L. EHRLICH.

MAIL CHUTE.

APPLICATION FILED OCT. 15, 1906.

988,961.

Patented Apr. 4, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

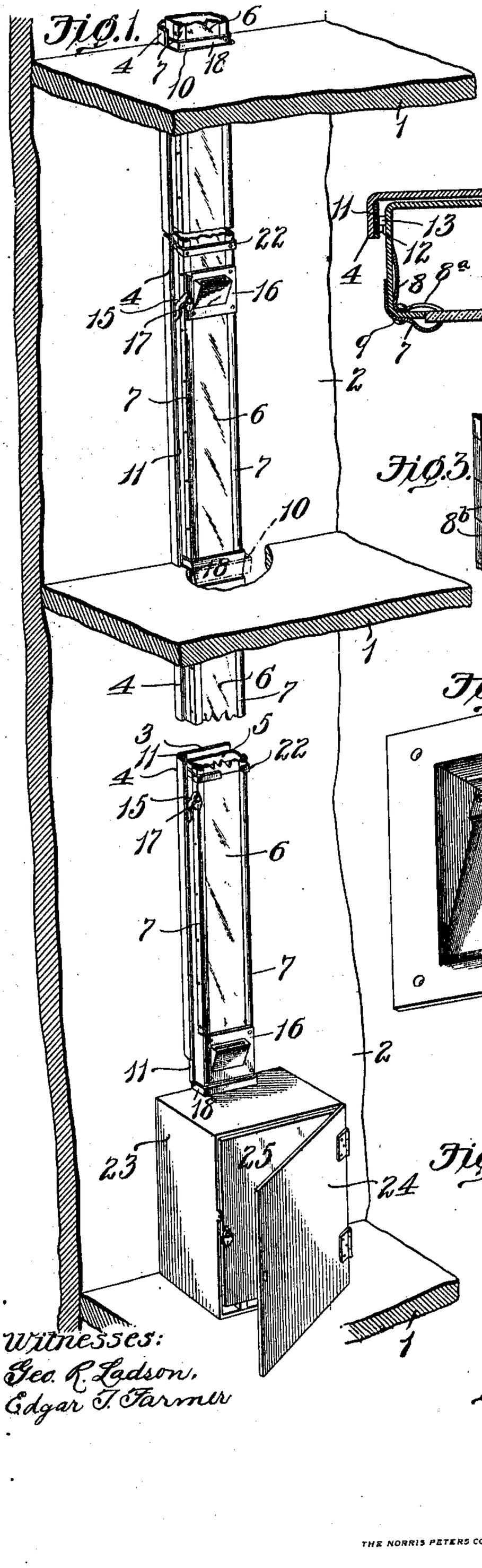

Fig. 2.

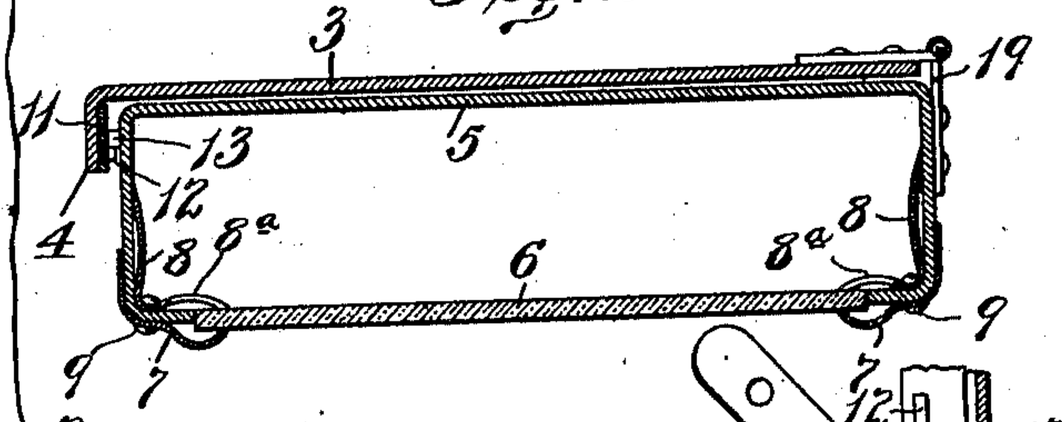

Fig. 3.

