L. EHRLICH.

MAIL CHUTE.

APPLICATION FILED AUG. 10, 1907.

985,985.

Patented Mar. 7, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

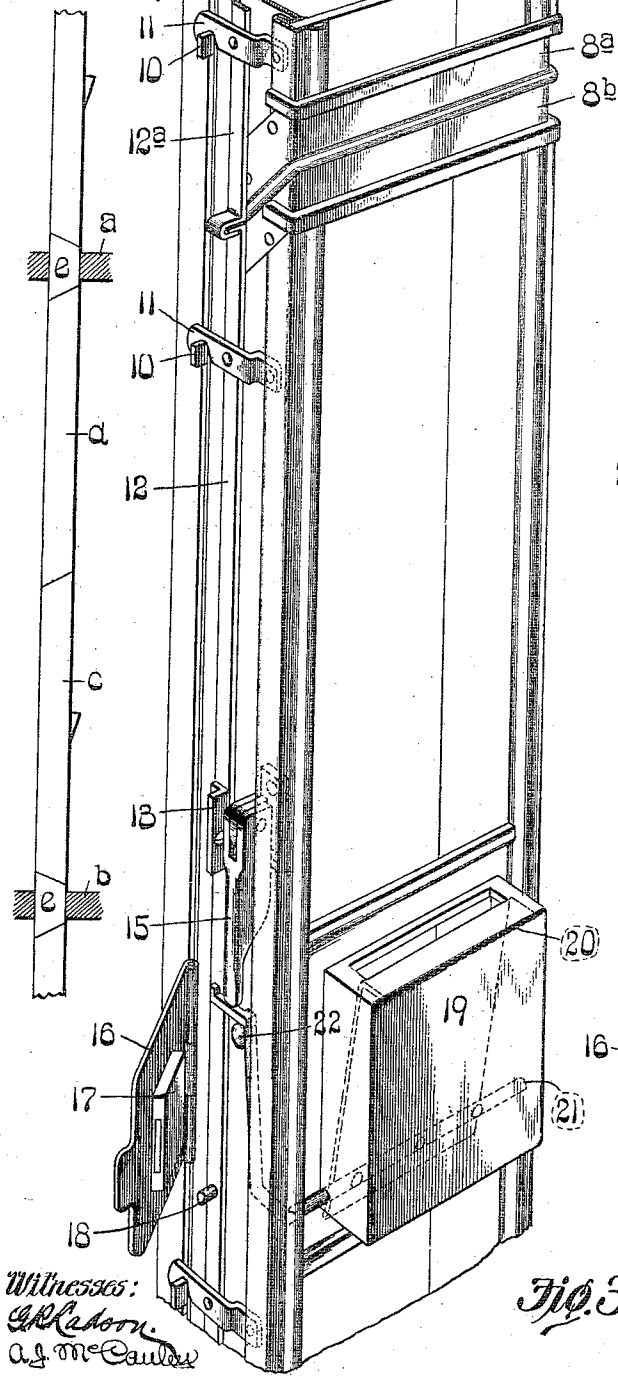

Fig. 1a.

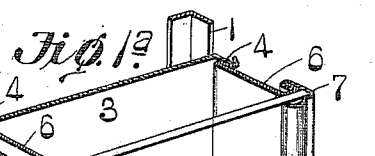

Fig. 2.

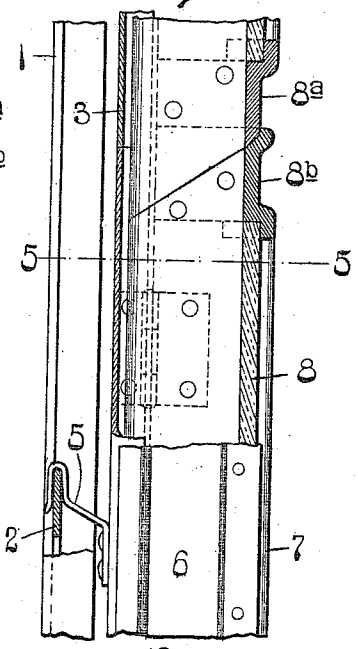

Fig. 4.

