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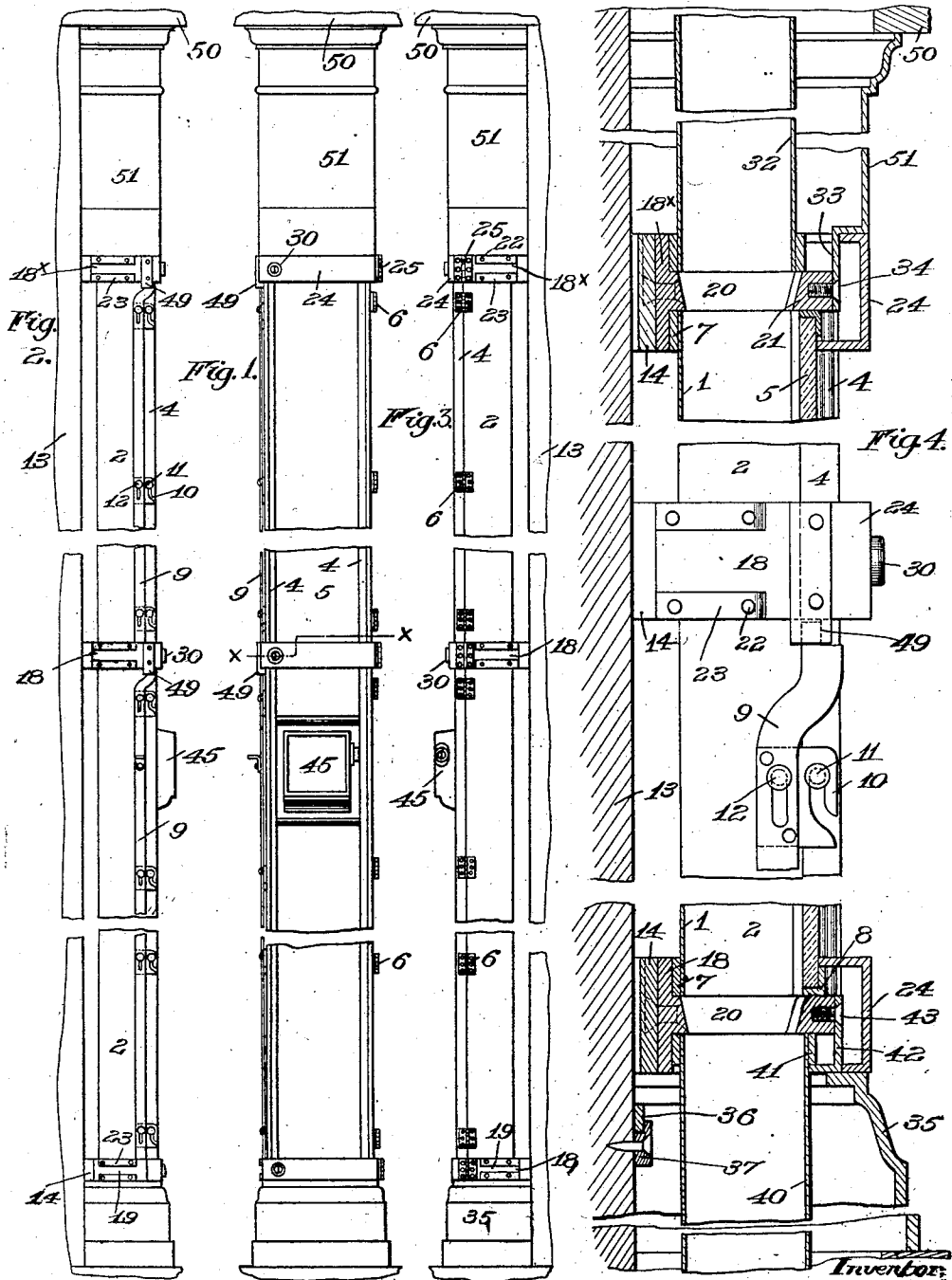
MAIL CHUTE.

APPLICATION FILED DEC. 12, 1906.

