front edges of the ends of the box, if preferred, and the curved inclination of the back of the box extended to the forward edges, as described, with such other modifications as will readily occur without departing from our invention.

Having fully described our invention, what we now claim as new, and desire to secure by Letters Patent, is—

1. In a letter-box having an opening for the passage of the letters, &c., a valve normally closing said opening and pivoted at its upper edge so as to be moved inwardly by the pressure of the letter, a plate upon the inner side of said box below the opening having its upper surface in a single curved line struck from the pivot-point of said valve, and extending rearwardly and upwardly, as and for the purpose described.

2. In a letter-box having an opening for the passage of the letters, &c., a pivotal wedge-shaped valve closing said opening, and a plate upon the inner side of said box having its upper surface in a single curved line struck from the pivotal point of said valve and extending rearwardly and upwardly, the larger end of said wedge-shaped valve fitting said curve, as and for the purpose described.

3. In a letter-box having a discharge-opening, a cover for said opening, the ends of the said box extending beyond said cover to form a discharge-chute for the contents of the box.

4. In a letter-box for the collection and delivery of letters having an opening for the discharge of said letters, a hinged cover for said opening, the ends of said box extending beyond the cover when closed, in such manner that said bottom when opened out and said ends form a continuous chute for the discharge of the contents of the box.

5. In a letter-box for the collection and delivery of letters, having an opening for the discharge of said letters extending through the bottom, and the lower portion of the front side of said box, and a bottom to said box hinged at one end to the lower end portion

of the back of said box, and extending up between the ends and secured to the front side of said box in such manner that said bottom when opened out, and said sides, form a continuous chute for the discharge of the contents of the box.

6. In a letter-box for the collection and delivery of letters having an opening for the discharge of the contents of the box, extending through the lower end of the box and the lower portion of the front side of the box, and a bottom formed by a valve or covering for said opening hinged at one end to the lower portion of the back of the box, and extending up between the ends and secured to the front side of said box, in such manner that when lowered it combines with an incline in the back of said box extending from said point of hinge to a point of contact with the perpendicular line of the back of said box, so as to form a continuous and easy slide or descent for the contents of the box from said point of contact down to the extreme lower part of said opening or point of discharge, the contents of the box being facilitated in the discharge by reason of said incline employed in combination with the slide formed by said valve or covering when lowered, so as to form a downward incline from said point of hinge to said point of discharge, as and for the purpose described.

7. In a letter-box for the collection and delivery of letters, having an opening for the discharge of the contents of the box, extending through the lower end of the box and the lower portion of the front side of the box, and a bottom formed by a valve or covering for said opening, hinged at one end to the lower portion of the back of the box, and extending up between the ends and secured to the front side of said box, in such manner that when lowered it combines with a curvature in the lower end of the back of said box, so as to form a continuous and easy slide or descent for the contents of the box from a point of contact in the perpendicular line of the back of the box, with said curvature down to the extreme lower part of said opening or point of discharge, the contents of the box being facilitated in the discharge by reason of said curvature employed in combination with the slide formed by said valve or covering when lowered so as to form a downward incline from said point of hinge to the said point of discharge, as and for the purposes described.

8. A letter-box for the collection and delivery of letters, &c., having its lower discharging end portion composed of the opposite lower portions of the ends of said box, and the lower end portions of the respective front side and back of the box inclined at an angle to and meeting each other, said bottom or lower end portion of the front side being separable and hinged at the rear end to the lower portion of the back of the box, as and for the purpose described.

9. A letter-box for the collection and deliv-

ery of letters, &c., having its lower discharging end portion composed of the opposite lower portions of the ends of said box, and the lower end portion of the respective front side and back of the box inclined at an angle to and meeting each other, said lower end portion of the front side being separable and hinged at the rear end to the lower portion of the back of the box, and extending up between the ends and secured to the front side of said box in such manner that said bottom, when opened out, and said sides form a continuous chute for the discharge of the contents of the box, as and for the purposes described.

10. In a letter-box for the collection and delivery of letters, &c., having upright ends and an opening in the bottom and lower portion of the front side, a bottom to said box hinged at one end to the lower portion of the back of said box and extending between the ends of the box and secured to the front side of the box at the other end and flanges on the inner side and lower end portion of said ends of the box inclined, for the purpose described.

11. The combination with a letter-box of a frame for time-cards, and means acting upon the edges of the card for securing the time-card in the frame out of contact with the box, whereby discoloration of the time-card is prevented, substantially as described.

12. The combination with a letter-box of a frame for time-cards provided with a groove upon its inner surface, and means acting at the edges of the time-card to press the card away from the box and against the outer wall of the groove, whereby discoloration of the time-card is prevented, substantially as described.

13. The combination with a letter-box of a frame for time-cards provided with a groove upon its inner surface, a curved plate arranged between the side of the box and the time-card and engaging the card at its edges only, substantially as described.

14. The combination with a letter-box and its support, of a base-plate, means for securing the base-plate to the support and a screw for securing the box to the base-plate in such manner as to protect its securing means, substantially as and for the purpose described.

15. The combination with a letter-box and its support, of a strap for securing the letter-box to the support, a base-plate having openings in the back for the ends of the strap, and fastening devices upon said ends, and a screw for securing the letter-box to the base-plate in such manner as to protect the ends of the strap, as and for the purpose described.

16. The combination with a letter-box having outward extensions extending beyond the outer surface of the said back, of a support for said box and a screw and strap, and a hollow base-plate adapted to receive the said extensions of the back of the box, having openings in its back for the ends of the strap, and a screw-threaded opening between said ends of the strap, fastening devices upon said ends within said base-plate and an opening in the said extension, and a screw-bolt extending through said opening within the screw-threaded opening in the back of said hollow base-plate, as and for the purpose described.

17. The combination with a letter-box, and its support, of a securing-strap, a hollow base-plate or casting secured to the ends of said strap, and an extension from the back of said box within the hollow casting, and a screw-bolt extending through said extension from within the letter-box into the said casting, as and for the purpose described.

18. The combination with a letter-box and its support, of a strap for securing the letter-box to the support, a hollow base-plate or casting having openings on the back portion for the ends of the strap, and fastening devices upon said ends, and a screw for securing the back of the letter-box to the casting from within the box, as described.

19. The combination with a street letter-box, of a lock-shield, said shield being provided with a hinge so adjusted with reference to the weight of the shield and center of gravity that when the shield is raised for the purpose of operating the lock, the shield, by its own gravity, stands up clear of the lock, substantially as and for the purpose described.

20. In combination with a letter-box, a lock-shield normally covering the lock, hinged above the lock, and a water-shedding plate between the hinge and the lock, substantially as and for the purpose described.

21. In combination with a letter-box, of a lock-shield E, provided with a water-shedding plate  $e^3$ , substantially as and for the purpose described.

22. In combination with a letter-box provided with a curved extension  $a^{10}$ , a lock-shield hinged above said extension and provided with a water-shedding plate  $e^3$  extending over the lock and underneath said extension  $a^{10}$ , substantially as and for the purpose described.

DAVID C. MCCARROLL.  
RICHARD M. SEIBEL.

Witnesses:

ISAAC A. WRIGHT,  
A. L. GREER.