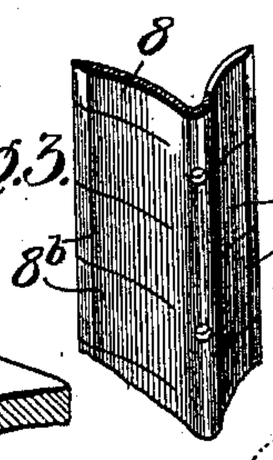

Fig. 4.

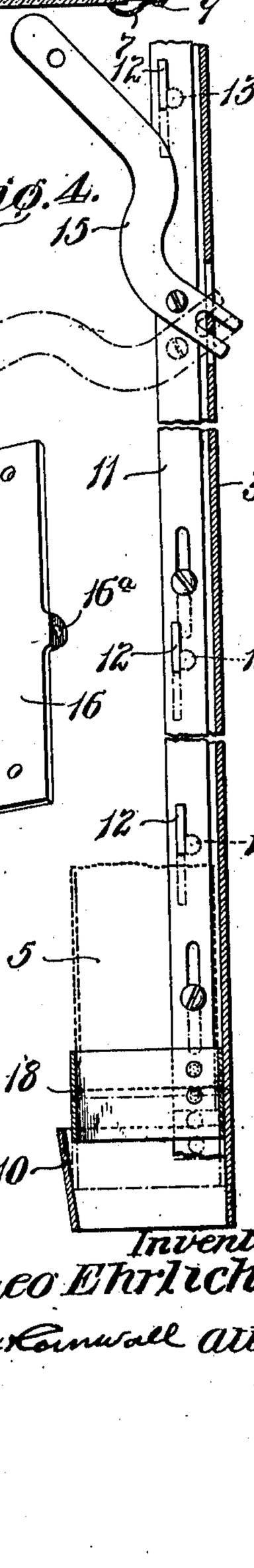

Fig. 5.

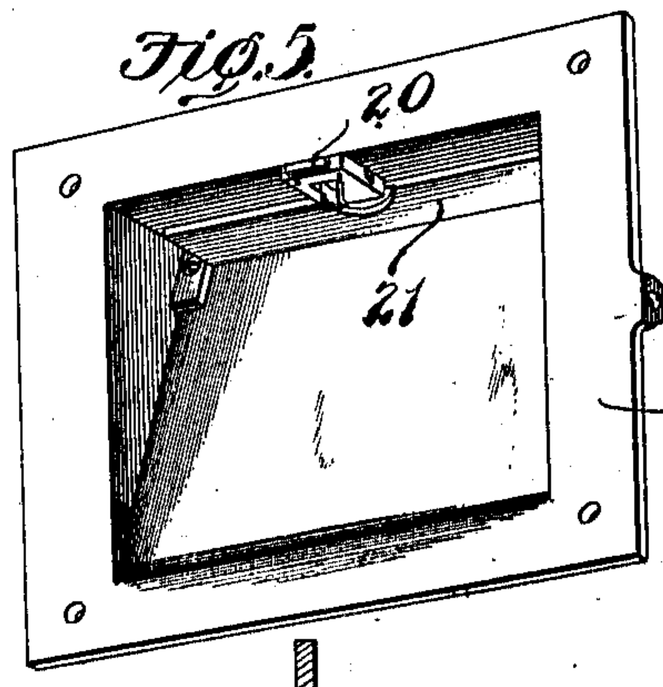

Fig. 6.

Witnesses:
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2 SHEETS—SHEET 2.

