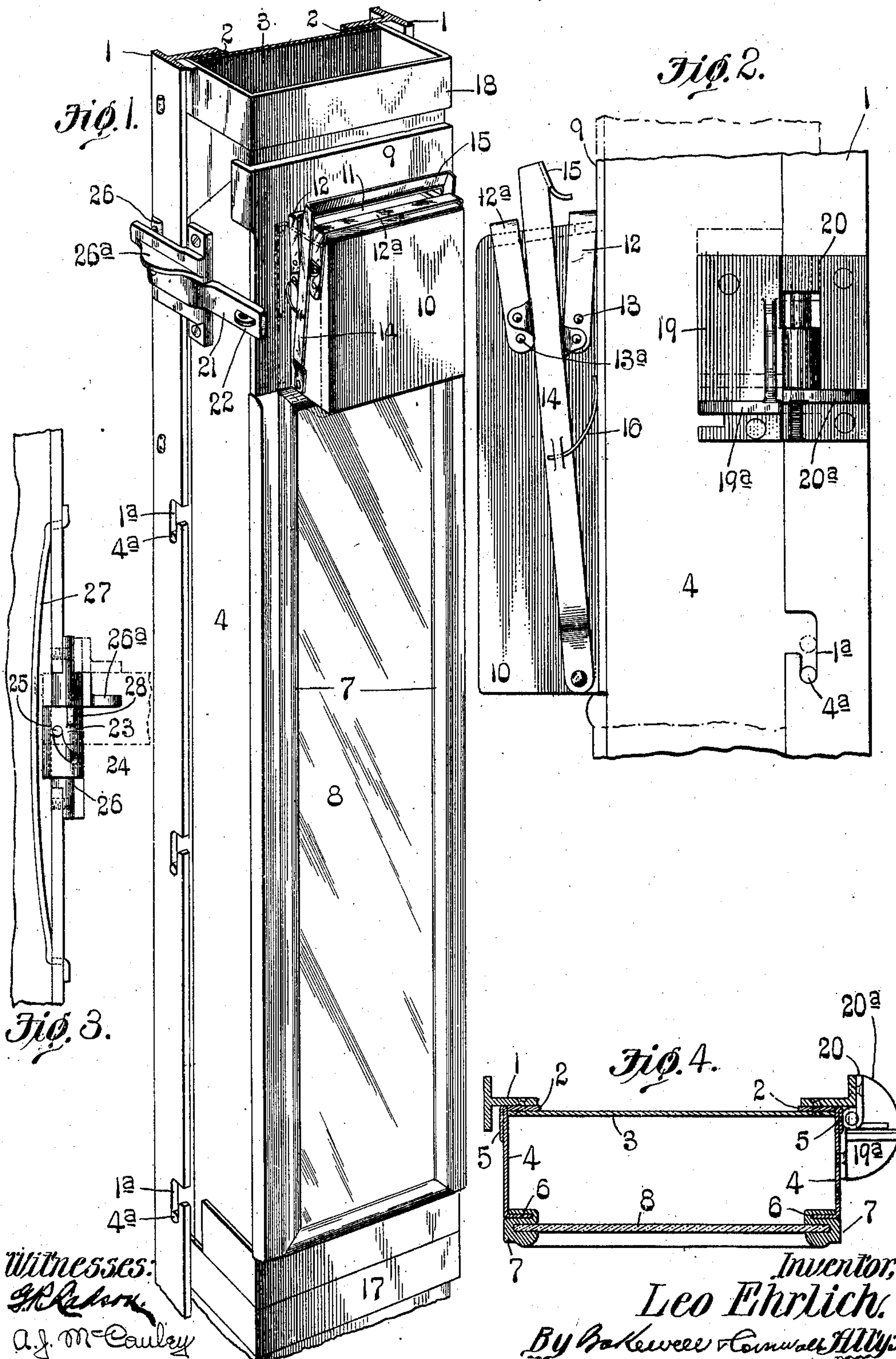


MAIL CHUTE:

Patented July 5, 1910.

