(No Model.)

E. SMALLEY.

MAIL BOX.

No. 301,288. Patented July 1, 1884.

Fig. 1.

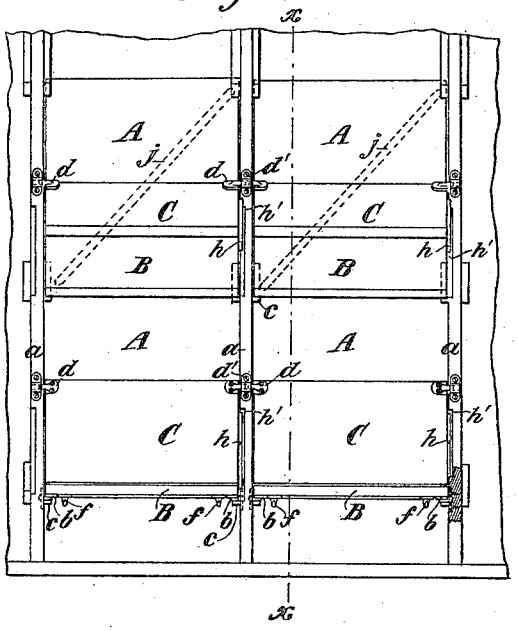


Fig. 2.

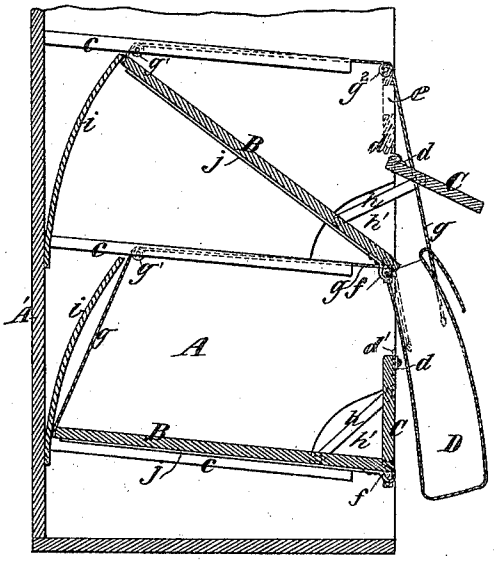


Fig. 3.

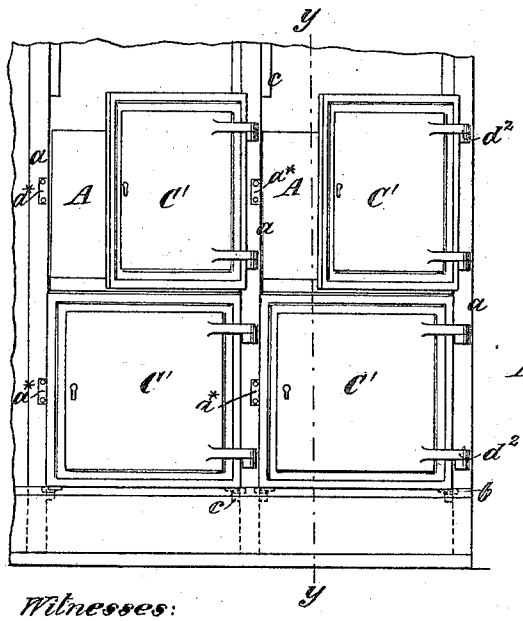
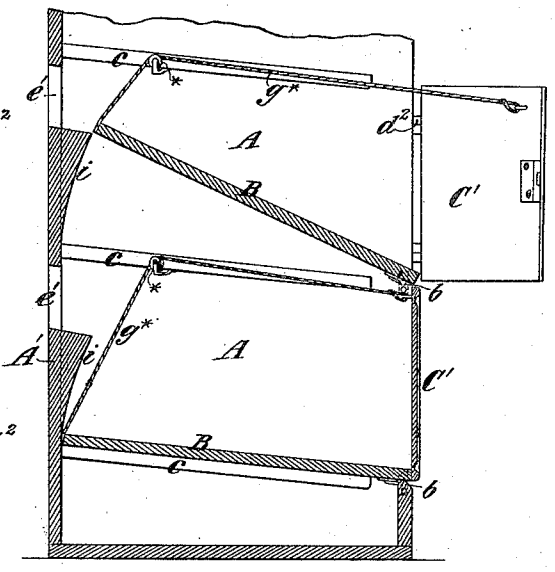


Fig. 4.



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UNITED STATES PATENT OFFICE.

EDMUND SMALLEY, OF SPARKILL, NEW YORK, ASSIGNOR OF ONE-HALF TO CHARLES M. LAWRENCE, OF SAME PLACE.

MAIL-BOX.

SPECIFICATION forming part of Letters Patent No. 301,288, dated July 1, 1884.

Application filed April 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDMUND SMALLEY, of Sparkill, in the county of Rockland and State of New York, have invented a new and useful Improvement in Boxes for Mail-Matter and other Purposes, of which the following is a specification.