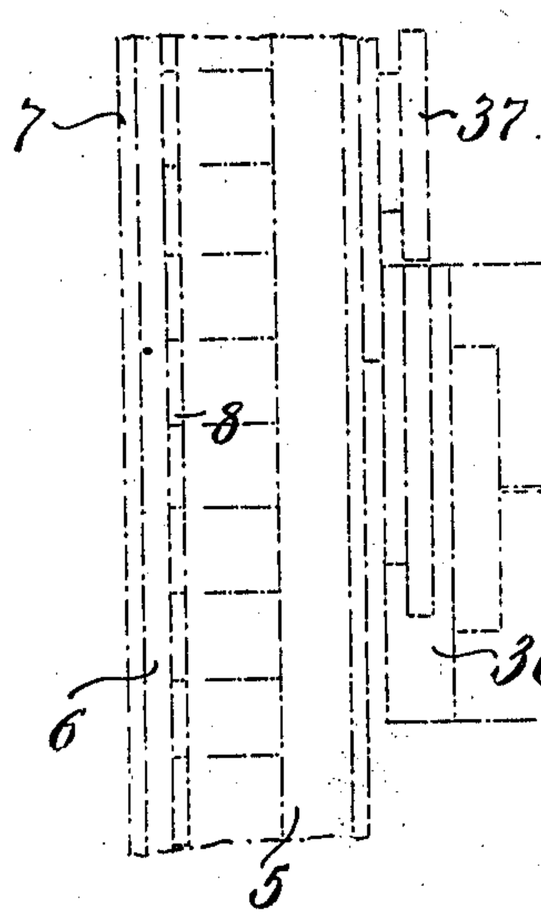
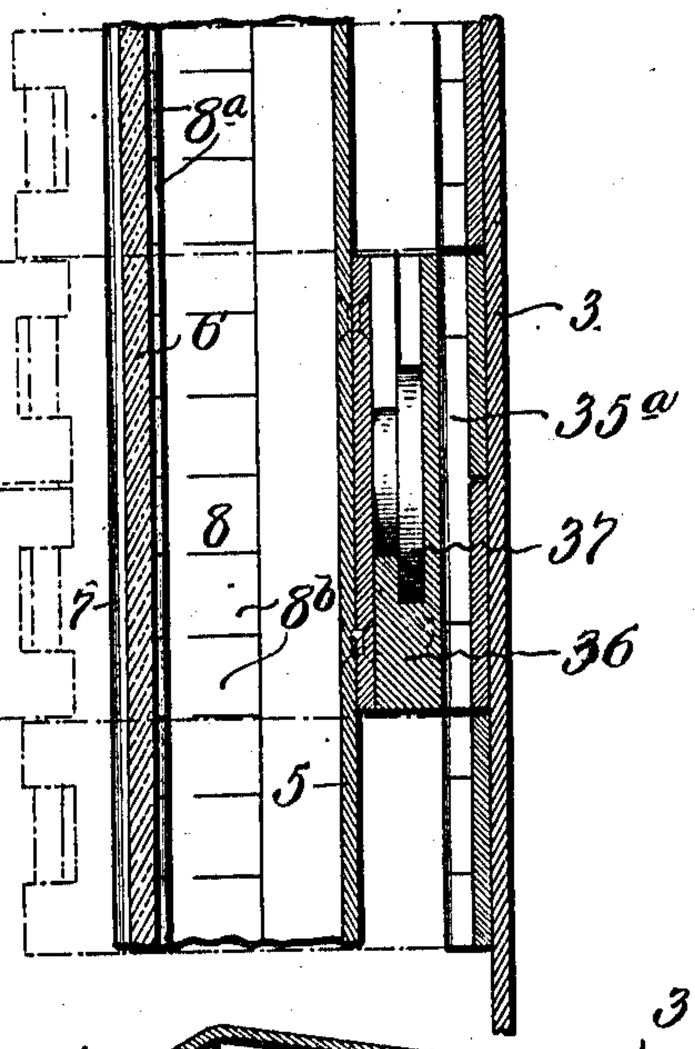


Fig. 8.