**963,534.**





# UNITED STATES PATENT OFFICE.

LEO EHRLICH, OF ST. LOUIS, MISSOURI, ASSIGNOR TO UNITED STATES MAIL CHUTE EQUIPMENT COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

## MAIL-CHUTE.

963,534.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed August 10, 1907. Serial No. 388,007.

*To all whom it may concern:*

Be it known that I, LEO EHRLICH, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Mail-Chutes, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a detail view of a portion of my improved mail chute; Fig. 2 is a side elevational view of a portion of said chute; Fig. 3 is a detail view illustrating the locking hasp and its connections; and Fig. 4 is a horizontal sectional view.

This invention relates to a new and useful improvement in mail chutes, the object being to so construct the chute that access may be gained to the interior for purposes of repair or of releasing mail matter in the event that the same is caught in the chute, tending to choke up the opening therein.

Another object is to provide means for preventing bulky packages or mail matter of large size from being introduced into the mail-receiving aperture.

With these objects in view, the invention consists in the construction, arrangement and combination of the several parts of my device, all as herein described and afterward pointed out in the claims.

In the drawings, 1 indicates uprights in the form of rolled T-shaped bars arranged with their middle legs presented inwardly. To these middle legs or webs are secured spacing strips 2 which, with the back plate 3, provide shoulders to form what is known as a rabbeted joint.

4 are the side walls of the movable part of the mail chute, which side walls have their rear edges folded as at 5 for strengthening purposes. The forward edges of these walls 4 are flanged inwardly as at 6 so as to be received in frame castings 7, which frame castings also provide a mount for the glass front 8.

9 is a plate constituting part of the front wall, which plate is secured in position on the side walls 4, said plate having a forward housing extension 10 in the upper wall of which is an opening 11 constituting the mail-

receiving aperture. On each side of this mail-receiving aperture are two bails 12 and 12<sup>a</sup> pivotally mounted on the housing 10 at 13 and 13<sup>a</sup> respectively. Connected to these bails below and above their pivotal points of connection to the housing respectively are lever arms 14 whose cross piece 15 forms practically a back guiding wall for the mail-receiving aperture. A spring 16 tends to hold the arms 14 and the cross piece 15 in a forward or upward position.

In the event that mail matter of ordinary size is introduced into the opening 11 it is obvious that the cross piece 15 need not be moved. In the event, however, that bulky packages are sought to be introduced into the mail-receiving aperture the cross piece 15 will be moved back toward the chute and such movement will cause the bails 12 and 12<sup>a</sup> to approach each other and close the mail-receiving aperture 11, or so reduce it that it is impossible to introduce a bulky package therein.

I do not claim the above mailing aperture closing in this application, as the same forms the subject matter of a divisional application filed by me February 2d, 1909, Serial No. 475,683.

If desired, a side wall constituting a housing for the parts mounted on the side of the casing 10 may be employed as indicated by dotted lines in Fig. 1.

Mail chutes are designed for conducting mail to a receptacle located in one of the lower floors of a building, and on each floor above said receptacle there are so-called sections of the mail chute. Opposite the floors and ceiling the chute is composed of what is known as thimbles, marked 17 in the drawings, which thimbles form continuations of the chute and are secured to the back supports in some suitable manner. If desired the portion of the chute section which extends downwardly from the ceiling may be permanently fastened in position, in which event a thimble 18 may be employed at its lower end, which thimble 18 is similar to the thimble 17. By the use of the thimble 18 midway the length of the complete floor section it is obvious that the lower portion of the floor section below the thimble 18 can be moved for the purpose of gaining access to the interior of the chute, or the thimble



18 may be omitted and the thimble 17 at the upper end of the floor section may be used, in which event the entire floor section can be moved to give access to the interior of the chute.