Patented Dec. 14, 1909.

3 SHEETS—SHEET 1.

943,183.



Witnesses

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MAIL CHUTE.

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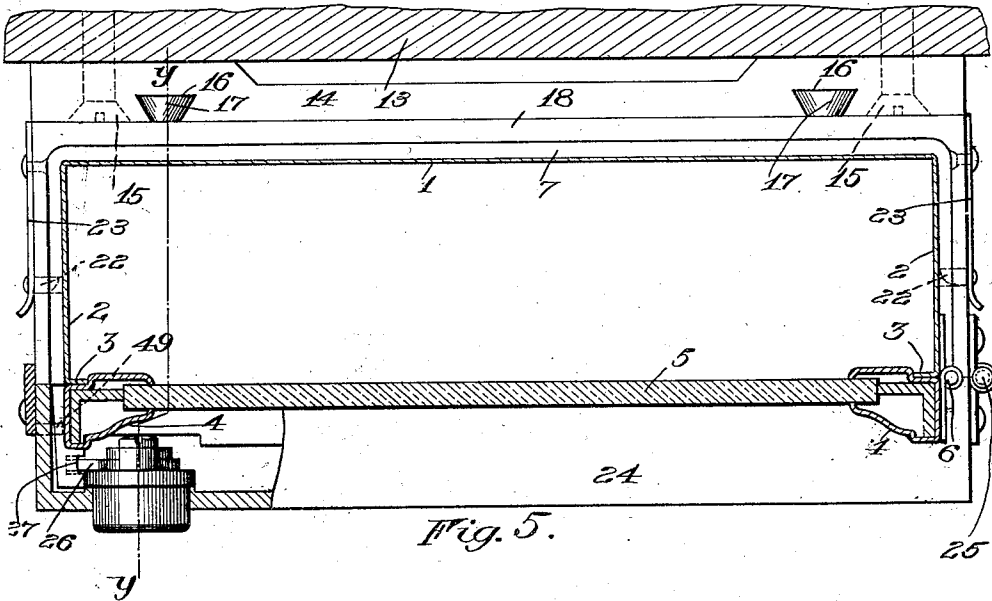


Fig. 5.

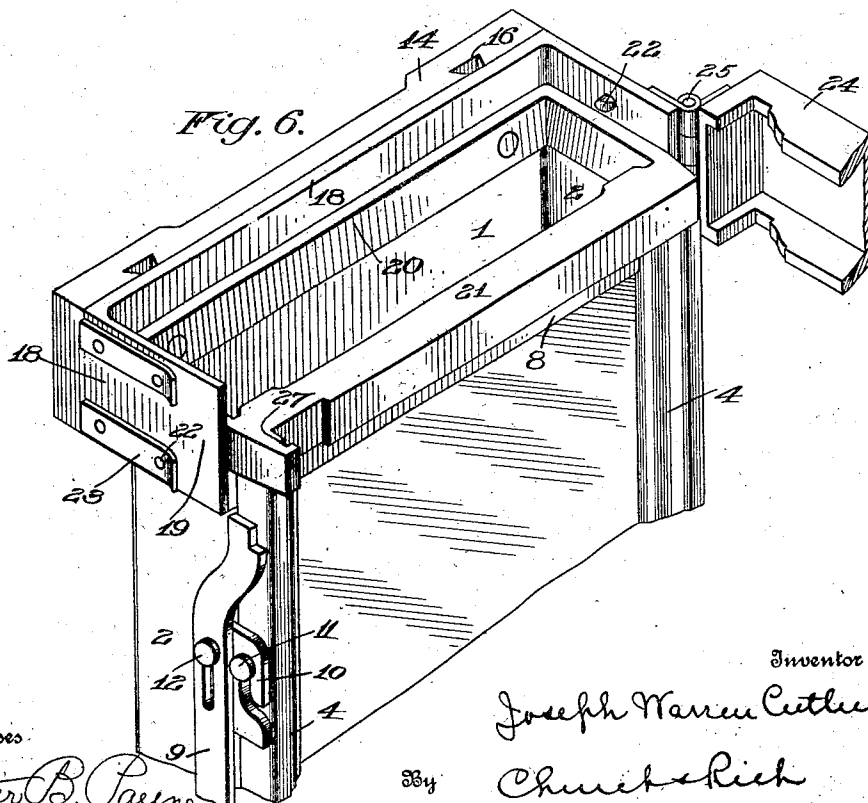


Fig. 6.