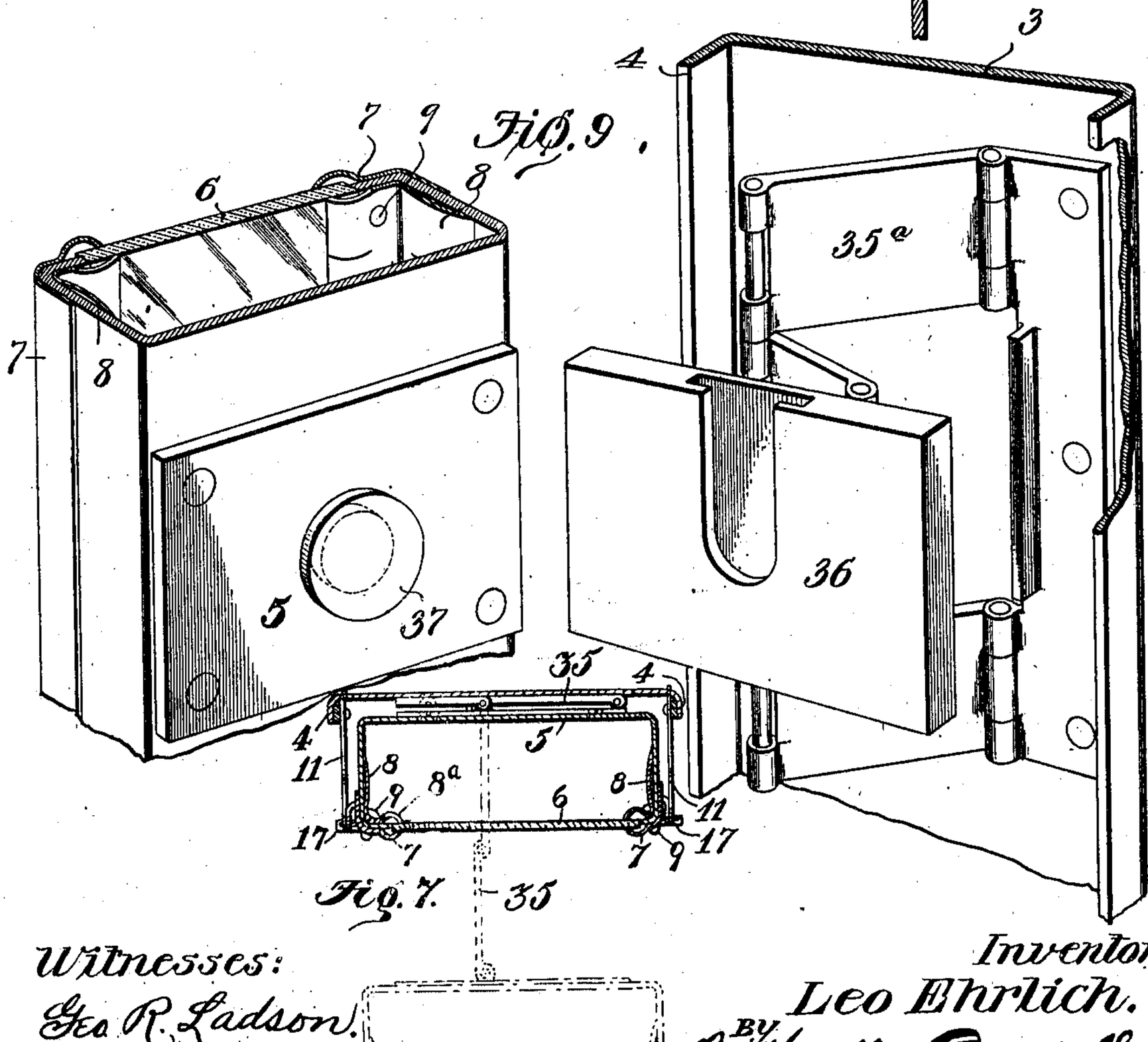


Fig. 9.

Fig. 7.

Witnesses:

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Edgar T. Farmer

Inventor,

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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.

988,961. Specification of Letters Patent. Patented Apr. 4, 1911.

Application filed October 15, 1906. Serial No. 339,131.

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 perspective view, partly broken away, illustrating my improved mail chute; Fig. 2 is a horizontal sectional view through a tube section; Fig. 3 is a detail view of a glass-supporting strip; Fig. 4 is a side elevational view, partly in section, of means for lifting the tube section so that it may be swung laterally; Fig. 5 is an inside view of a plate in which is arranged the mail-receiving aperture; Fig. 6 is a sectional view through said plate and aperture closure; Fig. 7 is a horizontal sectional view illustrating a modified method of mounting the tube section; Fig. 8 is a vertical sectional view showing another modified method of mounting the tube section; and Fig. 9 is a detail view illustrating the tube section removed.

This invention relates to a new and useful improvement in mail chutes, the objects being to construct a chute in such manner that it will be simple, strong and durable, and one which can be easily and cheaply manufactured and installed.