In the drawings I have shown the movable section of the chute as having one of its side walls hinged to one of the supports 1, the form of hinge being clearly shown in Fig. 2, and being what is known as a sliding hinge, that is, the pintle member and the eye member are displaceable with respect to each other in the direction of the axis of the pintle.

19 indicates the eye member of the hinge, which in this instance is shown secured to the chute section, and 20 indicates the pintle member of the hinge which in this instance is shown as secured to one of the T bars 1.

These hinge members are provided respectively with quadrant-like projections 19<sup>a</sup> and 20<sup>a</sup> respectively, forming tracks. When the parts are in the position shown in Fig. 2 it will be seen that these track sections are substantially opposite each other, and that it is impossible to open the movable chute section. As soon, however, as the chute section is raised in its bearings and the bayonet connections hereinafter described are free, the track member 19<sup>a</sup> will be above the track member 20<sup>a</sup>, in which event the chute section may be swung to one side, giving access to the interior thereof.

The forwardly projecting flanges of the T bars are provided with L-shaped notches 1<sup>a</sup>, see Figs. 1 and 2, with which coöperate pins 4<sup>a</sup> on the inner edges of the side walls 4. When the chute is closed these notches 1<sup>a</sup> and pins 4<sup>a</sup> constitute what is commonly known as a bayonet lock joint, and to open the chute section it is only necessary to lift the movable section of the chute and move it laterally, as before described, when the bayonet lock joint will be released and the chute supported by the track sections 19<sup>a</sup> and 20<sup>a</sup>.

The means for locking the chute section home is illustrated in Figs. 1 and 2, wherein it will be seen that 21 is a hasp having an opening in its forward end coöperating with a staple 22 extending from the movable section preferably from plate 9. A suitable lock may be used in connection with this staple 22. Hasp 21 is formed with a hub portion 23 in which is formed a spiral cam groove 24 coöperating with a pin 25. This pin 25 extends from a rod 26 riveted to the rearwardly extending flanges of one of the T-bars 1. From the above it will be observed that whenever the hasp 21 is swung on the post or bar 23 the hasp will rise by reason of the cam slot and pin connections with said post, and that when said hasp is moved to locking position said hasp will in such movement also move to a lower horizontal plane.

The movable section of the chute is provided with an extension 26<sup>a</sup>, see Fig. 1, which extension lies over the hasp 21 and its hub portion 23, the extension immediately above the hub portion being bulged as shown for the following purpose. As the hasp 21 is swung back its hub will engage the extension 26<sup>a</sup> and bodily lift the movable chute section until the bayonet locking joints are free from locking engagement and the track 19<sup>a</sup> is in a horizontal plane above the track 20<sup>a</sup>. When the movable chute section is thus lifted it can be swung outwardly and to one side, giving access to the interior of the chute. When the chute section is moved home the hasp 21 is of course swung back and the extension 26<sup>a</sup> will ride on the hasp before the track 19<sup>a</sup> leaves its companion track 20<sup>a</sup>. When the tracks are out of engaging connection, the bayonet locking joints are in readiness to lock the chute section home, and when the hasp 21 is swung forwardly to its locking position the pin 4<sup>a</sup> will engage the L-shaped notches 1<sup>a</sup>, and the chute section will be locked against swinging motion. It is only necessary now to introduce a padlock into the staple 22.

A wire spring 27 is preferably mounted in one flange of the T-bar 1 so as to coöperate with a lug 28 on the hub portion 23 when the hasp is swung back to its unlocking position. When the hasp is swung back the lug 28 passes behind spring 27 and said hasp is thereby held in its raised position so that it will coöperate with the extension 26<sup>a</sup> when the moved chute section is restored to its home position. After the moved chute section has been closed the operator forces the lug 28 from behind the spring by turning the hasp to its locking position.