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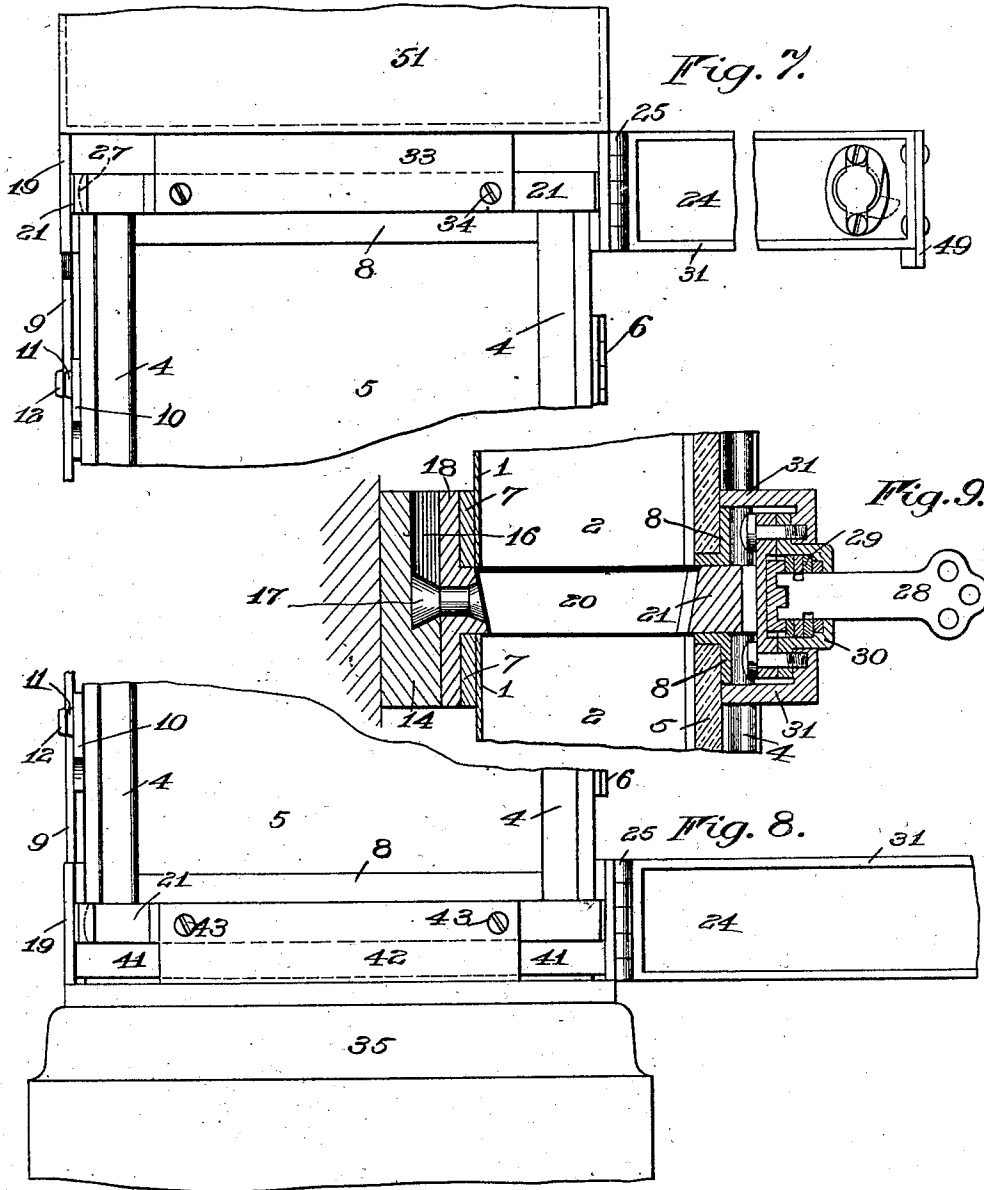
MAIL CHUTE.