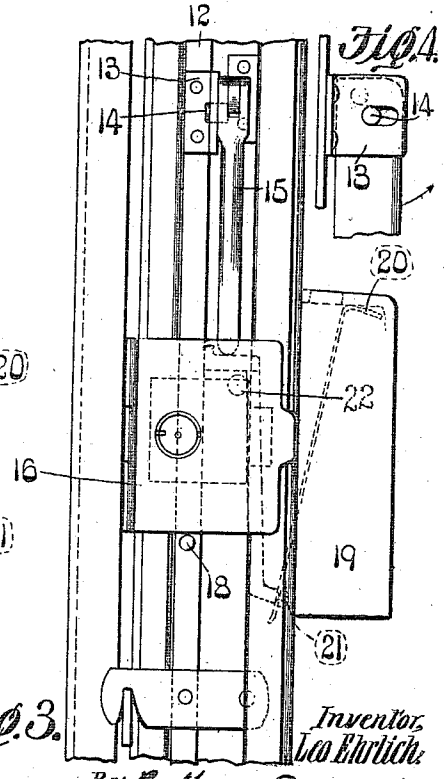

Fig. 3.

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2 SHEETS—SHEET 2.

Fig. 5.

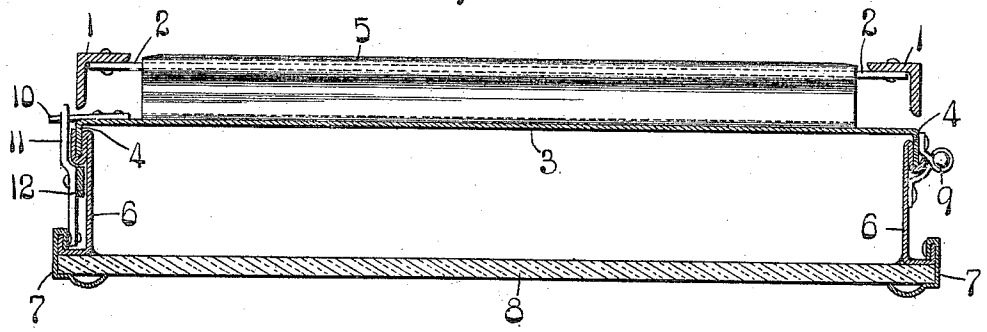


Fig. 7.

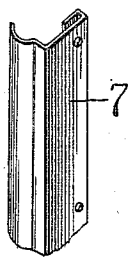
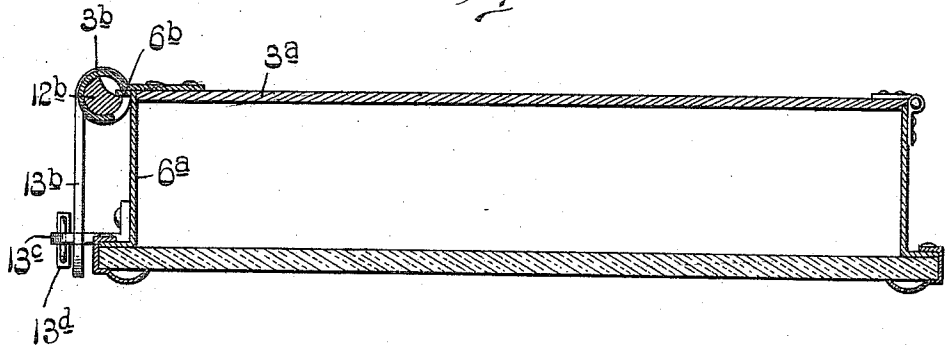


Fig. 6.



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UNITED STATES PATENT OFFICE.

