No. 642,586. Patented Feb. 6, 1900.

J. W. CUTLER.

MAIL CHUTE.

(Application filed Nov. 27, 1899.)

(No Model.) 2 Sheets—Sheet 1.

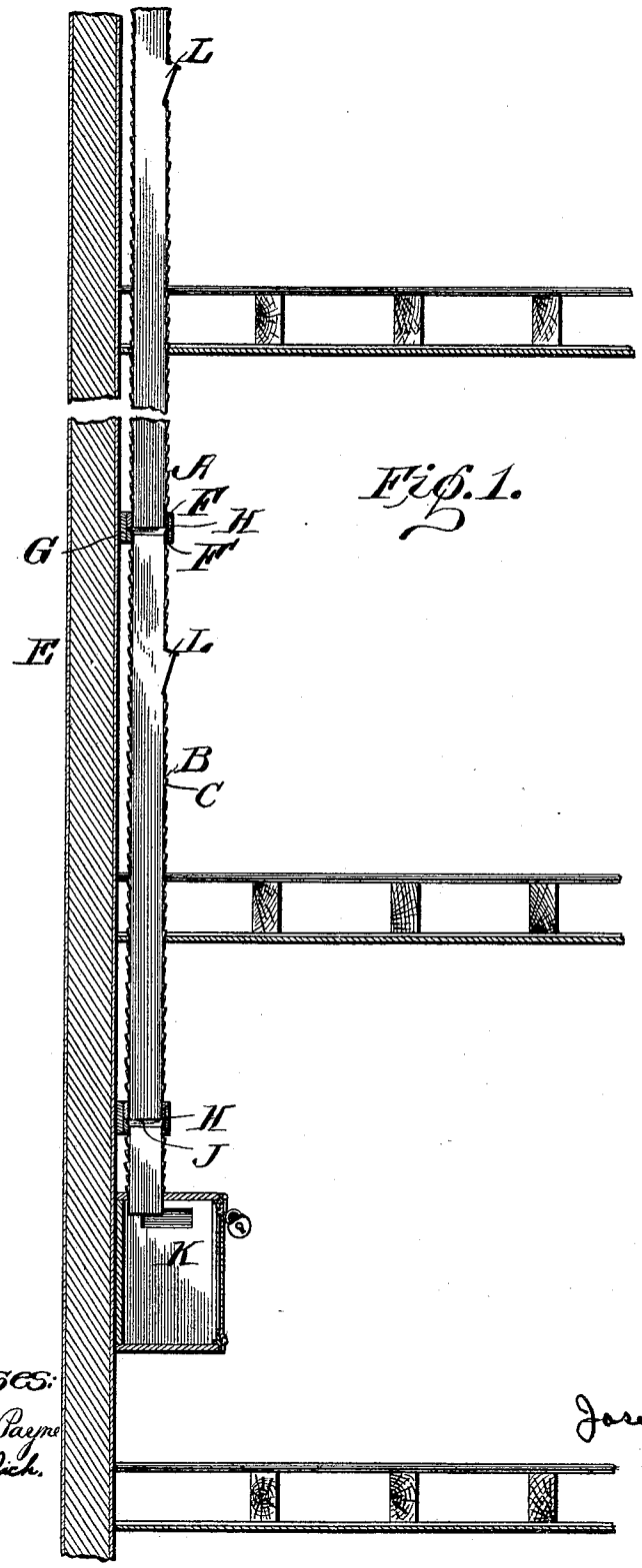

Fig. 1.

Witnesses:
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Willard Rich.

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His Attorneys

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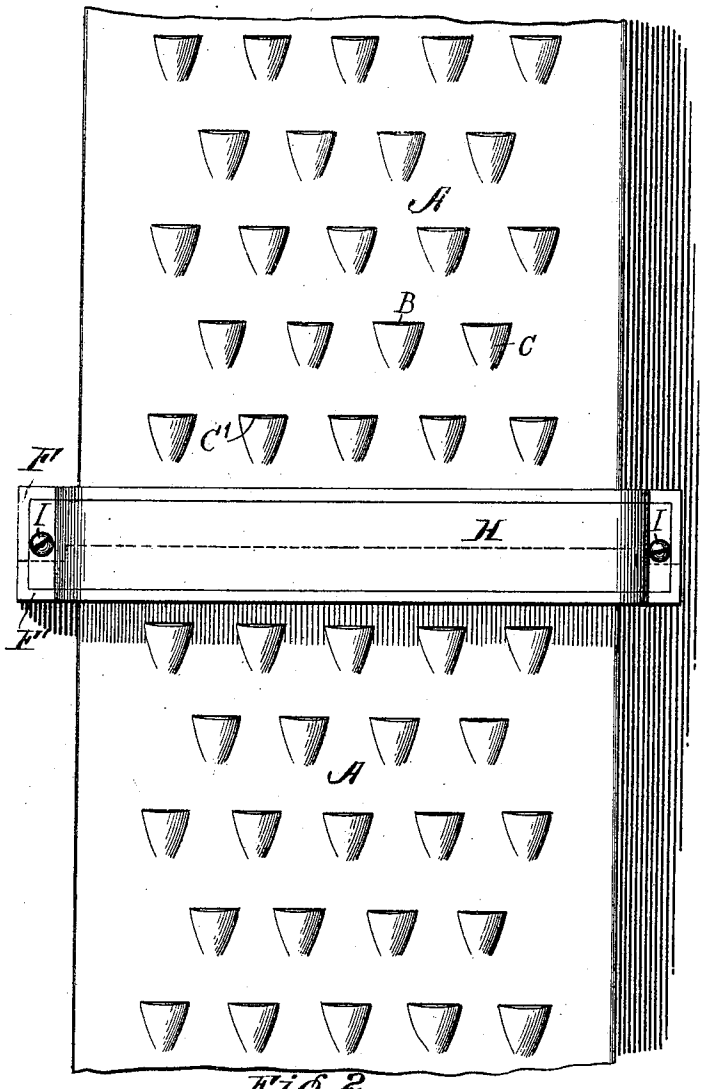