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UNITED STATES PATENT OFFICE.

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MAIL-CHUTE.

943,183.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed December 12, 1906. Serial No. 347,397.

To all whom it may concern:

Be it known that I, JOSEPH WARREN CUTLER, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Mail-Chutes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference numerals marked thereon.

My present invention relates to mail chutes and has for its object to provide a chute the parts of which are so constructed and arranged that not only may they be readily erected, but access may be had to the interior for the purpose of removing obstructions or clearing the chute and the chute dismantled or new sections inserted by authorized persons only, and to these and other ends the invention consists in certain improvements and combinations of parts all as will be hereinafter more fully explained, the novel features being pointed out in the claims at the end of the specification.

In the drawings: Figure 1 is a front elevation of a portion of a chute embodying one story constructed in accordance with my invention and embodying my improvements. Fig. 2 is a side elevation thereof. Fig. 3 a view of the front side. Fig. 4 is a vertical sectional view of the upper and lower ends of a portion of the chute between floors, the parts intermediate the length being removed. Fig. 5 is a horizontal sectional view on the line $x-x$ of Fig. 1. Fig. 6 is a perspective view of one of the brackets intermediate the sections and the end of one of the sections. Fig. 7 is a front elevation of the securing devices for the upper end of the chute having the locking bar open. Fig. 8 is a similar view of the locking device at the base section. Fig. 9 is a vertical sectional view on the line $y-y$ of Fig. 5.

Similar reference numerals in the several figures indicate similar parts.

I have only deemed it necessary to show in the drawings the portion of the chute standing between the ceiling and floor of one floor of the building, it being understood that the extreme lower end of the chute is connected with a suitable receptacle or mail box and that the portions located at the other floors are similar to the one shown.

In the preferred form of the invention the chute sections themselves are of the general shape and arrangement of that shown in my prior patent No. 758,128, embodying the rear channel member or portion 1 constructed of sheet metal having the flanges 2 at the side, the forward ends of which latter are provided with inwardly-turned flanges 3. The front of the section consists of a movable panel or portion, composed in the present instance of a frame 4 containing the glass or transparent front 5. This panel or portion is hinged to the rear channel by hinges 6, and as in my prior patent, the joints between the sides of the panel and the side and flanges of the channel are so arranged as to be protected from the entrance of mail matter descending the chute. The ends of the chute sections are reinforced by bands 7, secured to the channel, and the ends of the movable panels are provided with angle bars 8, as shown in Fig. 9, which project slightly at the front. As the front panels shown are hinged at one side, the opposite side is secured by a longitudinal locking bar 9 having slotted brackets 10 adapted to engage with pins or projections 11 on the inner edges of the panel, said bars 9 being guided to move in right lines by studs or projections 12 extending through them as shown. These locking bars serve to secure the inner edge of the panels at intervals in their length to prevent separation of the parts, for as will be described, the ends of the panels or doors are locked by other means.

The ultimate support of the chute is, or may be, the wall of the building, or a suitable structure erected in the building, which is indicated by the reference numeral 13, and to this support are secured plates 14 in any suitable manner as by means of the screws or bolts 15 passing through from the front side and entering said support 13. In the present embodiment these plates 14 are provided with undercut recesses 16 open at the top and adapted to receive headed projections 17 located on the rear side of brackets 18. Said brackets are provided at their ends with forwardly-projecting arms 19, and with the inwardly-extending beveled flange 20 extending around three sides of the bracket and across the front in the form of a bar 21, the inner side of which is correspondingly beveled, the lower edge of the

flange and bar extending inwardly beyond the inner walls of the upper end of the chute section below it to prevent the lodgment of mail matter thereon.