LEO EHRLICH, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY MESNE ASSIGNMENTS, TO CUTLER MAIL CHUTE COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

MAIL-CHUTE.

985,985. Specification of Letters Patent. Patented Mar. 7, 1911.

Application filed August 10, 1907. Serial No. 388,008.

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 diagrammatic view illustrating my improved mail chute; Fig. 1[a] is a detail view showing a portion of my improved mail chute; Fig. 2 is a side elevational view, partly in vertical section, through the same; Fig. 3 is a side elevational view illustrating another portion of the chute; Fig. 4 is a detail view of the locking hasp and its connections; Fig. 5 is a cross sectional view on the line 5—5 of Fig. 2; Fig. 6 is a cross sectional view showing a modified form of locking mechanism; and Fig. 7 is a detail view of the glass panel supporting frame.

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 the purpose of repair or to relieve congestion resulting from the lodgment of mail matter in the chute.

Another object is to provide means to close the letter-receiving aperture in the event it is desired to prevent the introduction of mail matter into the chute.

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

In the drawings, 1 indicates angle bars to which are secured, by means of suitable rivets or other fastening devices, spacing bars 2.

3 is the back plate of the chute having forwardly extending marginal flanges 4, as shown in Fig. 5.

5 is a hooked extension secured to the back plate 3 and designed to coöperate with one of the spacing bars 2 so as to hold the back plate in position on its support. In this manner the entire chute section may be swung on the spacing bars 2, and if for any reason it is desired to remove the chute section the same may be lifted from its supports.

6 indicates the side walls of the chute, which side walls are formed with folded rear edges, the extremities of said folded portion being bent rearwardly so as to provide seats to receive the marginal flanges 4 of the back plate. The forward edges of these flanges are bent outwardly and backwardly, the backwardly extending flanges being received in and riveted to the bent portion of a frame 7, which frame supports the front glass panel 8 in position.

8[a] and 8[b] are castings arranged at the lower and upper edges respectively of the chute sections, the upper casting 8[a] having a beveled front edge and an inclined side edge so as to coöperate with appropriate seats formed in the casting 8[b] of the next adjacent lower chute. In this manner it is possible to swing the chute section on a hinge of common construction.

In Fig. 1, I have illustrated diagrammatically my improved chute section in which *a* and *b* represent the floors of the building and *c* a swinging chute section having castings 8[b] at its ends beveled in opposite directions. In this manner it is possible to swing the second *c* outwardly without disturbing the upper section *d* which constitutes the beveled portion of the chute section for a floor. Thus the section *c* may be termed a locking section in that when it is home it locks the section *d* in position. After the section *c* is open, however, it is possible to swing the section *d* to an open position, the upper end of section *d* having a beveled casting similar to 8[b], the lower end of section *d* having a beveled casting similar to 8[a]. The joint section *e* opposite the floors of the building is preferably provided with castings at its extremities beveled in opposite directions, which castings correspond to the castings 8[a].

9 indicates a hinge, one member of which is secured to the back plate, and the other member of which is secured to the swinging

chutes section composed of the side and front walls above described. This hinge may be of any well-known construction.

10 are projections extending laterally from the back plate 3, which projections coöperate with hooks or retaining devices 11 pivotally mounted upon the rearwardly extending flange of one of the side walls 6, as shown in Fig. 5. These hooks 11 are connected together by a vertically movable rod 12. One rod may extend throughout the length of a chute section, a chute section being usually that portion of the chute extending between floor and ceiling. Said rod carries a slotted projection 13, see Figs. 1[a] and 4, which coöperates with an eccentrically placed pin 14 carried by a hasp lever 15. When this hasp lever 15 is raised from the position shown in Fig. 1 it is obvious that all of the hooks 11 will likewise be raised and released from the projections 10, thus enabling the chute section composed of the side and front walls to be swung outwardly upon its hinges.