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

In the drawings, 1 indicates the floors of a building and 2 the vertical wall of said building.

3 indicates a back plate which is secured to the vertical wall 2 and which is preferably made up of sections of appropriate length spliced together so as to be co-extensive with the length of the chute. The back plate may be flanged as at 4 for the purpose of adding strength.

The tube section shown in Figs. 1 and 2 consists preferably of a metal plate 5 forming the back and side walls of the chute. The front wall of the chute is formed principally of glass panels 6. Panels 6 are held in position by securing strips 7 which are preferably made of spring brass arranged outside the tube and whose free edges engage the panel 6, and by strips 8 arranged inside the chute and whose free edges are cut or scored so as to form independent tongues 8^a which bear against the panel 6. This inner strip 8 is also provided with independent tongues 8^b which bear against the inner face of the metallic portion of the chute at their free edges to make close contact therewith. Rivets 9 are employed to hold these strips 7 and 8 in position, and it will be noticed that said rivets are so positioned that they permit the strips to exert a tension on the glass at all times.

10 indicates thimbles which are secured to the back plate 3 in the horizontal plane of the floors 1. These thimbles are preferably made tapered, as shown.

11 indicates a locking and lifting bar having slot and pin connection with the flange 4 of the back plate 3 whereby said bar is capable of vertical movement with respect to said back plate. Bar 11 carries locking projections 12 which coöperate with projections 13 on the tube section.

15 indicates a lever handle pivoted to the bar 11 and having its inner bifurcated end in engagement with a fulcrum piece 3^a on the back plate. The outer end of lever 15 is provided with an opening which is designed to register with a similar opening 16^a on the plate 16 in which latter is formed the mail-receiving aperture. A lock 17 is employed to retain the lever handle 15 in its raised position.

The lower end of rocking bar 11 carries a sleeve 18 which is designed to embrace the lower end of the tube section when the bar 11 is raised. When the bar 11 is lowered this sleeve section 18 is moved downwardly into the thimble 10 and below the tube section, thus enabling the tube section to be swung outwardly. Hinge 19, see Fig. 2, connects the tube section with the back plate. When the tube section is swung on its hinge the lower edge thereof is above the floor level and any accumulated mail lodging in the tube section so swung outwardly may be removed.

The plate 16 which is provided with the mail-receiving aperture, has a manually operable latch 20 mounted thereon, see Fig. 6, which latch coöperates with the free edge of a hinged closure 21. When the plate 21 is raised to close the mail-receiving aperture the latch 20 may be moved under its free edge and so support the plate 21 in its closed position.

To facilitate convenience in transportation each swinging tube section is made up of two or more lengths, and these lengths are connected together by a band 22, see Fig. 1, which preserves the alinement of the tube sections and compels them to move together when swung on their hinges 19. To obtain access to the latch 20 the band 22 may be removed as it is held in position by screws and the upper portion of the tube section swung out (after the bar 11 is depressed to unlock the same), when the hand may be inserted into the tube to operate the latch 20.

23 is a receptacle at the bottom of the chute, which receptacle is provided with a door 24 through which access may be gained to the interior of the chute.

25 is a removable receptacle for receiving the mail, which may be employed if desired.

In Fig. 7 I have shown a modified form of mounting the tube section. In this modification, instead of hinging the tube section to the back plate, as shown in Fig. 2, so that the tube section will swing on a fixed axis, I have provided an extensible hinge 35 which enables the tube section to be moved bodily forward away from the back plate as shown in dotted lines in Fig. 7.

In Figs. 8 and 9 I have shown the extensible hinge referred to above, and which I have here marked 35ª, as carrying a socketed plate 36 on the free end of its floating member, in the socket of which is received a trunnion 37 arranged on a plate at the back of the tube section. When the trunnion is inserted in the socket of plate 36, and the tube section in this manner mounted, it is obvious that not only can the tube section be moved bodily outward away from the back plate, but that said tube section can also be swung on its trunnion to horizontal or an inverted position if desired. Should mail be caught in a tube section it builds up, and by mounting the tube section on a trunnion it is obvious that when the said tube section is inverted the mail will be more readily displaced, and the same could be done in efforts to extract the mail from the top or bottom of the tube section when the tube section is in its normal vertical position.