5 At the ends of the bracket 18 are provided movable catches or projection 22 passing inwardly through the bracket, and adapted to engage corresponding recesses formed in the reinforcing strips 7 at the
10 ends of the sections, said catches in the present instance being mounted upon the ends of spring arms 23, whereby they are automatically held in place, but may be disengaged when desired.

15 24 indicates a movable member in the form of a hollow cross bar or frame adapted to extend across between the forwardly-extending arms of the brackets and to be secured in position by a locking device operable only by a key, said member serving
20 not only to hold the chute sections in place on the bracket, but to lock the removable panels in position, and incidentally to secure the side locking rods 9 of one of the adjacent sections. In the present embodiment this
25 member 24 is hinged at one end, as indicated at 25, to the bracket, and its opposite or free end is provided with a movable locking bolt 26 adapted to be rotated to engage with a
30 recess 27 formed in a forwardly-projecting portion on the bracket, in this instance on the cross bar 21. This bolt 26 is capable of actuation only by means of a removable key
35 such as 28, the ward plates 29 arranged in the lock casing 30 serving to prevent the actuation of the bolt excepting by a key having the proper configuration. The member
40 24 is also provided with inwardly-extending flanges 31 which extend, when the bar is in position, over and below the bars 8 forming part of the frames of the movable panels, as shown in Fig. 9.

When the movable panels are secured in position by the locking bars 9, the upper
45 ends of the latter are brought below and are secured by the movable members 24 when in locked position, said member having a downward projection 19 extending forwardly of the upper end of said bar to prevent its being bent outwardly by maliciously disposed
50 persons.

While a number of the chute sections may be arranged at each floor of the building, I find in practice that as a rule it is only
55 necessary to employ two, and have, therefore, shown this number, which necessitates the employment of only three of the brackets and locking members, these being substantially the same, so that the description of one will answer for the other, but the base and
60 top sections are slightly different and the differences in the heights of various ceilings are usually compensated for by making the upper or ceiling sections of various or different lengths, so that the main sections em-

bodying the movable transparent panels for permitting access to the interior of the chute may be of a standard length. As the brackets forming the mediate supports for the chute sections are connected to the ultimate support 13 by the slot and pin connections
70 shown, which are disengaged by a vertical movement, it is necessary to prevent this vertical disengaging movement, which would enable the chute to be taken down, by a
75 member or part controlled by a key lock, which latter is operable by a key in the hands of an authorized person only.

In the present embodiment of the invention I secure the bracket nearest the ceiling, and which is indicated by 18', rigidly in
80 position after the chute is erected, by what may be termed a key-piece or movable abutment arranged between said bracket and a suitable stationary abutment, in the present instance the ceiling, or an equivalent stationary part, indicated by 50. In the preferred
85 form this key-piece is the top or cornice section 51 extending around three sides of the chute proper and covering the lower end 32 of the chute or conduit proper, which extends from the floor above. The lower end
90 of this cornice section is provided with a downwardly-extending flange 33 which is secured by screws or other fastenings 34 to the cross bar 21 of the upper bracket, and when
95 the member 24 cooperating with this bracket, is in position and locked, access to these screws 34 is prevented, so that the chute as a whole is secured in position by the key-piece or cornice section and the latter is secured
100 from unauthorized movement by the upper movable member 24.

The base 35 consists of a hollow ornamental casting resting upon the floor and secured to the support 13 at its rear side in
105 any suitable manner to prevent forward movement, as for instance by providing it with a cross bar 36 engaging in a suitable bracket or block 37 secured in position by fastenings which are covered by the base, the disengagement of the parts being accomplished by a vertical movement only. This
110 base is held in position against the floor by the lowermost locked member 24, which engages its upper side as shown in Fig. 4, and the tubular chute section 40 passing downwardly through the floor is provided with the reinforcing collar or band 41 at its
115 upper end, and is held up by the angular plate 42 secured in position to the cross bar 21 of the bracket by the screws or fastening devices 43, these screws being inaccessible, excepting when the movable member 24 is
120 unlocked and turned backward, as shown in Fig. 8.