In the event that it is desired not to swing the entire chute outwardly, the rod 12 may be made in two parts as illustrated in Fig. 1[a], one of said parts being bent around the laterally extending portion of the other part, whereby after said rod has been manipulated the lower section may be swung outwardly, leaving the upper section closed. Of course, if it is desired to swing the upper section outwardly, the rod 12[a] may be lifted so as to release the hook levers 11.

16 is a plate hinged to the back plate 3 and carrying a lock 17, the bolt of which lock being designed to be thrown behind the rearwardly extending flange on the forward edge of the side plate. When lever 15 is down, the plate 16 covers the end thereof and prevents the operation of said lever, and also coöperates with a pin 18 on the bar 12, whereby when said plate 16 is locked in its closed position the lever 15 cannot be operated nor can the bar 12 be moved vertically.

19 is a housing whose upper wall contains a mail-receiving-aperture, and 20 is a closure for said aperture, said closure being mounted on a rock shaft 21 as shown in Fig. 1. The end of rock shaft 21 is bent in the form of a crank whose end coöperates with a projection in the form of a rivet head 22 arranged in the side wall of the chute so that the crank end of the rock shaft 21 may be swung on one side or the other of said rivet head for the purpose of holding the closure for the mail-receiving aperture in open or closed position, as the case may be. When the plate 16 is closed, of course it is impossible to operate the crank end of the rock shaft 21 and spring it over the projection 22, and thus if the plate 20 is open or closed it cannot be moved until the plate 16 is opened.

In Fig. 6 I have shown a modified form of locking mechanism for the hinged portion of the chute, in which the side wall 6[a] at the free edge of the swinging chute section is provided with a laterally extending flange 6[b]. The back plate 3[a] is provided with a circular bearing 3[b] in which is mounted a rocking post 12[b] having a handled hasp 13[b] coöperating with a staple 13[c] on the forward edge of the swinging chute section. A padlock 13[d] may be used to lock the handled hasp in its closed position. When the hasp 13[b] is swung laterally the post 12[b] will release the flange 6[b] and permit the swinging chute section to be opened. When the swinging chute section is home and the handled hasp moved to locking position it will be observed that said chute section is firmly locked in position.

By referring to Figs. 5 and 7 it will be observed that the glass panel supporting frame 7 is riveted to the rearwardly extending flange at the upper edge of the side walls and extends forwardly and is then bent inwardly over the glass frame. In this manner the frame strip 7 is yieldable laterally, and the free edge of its overhanging portion is also yieldable in a forward direction.

I do not, in this application, claim the closure for the mail-receiving aperture, as the same forms the subject matter of a divisional application filed by me February 2d, 1909, Serial No. 475,684.

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

1. A mail chute comprising in combination, a support, a series of chute sections arranged in front of said support, each chute section comprising a back plate, hooks on said back plate for engaging the support, a swinging front portion hinged to the back plate, lateral projections on the back plate of each section and hooks pivotally mounted on the hinged portions of each section which hooks engage the lateral projections.

2. A mail chute comprising in combination, a support, a series of chute sections arranged in front of said support, each chute section comprising a back plate, hooks on said back plate for engaging the support, a swinging front portion hinged to the back plate, lateral projections on the back plate of each section, hooks pivotally mounted on the hinged portions of each section which hooks engage the lateral projections, and means whereby all of the hooks on each side of each chute section are simultaneously actuated.

3. In a mail chute, the combination with a rigidly held vertically disposed support comprising parallel bars and transverse spacing bars, of a sectional chute positioned immediately adjacent the support and hooks on the individual chute sections for engaging the

spacing bars of the support to maintain said chute sections in vertical alinement.

4. A mail chute comprising, in combination, two parallel angle bars, connected spacing bars, and a chute section comprising a back plate, a portion of said back plate being hinged to said chute section, and hooked connections between said back plate and the spacing bars of said support; substantially as described.