I do not, in this application, claim the details of a removable letter box, as the same forms the subject of a divisional application filed by me February 2d, Serial No. 475,685.

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

1. In a mail chute, a swinging tube section composed of independently movable parts, and means for coupling said parts together so that they will swing in unison; substantially as described.

2. In a mail chute, a back plate, a hinged tube section hinged to said back plate, and a vertically movable sleeve section for embracing one end of a tube section when in its home position; substantially as described.

3. In a mail chute, a movable tube section, a thimble, and a movable sleeve section operating in the thimble and having telescopic engagement with one end of the tube section; substantially as described.

4. In a mail chute, a movable tube section, a fixed thimble, a sleeve section operating in the thimble and having telescopic engagement with one end of the tube section, and a locking bar for coöperating with the tube section to lock it in its home position, said locking bar carrying said sleeve section; substantially as described.

5. In a mail chute, a back plate, a locking bar, a lever fulcrumed on said back plate and supporting said locking bar, a movable tube section, and a lock for locking said lever to said tube section; substantially as described.

6. In a mail chute, a back plate, a slidable locking bar mounted on said back plate, a lever pivotally connected to said locking bar and fulcrumed on said back plate, a movable tube section, and means for locking said lever to said tube section; substantially as described.

7. In a mail chute, a tube section having a glass panel, and strips for securing said panel in position, said strips having their free edges cut or scored so as to form independent tongues for bearing against said panel; substantially as described.

8. In a mail chute, a glass panel, and independently yielding tongues for holding said panel in position; substantially as described.

9. In a mail chute, a glass panel, and independently yielding tongues for holding said glass panel in position, said tongues being connected together; substantially as described.

10. In a mail chute, a glass panel, and a row of yielding tongues arranged side by side and whose free edges engage said panel; substantially as described.

11. In a mail chute having a mail-receiving aperture, a hinged closure therefor, and a latch bolt coöperating with the free edge of said closure; substantially as described.

12. In a mail chute having a mail-receiving aperture, a hinged closure for said aperture, a sliding member for engaging the free edges of said closure, and a handle on

said sliding member by which it may be operated; substantially as described.

13. In a mail chute, the combination of inner and outer receptacles having coinciding mail apertures alining with the chute, the inner receptacle being bodily removable from the outer one, and having means to prevent unauthorized access to its interior.

14. In a mail chute, the combination of inner and outer receptacles having coinciding mail apertures alining with the chute, the inner receptacle being bodily removable from the outer one, and having means to prevent unauthorized access to its interior, consisting of a key-locked door.

15. In a mail chute, a tubular chute with flat walls, a panel in one wall, and metal strips that engage said panel on its inner and outer sides, and bent to engage the inner and outer sides of a chute wall at right angles to the panel.

16. In a mail chute, a back plate, a tubular section, and an extensible hinge connection between said parts; substantially as described.

17. In a mail chute, a back plate, a tubular section, an extensible hinge connection between said parts, and means for locking said tubular section in its home position; substantially as described.

18. In a mail chute, a tubular section, an extensible hinge mount for said tubular section; substantially as described.

19. In a mail chute, an extensible hinge, and a tubular section mounted upon said extensible hinge so as to be swung at an angle to the axis of movement of the hinged parts; substantially as described.

20. In a mail chute, a tubular section, an extensible hinge, and a swivel connection between said parts; substantially as described.

21. In a mail chute, a tubular section, an extensible hinge, said hinge carrying a socket plate, and a trunnion on the tubular section arranged in the socket on said plate; substantially as described.

22. In a mail chute, a tubular section, an extensible hinge, a socketed plate carried by said hinge, a trunnion on the tubular section coöperating with the socketed plate of the hinge, and means for locking said tubular section in its home position; substantially as described.

23. In a mail chute, a tube section having a glass panel, and strips for securing said panel in position, said strips having both edges cut or scored so as to form independent tongues for bearing against said panel and against the adjacent metallic portion of the chute; substantially as described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this eleventh day of October 1906.

LEO EHRLICH.

Witnesses:
F. R. Cornwall,
George Bakewell.