The aperture for the introduction of mail matter is preferably located in the movable panel of the lower section of the chute, said
125 aperture being in the top of the mailing sec-

tion or frame 45; this not being essentially different from that shown in my prior patent No. 758,128, but if desired, may be of any suitable construction.

5 From the above description it will be readily seen that when the chute is in position with all the movable members 24 locked, there is no possibility of either removing the chute from its support, or of obtaining access to the interior, but when it is desired to
10 open the chute for the purpose of removing obstructions, or cleaning it, it is only necessary to insert and turn the key in two of the locked members at opposite ends of the panel
15 which it is desired to remove, to turn them back on their hinges; then to disengage the locking bar 9 and swing out the panel or movable portion, the channel or rear portion of the section being held in the bracket either
20 by friction, or by the movable pins 22. If it should be desired to remove a section for the purposes of repairs or otherwise, it may be readily accomplished by withdrawing the pins 22, while the members 24 are removed.
25 While in the present embodiment the brackets are movable on the ultimate support 13, the two sections of the chute and their brackets can not be moved vertically until the key or cornice section is disengaged from the
30 upper bracket, and this can only be accomplished by the removal of the upper member 24 and the screws.

In this construction, therefore, we have a chute which is secured to its ultimate support in such manner that it cannot be removed except by authorized persons, and the same locking means also serves to prevent access to the interior of the chute, or the removal of any part or panel which would
40 permit this access.

It will be understood that the movable panel or part of the chute is not necessarily the front as shown, as the invention comprehends broadly means controlled by a key lock
45 for not only securing the parts or members of the chute together, but to a support or backing upon which it is mounted.

In my pending application Serial No. 229,749, filed Oct. 24, 1904, I have claimed
50 broadly the locking bar for the chute sections or parts and in application Serial No. 276,515, a division of the former, a covering means for the chute section securing means.

I claim as my invention:

55 1. A mail chute composed of superposed separately removable sections, each having a hinged panel at the front, in combination with bars extending transversely of the chute at adjacent ends of the sections and over the
60 rods of the hinged panels and key locks for securing said bars in position.

2. A mail chute composed of superposed sections each having a movable panel for
65 permitting access to the interior of the chute, in combination with cross bars engaging the

adjacent ends of the sections and key locks for securing said cross bars in position.

3. A mail chute composed of superposed removable sections each having a movable panel for permitting access to the interior of
70 the chute in combination with cross bars engaging the adjacent ends of the panels and key locks for securing said cross bars in position.

4. A mail chute composed of superposed
75 sections each having a movable panel for permitting access to the interior of the chute, in combination with stationary brackets located at the adjacent ends of the sections, a removable cross bar extending over the ends
80 of the panels and a key-controlled lock for controlling the removal of said bar.

5. A mail chute composed of superposed removable sections each having a movable
85 panel for permitting access to the interior of the chute, in combination with stationary brackets located at the adjacent ends of the sections, a removable cross bar extending over the ends of the panels and a key-controlled lock for preventing the removal of
90 said bar.

6. A mail chute composed of superposed sections each having a movable panel for permitting access to the interior of the
95 chute, in combination with stationary brackets having arms engaging the sides of the chute sections adjacent their ends, a movable cross bar engaging the forwardly-extending arms of the bracket and a key-controlled lock for preventing the removal of
100 said bar.

7. A mail chute composed of superposed removable sections each having a movable panel for permitting access to the interior
105 of the chute, in combination with stationary brackets having arms engaging the sides of the chute sections adjacent their ends, a movable cross bar engaging the forwardly-extending arms of the bracket and a key-controlled lock for preventing the removal
110 of said bar.

8. A mail chute embodying superposed removable channels open at the front and movable panels for closing the front, in
115 combination with a stationary bracket having forwardly-extending arms engaging the sides of the channels, a cross bar engaging said arms and cooperating with the panels of adjacent sections and a key lock for preventing the removal of said cross bar.
120

9. The combination, with a support, of a mail chute embodying separately removable channels having movable panels and key-controlled locking devices for securing said
125 panels in position and also holding the channels to the support.