Fig. 2.

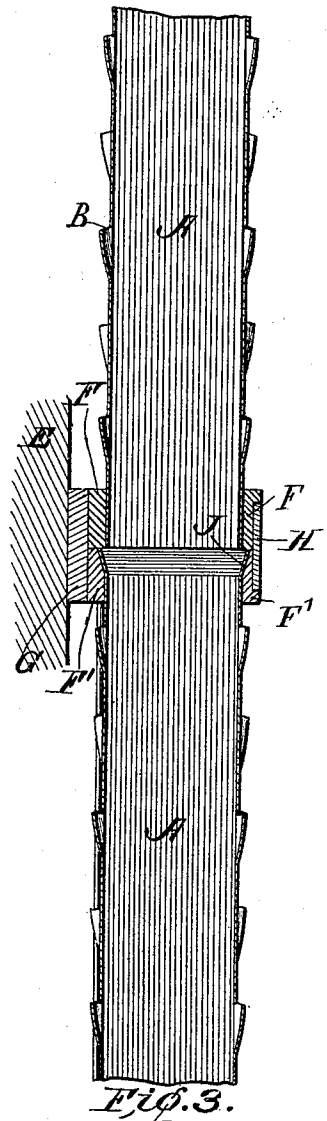

Fig. 3.

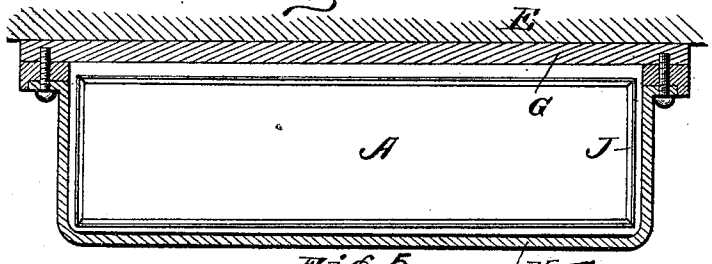

Fig. 5.

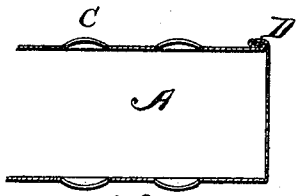

Fig. 4.

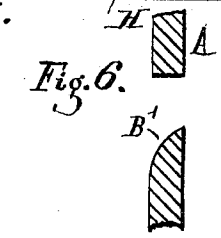

Fig. 6.

Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH WARREN CUTLER, OF ROCHESTER, NEW YORK.

MAIL-CHUTE.

SPECIFICATION forming part of Letters Patent No. 642,586, dated February 6, 1900.

Application filed November 27, 1899. Serial No. 738,430. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WARREN CUTLER, a citizen of the United States, residing at Rochester, New York, have invented a certain new and useful Improvement in Mail-Chutes, of which the following is a specification, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-letters marked thereon.

My invention relates to improvements in mail-chutes whereby their construction is simplified and cheapened and provision is made for ventilating, lighting, and inspecting the interior without permitting the abstraction of mail-matter therefrom.

My invention is fully described and illustrated in the following specification and the accompanying drawings, the novel features thereof being specified in the claims annexed to the said specification.

In the accompanying drawings, Figure 1 is a sectional view of a chute embodying my improvements; Fig. 2, a front elevation of a portion of my improved mailing-tube and its supporting-band; Fig. 3, a central vertical section of the same; Fig. 4, a transverse section of the tube; Fig. 5, the upper end of a tube-section and the band, and Fig. 6 a modification.

Similar reference-letters in the several figures indicate similar parts.