I am aware that minor changes in the construction, arrangement and combination of the several parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A support for a mail chute, comprising two bars each having legs, and a back plate secured to said legs; substantially as described.
2. A mail chute support comprising two parallel T-bars, and a back plate secured to the inwardly projecting webs of said T-bars; substantially as described.
3. A mail chute support comprising parallel flanged bars, spacing strips secured to said bars, and a back plate also secured to said bars, the edges of said back plate and said spacing strips coinciding; substantially as described.
4. A mail chute comprising a back plate,



side walls having a flanged forward edge and a folded rear edge, and a front wall; substantially as described.

5. In a mail chute, a back plate, side walls having folded rear edges and inwardly bent front edges, a cast metal frame provided with grooves for the reception of the inwardly bent front edges of the side walls and a glass panel fitted in the cast frame and forming the front wall of the chute, substantially as specified.

6. A mail chute comprising a support and a chute section having a sliding hinged connection with said support; substantially as described.

7. A mail chute comprising, in combination, a support, a swinging chute section, a sliding hinged connection between said parts, and track projections adjacent said sliding hinged connection; substantially as described.

8. A mail chute comprising, in combination, a support, a swinging chute section, hinge elements on said parts, and track projections on said hinge elements; substantially as described.

9. A mail chute comprising, in combination, a support, a swinging chute section, hinge elements on said parts, said hinge elements being capable of longitudinal displacement relative to each other, and track sections on said hinge elements, which track sections in one position of the hinge elements are substantially opposite each other, and in another position of the hinge elements are in different horizontal planes; substantially as described.

10. A mail chute comprising, in combination, a support, a swinging chute section, hinge elements on said parts, and quadrant-shaped track elements on said hinge elements, said hinge elements being capable of longitudinal movement with relation to each other; substantially as described.

11. In a mail chute comprising, in combination, a support, a swinging chute section mounted on said support and capable of vertical movement with respect thereto, and bayonet locking joints between said swinging chute section and its support; substantially as described.

12. A mail chute comprising, in combination, a support, a swinging chute section having vertical movement relative to said support, bayonet locking joints between said parts, and means for holding the swinging chute section in unlocking position relative to said bayonet joints when in other than a home position; substantially as described.

13. A mail chute comprising, in combination, a support, a swinging chute section capable of vertical displacement relative to

said support, bayonet locking joints between said parts, and a hinge comprising displaceable members, said hinge being provided with track projections for holding the chute section in a vertically displaced position when in other than a home position; substantially as described.

14. A mail chute comprising, in combination, a support having forwardly extending flanges, a chute section hinged at one side to said support, said chute section being displaceable vertically with respect to said support, and bayonet locking joints between the side walls of said hinge section, and the forwardly extending flanges of said support; substantially as described.

15. A mail chute comprising, in combination, a support, a swinging chute section, a swinging hasp, means for causing said hasp to move vertically in its opening and closing movements, and means on said swinging chute section for engaging said hasp; substantially as described.

16. A mail chute comprising, in combination, a support, a swinging chute section, a horizontally swinging hasp mounted on said support, means for causing said hasp to move vertically in its opening and closing horizontal movement, and means on said swinging chute section whereby said chute section is lifted or permitted to drop from the movements of said hasp; substantially as described.

17. A mail chute comprising, in combination, a support, a swinging chute section, a hasp having a cam slot and pin connection with said support, whereby when said hasp is swung horizontally it has a vertical movement also imparted to it, and an extension on said swinging chute section for engaging said hasp whereby said swinging chute section partakes of said vertical movement; substantially as described.

18. A mail chute comprising, in combination, a support, a swinging chute section capable of vertical movement with relation to said support, bayonet locking joints between said parts, a sliding hinge connection between said parts, hinge members provided with track extensions, a hasp, and a connection between said hasp and said swinging chute section, whereby the vertical movement of said hasp is imparted to said swinging chute section; substantially as described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this sixth day of August 1907.

LEO EHRLICH.

Witnesses:

F. R. CORNWALL,  
LENORE WILSON.