10. In a mail chute, the combination with a support, a plurality of superposed chute sections, a bracket on the support embracing the sides of the ends of adjacent sections
130

and a removable locking plate cooperating with the arms of said bracket.

11. In a mail chute the combination with a support and a bracket thereon, having the forwardly extending arms, of tubular chute sections having their proximate ends located between the bracket arms, a bar cooperating at its ends with the bracket arms and a key lock for securing said bar in position.

12. In a mail chute the combination with a support and a bracket thereon, having the forwardly extending arms, of tubular chute sections having their proximate ends located between the bracket arms, a locking bar extending between the arms, and a movable bolt mounted on the bar adapted to be actuated by a removable key.

13. In a mail chute the combination with the chute sections, of the support, the bracket thereon having the web thereon with which the ends of the section cooperate and the forwardly extending arms, the locking bar cooperating with the outer ends of the arms and a key lock for securing the bar in position.

14. In a mail chute the combination with the chute sections, of the support, the bracket thereon having the arms and the web on the rear portion and arms with which the ends of the sections cooperate, the movable locking bar cooperating with the ends of the arms and a key lock for securing the bar in position.

15. The combination with a support, plate secured thereto, a bracket on the plate preventing access to the plate securing devices, in combination with a mail chute embodying separable channels engaging the bracket, removable panels for the channels and key controlled means on the bracket cooperating with the ends of the panels on adjacent sections to hold them in engagement with the brackets.

16. The combination with a support, a plate secured thereto, and a bracket on the plate open at the front, of chute sections having their ends extending within the bracket and having the removable panels, a movable locking bar engaging the panels and a key lock for controlling the movement of said bar.

17. The combination with two mail chute channels having movable panels, of a bracket embracing the rear and sides of said channels, a removable bar engaging the front arms of the bracket and extending over the ends of the panels of adjacent sections and key controlled locking means for preventing the removal of said bar.

18. The combination with a bracket having the forwardly extending arms, of mail chute sections embodying rear channels and removable panels at the front, the ends of said sections being arranged between the arms of the brackets, a removable bar en-

gaging the ends of the brackets and key controlled locking devices for preventing its removal.

19. The combination with a plate having the vertical recesses, the bracket having the studs entering said recesses, the arms at the sides, the interior beveled web, the front cross bar, and the catches at the sides of the chute sections having their ends extended between the arms and engaged by the catches and having the movable panels at the front with bars at the ends, and the removable hollow cross bar extending over the bars on the panels and on the bracket and means for securing said hollow bar in position.

20. The combination with the bracket, having the arms at the sides, the web extending on said arms and a bar at the front, of the chute sections having the panels hinged at one side and a cross bar hinged to one of the arms on the same side as the hinges of the panels and a key lock for securing the free end of said bar to the other arm of the bracket.

21. The combination with a support, of a mail chute having a removable portion or panel to permit access to the interior thereof, means for securing the chute to the support and a movable member for preventing access to the securing means and also securing the removable portion or panel of the chute in position and a key lock for securing said member in position.

22. The combination with a support, of a mail chute embodying a plurality of superposed sections, mounted on the support and readily detachable therefrom by a movement in one direction, a key piece operating when in position to prevent the detaching movement of the sections and a key lock for controlling the movement of said key piece.

23. The combination with a support, of a mail chute mounted on the support and readily detachable therefrom by a movement in one direction, a key piece operating when in position to prevent the detaching movement of the section and a key lock for controlling the movement of said key piece.

24. The combination with a support, of a mail chute mounted on the support and readily detachable therefrom by a movement in one direction, a movable portion or panel for permitting access to the interior of the chute, a key piece operating when in position to prevent the detaching movement of the section, a movable member and a key lock for controlling it, said member operating to control the operation of the key piece and of the movable panel or portion.