The chute as a whole consists of a tube or conduit extending from top to bottom of a building, having a mail box or receptacle K at the lower end, from which the contents may be removed, and having at intervals—say at each floor of the building—apertures (indicated by L) for the reception of the mail-matter to be conveyed to the receptacle K. As usual in devices of this description the chute is composed of a series of superposed sections A, which are preferably constructed of sheet metal bent into suitable shape and with the joint, which may be either lapped, soldered, or brazed, running longitudinally. As represented, the joint D is made at one of the rear corners. The interior of the chute-section or tube is smooth, presenting no inward projections or obstructions on which mail-matter might lodge as it falls downward through the chute.

In order to admit light to the interior of the chute, so that the descent of mail-matter therein may be readily observed, I provide the wall or walls of the sections with a series of openings, the lower edges of which are bent or flanged outward, as most clearly shown in the vertical section in Fig. 2, for the purpose of preventing any of the mail-matter from becoming caught in the section. The openings in the section are represented at B and the bent edges at C.

The number, arrangement, and dimensions of the openings may be varied within wide limits, provided they admit sufficient light not only to illuminate the interior, but also to permit inspection of the interior, and the upper edges of the bent flanges may be cut away, as indicated at C′, to increase the size of the perforations. I prefer, however, to provide the sections with openings of about the relative dimensions shown on the accompanying drawings and to arrange them on diagonal lines and reasonably close together, so that all portions of the chute may be readily examined, as represented. The openings may be made on the front side of the tube only; but if made on both sides I prefer to place them opposite or nearly opposite each other, so that the observer can look clear through across the tube. The larger the openings the greater the amount of outward bending which should be given the flanges *c*, so as to prevent the possibility of any mail-matter catching by one corner against the flange, and thus forming an obstruction in the tube. It will also be understood that the flanges must not occupy such an angle with the vertical line that the corner of a piece of mail-matter could catch against it, the upper corner resting against the other wall, and so serve as an obstruction which will detain other mail-matter, and thus stop the operation of the chute. Sharp corners or projections should also be avoided where the flanges join the flat walls of the tube. The openings and flanges may be formed in any suitable dies before the

sheet metal is bent to make the sections, which may be formed with a single joint or with two or more, as preferred. The openings may be formed by simply slitting the metal and pressing the edge below the slit outward or by removing a portion of the edges, as indicated, or both.

My improved perforated mail-chute may be sustained in position for practical use in any suitable or preferred manner; but in the accompanying drawings I have represented it as put up in removable sections and attached to the wall E or other upright support by the bands or collars F F′ either directly or with an intermediate bar G interposed. The bands or collars are attached to the ends of the sections of the tube by screws or rivets. An outer band H conceals the joint between the collars, being held in place by the screws I. Provision is thus made for removing any one of the sections without disturbing the rest of the tube. The bands and clamp may be ornamented in any suitable or preferred manner. The upper inner corners of the lower band are beveled, as indicated at J, so as to prevent the lodging of mail-matter. Any other suitable manner of supporting my improved mail-chute or the sections may be employed. The narrow sides of the tube may be also provided with perforations, if desired.

My improved perforated mail-chute is cheaper and more durable than the transparent tubes heretofore used, and it affords greater security to the mail-matter passing through it, as the sheet metal is stronger and less likely to be broken than the glass, and the perforations are of such restricted dimensions that it is impossible to insert or abstract mail-matter through them, while they serve to secure free ventilation throughout the length of the chute, thereby preventing condensation of moisture from differences in temperature, and, as stated, they permit inspection of the chute throughout its length at all times and enable any obstruction to be removed.

I claim as my invention—

1. The herein-described tube for mail-chutes provided with a series of restricted openings having the lower edges inclined outward at an angle which prevents the lodging of the mail-matter while permitting inspection and ventilation.

2. The herein-described tube for mail-chutes, provided with perforations in the opposing walls of the tube, which permit vision across the chute.

3. The combination with the removable perforated mail-chute sections, having bands rigidly attached to their ends, of the clamp covering the joint between the bands of adjacent sections, and removably secured thereto.

4. The combination with a letter box or receptacle, of a chute communicating therewith extending through the various stories of a building, and having letter-receiving apertures at various points in its length, said chute having a smooth unobstructed interior and being provided with small apertures in its face for admitting light and permitting the inspection of the interior thereof.

5. The combination with a letter box or receptacle, of a chute for mail-matter leading thereto, composed of separate sections, having a smooth unobstructed interior and provided with small apertures for admitting light and permitting inspection of the interior of the chute at all points.

6. The combination with a letter box or receptacle, of a chute for mail-matter leading thereto composed of opaque material and having small apertures in the front thereof for permitting the admission of light and the inspection of the interior, said apertures being small enough to prevent the entrance or exit of mail-matter and having the edges arranged to prevent the arrest of mail-matter descending in the chute.

7. The herein-described tubular mail-chute section composed of a single piece of sheet material folded up and connected at the edge, affording a smooth unobstructed interior and provided with apertures of such restricted dimensions as to prevent the insertion or removal of mail-matter, but permitting the admission of light and inspection of the interior thereof.

JOSEPH WARREN CUTLER.

Witnesses:
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G. A. RODA.