5. In a mail chute, a back plate the side edges of which are bent to form forwardly extending flanges, side walls having folded and re-folded rear edges to form grooves which receive the forwardly bent side edges of the back plate, molding strips engaging the front portions of the side walls and a transparent front wall the side edges of which are rigidly supported between the molding strips and the front portions of the side walls.

6. In a mail chute, a chute section comprising a back plate, a hook thereon for engaging a rigid support, the side portions of which back plate are bent to form forwardly projecting flanges, side walls the rear portions of which are bent to form grooves which receive the forwardly projecting flanges of the back plate and a transparent front wall rigidly supported between the front portions of the side walls.

7. A mail chute comprising, in combination, side walls whose forward edges are bent outwardly and then rearwardly, a front glass panel, and a frame plate secured to the rearward extensions of said side walls and engaging said glass panel; substantially as described.

8. A mail chute comprising, in combination a support, a swinging chute section divided into several parts, each of which is capable of being swung outwardly, and a separable locking device for said parts, which locking device is connected when said parts are in home position; substantially as described.

9. A mail chute comprising, in combination, a plurality of contiguous swinging sections, connected means for locking said sections home, and means for disconnecting said locking means whereby one of said sections may be swung independently of the adjacent section; substantially as described.

10. A mail chute comprising, in combination, a support, a back plate, locking projections extending from said back plate, a swinging chute section, hooked levers mounted on said swinging chute section, a rod or bar connecting said levers, and means for operating said rod or bar; substantially as described.

11. A mail chute comprising, in combination, a support, a back plate, locking projections extending from said back plate, a swinging chute section, hooked levers mounted on said swinging chute section, a rod or bar connecting said levers, said rod or bar being composed of a plurality of sections capable of being disconnected from each other, and means for operating one of said sections; substantially as described.

12. A mail chute comprising, in combination, a support, a swinging chute section, locking devices for said swinging chute section, a vertically movable rod for operating said locking devices, a lever for operating said rod, and a swinging lock plate coöperating with said lever to lock the same home; substantially as described.

13. A mail chute comprising, in combination, a support, a swinging chute section, locking devices for said swinging chute section, a vertically movable rod for operating said locking devices, a lever for operating said rod, and a swinging lock plate coöperating with said lever and with said rod to lock the said parts home; substantially as described.

14. A mail chute comprising in combination two parallel angle bars, spacing bars connecting said angle bars a sectional chute and hooks on the back plates of the sections of the chute which hooks engage the spacing bars.

15. A mail chute comprising in combination a rigid support, a sectional chute arranged adjacent the support, each section of the chute being formed in two parts one of which is hinged to the other, hooks on the back plate of each section which hooks engage the rigid support to the hinged front portion of each chute section having inclined ends to coöperate with the inclined ends of the adjacent sections.

16. In a mail chute a chute section comprising a back plate, hooks thereon for attachment to a rigid support, a front portion hinged to the back plate and the ends of the side walls of which hinged front portion are inclined.

17. In a mail chute a chute section comprising a back plate, hooks thereon for attachment to a rigid support, a front portion hinged to the back plate, the ends of the side walls of which hinged front portion are inclined and means whereby the hinged front portion is locked to the back plate.

18. In a mail chute, a chute section comprising a back plate, hooks thereon for attachment to a rigid support, a front portion hinged to the back plate, a transparent front wall for the front portion, means whereby said front portion is locked to the back plate and the ends of the side walls of said front portion being inclined to coöperate with the inclined ends of the side walls of the adjacent chute sections.

19. A mail chute comprising in combination, a rigid support, a sectional chute arranged adjacent the support, each section of

which chute comprises a back plate and a hinged front portion, hooks on the back plates for attachment to the support, the engaging ends of the chute sections being inclined, and means whereby the hinged portion of each chute section is locked to the back plate substantially as described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 6th day of August, 1907.

LEO EHRLICH.

Witnesses:
F. R. CORNWALL,
LENORE WILSON.