25. The combination with a support, the brackets thereon having the arms, the movable cross bar and a key lock for securing it in position on the arms, of two adjacent mail chute sections having movable portions

- or panels having their proximate ends extending between the arms of the bracket.
26. The combination with a support, the bracket having the arms, the movable cross bar and a key lock for securing it in position on the arms, of chute sections having the movable portions or panels and arranged with their ends between the arms of the bracket.
27. The combination with a support, the bracket having the arms, the movable cross bar and a key lock for securing it in position on the arms, of chute sections embodying the channels and movable portions or panels and arranged with their ends between the arms of the bracket and means for detachably holding the channels to the brackets, thus permitting the panels to be moved independently of the channels when the cross bar is removed.
28. The combination with a support, a bracket thereon having the internal rib or flange at the sides and rear and the bar at the front, of mail chute sections extending into the bracket from above and below, a movable cross bar at the front of the bracket adapted to engage and hold the sections in position and a key lock for securing said bar.
29. The combination with a support, a plurality of vertically movable brackets thereon, of a plurality of mail chute sections engaging at their ends in the brackets, means for preventing the vertical movements of one of the brackets and a key lock for controlling the operation of said preventing means.
30. The combination with a support, a mail chute and connections between it and the support detachable by a vertical movement of the chute, of a stationary abutment for holding the chute and a movable abutment between it and the chute for preventing movement of the latter and a key lock for controlling the operation of said movable abutment.
31. The combination with a support, a bracket thereon having the arms, of a mail chute arranged between the bracket arms, the cross bar hinged to one arm and a key lock for securing the cross bar to the other arm.
32. The combination with a support, a bracket thereon having the arms, of a mail chute arranged between the bracket arms, the cross bar hinged to one arm and a key lock located at its free end adapted to engage the other arm of the bracket.
33. The combination with a support, of a mail chute secured thereto by detachable fastenings, a cornice section engaging the chute to secure it in position, a movable member for preventing the movement of the cornice section and a key lock for controlling it.
34. A mail chute having two movable panels or portions for permitting access to the interior thereof, in combination with devices for securing each of said panels in position, and a single key lock for controlling the movement of both of said panels.
35. A mail chute having a movable portion or panel for permitting access to the interior thereof, in combination with a plurality of securing devices for said portion connected for simultaneous operation, a hinged member adapted when in one position to engage and prevent the disengagement of said securing devices and a key lock for securing said member in position.
36. A mail chute having two movable panels or portions for permitting access to the interior thereof, in combination with longitudinally movable locking bars, one for each panel, a movable member adapted to be moved into contact with the adjacent ends of the panels and a key locking device for securing said member in position.
37. The combination with a support, of a mail chute embodying two separately removable channels open at one side, movable panels for closing the open sides of the channels, locking devices on the channels for securing the panels in position, a movable member arranged at the adjacent ends of the channels and preventing when in one position, the unlocking movement of one of the locking devices and the removal of the channels and a key lock for securing said member.
38. The combination with a support, a mail chute embodying separable parts to permit access to the interior, of a locking device operable by a key for securing the parts together and to the support.
39. The combination with a support, a mail chute embodying a separable front and back and a locking device operable by a key for securing said parts together and to the support.
40. The combination with a support, a mail chute embodying the separable front and back portions, of a movable member for securing said front and back together and to the support and a key lock on said member for securing it in position.
41. The combination with a support, a mail chute section composed of a rear portion and a front portion separable to permit access to the interior of means for securing said parts together and to the support and locking devices operable by a key for securing said means in position.
42. In a mail chute an inclosing hand having sides and a back adapted to be fixed to the support of said chute, a front member hinged at one side and a locking device at the opposite side.
43. A mail chute having a movable portion or panel for permitting access to the interior thereof, in combination with secur-

ing devices for said portion, a bar hinged at one side of the chute and adapted to extend over the panel and arranged when in one position to engage and prevent the operation of said securing devices and a key lock for securing said bar in position to fasten the parts.

44. A mail chute having two movable portions or panels for permitting access to the interior thereof, in combination with securing devices for said portions, a bar hinged

at one side of the chute and adapted to extend over and engage the adjacent ends of the two portions and also engaging and preventing the operation of the securing device, and a key lock for preventing the unauthorized movement of said bar.

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