My invention is particularly intended for mail-cars in which are a large number of boxes or receptacles into which mail-matter is placed in sorting it, and from which the contents are discharged into mail pouches or bags. Heretofore these boxes have been arranged in nests or tiers, the depth or dimensions of the boxes from front to rear being considerable. The boxes have been provided with fronts, which are fitted to slide in grooves, and which afford ample space above them for throwing letters into the boxes; and when the contents of a box are to be removed, the front is slid upward or raised, and the contents drawn forward and pulled out by an implement like a hoe introduced from the front.

An important object of my invention is to facilitate the discharge of the contents of the boxes; and it consists, essentially, in hinging the bottom of the box near its front end, so that by raising its rear end it may be tilted at a steep inclination, and in hinging the front and so connecting it with the tilting bottom that one operation will raise the bottom and open the door or front, so that the contents will slide freely outward. Although of great advantage for mail-cars, the invention is applicable to post-office boxes, in which case the back of the box would preferably be open, and generally to boxes or receptacles for letters or articles of other kinds.

In the accompanying drawings, Figure 1 represents an elevation of a number of boxes embodying my invention. Fig. 2 is a vertical section on the dotted line *x x*, Fig. 1. Fig. 3 is a front elevation of a number of boxes embodying a modification of my invention, and Fig. 4 is a vertical section on dotted line *y y*, Fig. 3.

Similar letters of reference designate corresponding parts in all the figures.

In the example of my invention shown in Figs. 1 and 2 the boxes are arranged suitably for mail-cars. The nest or system of boxes may be any number of boxes in width and height; but I have shown only two boxes in width and two high.

A designates the boxes, which are formed between vertical partitions *a*. Each box has a bottom, B, which is hinged at the front, so that it may be brought to a steep incline by raising its rear end, as shown in Fig. 2. As here shown, the hinges or pivots are formed by small plates *b*, secured to the under side of the bottom at the front end thereof, and having pivots fitted to plates secured to the partitions *a*. When the box-bottoms B are down, they are supported in a horizontal or nearly a horizontal position by cleats *c*, secured to the partitions *a*.

At the front of the boxes A are hinged doors C, which extend about half the height of the boxes, and are hinged at their upper edges, so as to swing outward or open, as shown in the upper box, Fig. 2, or closed, as in the lower box in said figure. The doors C may be advantageously hinged by small plates *d*, secured near their upper edges, and having pivots projecting beyond their edges, and at the front of the partitions *a* are small socket-plates *d'*, each receiving the pivots of the doors on its opposite sides.

The letters or other articles for which the boxes are intended are easily introduced through the front over the doors C; or the fronts may be closed above the doors, as shown by dotted lines, Fig. 2, in which case a slot or opening, *e*, would be provided in such fixed portion of the front.

The bottom B and door C of each box are so connected that when the bottom is swung up or tilted forward the door will be opened outward, as shown at the upper box in Fig. 2, and the contents will slide out easily into a mail bag or pouch, D. The bag or pouch D may be secured upon hooks *f*, secured to the under side of the bottoms B at the front end thereof, or to the front edges of the partitions *a*, if desired.

As here shown, the bottom B of each box is raised by a cord, chain, or other connection, *g*, secured to the bottom at or near its rear end, and thence carried upward and forward

over pulleys g' g^2, and out at the front of the box. The connection between the bottom B and door C is formed by a link, h, pivoted to the edge of the bottom near its front end, and also pivoted to the edge of the door. In the side of the partition a is a recess, h', which receives this link, and hence none of the contents of the box can lodge against the link and be retarded in delivering. To discharge the box, all that is necessary is to pull the cord or connection g, thus raising the bottom, and through the link h the rising bottom swings the door C outward. When the cord or connection is released, the weight of the bottom B causes it to fall back onto the cleats c, and through the link h the door C is closed.

In the back of the box is a curved guard, i, in close proximity to which the back edge of the bottom B moves, and which prevents any of the contents of the box from getting between the back A′ and the rear edge of the bottom, and so hindering the raising of the bottom or falling down behind into the box below. In order to strengthen the bottoms B and prevent their warping or splitting, a cleat, j, of wood or metal, may be secured diagonally across the under side of each. Such a cleat is shown dotted in the upper boxes in Fig. 1, the bottoms of which are raised.

The example of my invention shown in Figs. 3 and 4 is more particularly adapted for post-office boxes. In this case, as in Figs. 1 and 2, the boxes A are formed between vertical partitions a, and have bottoms B, which are hinged at b, so that they may be swung up, as shown in the upper box, Fig. 4, or adjusted into a horizontal or nearly horizontal position upon cleats c, as shown in the lower boxes in Fig. 4. The doors C′ are hinged at their vertical edges by hinges d^2 to the partitions a, and may be swung in a horizontal plane to open and close them. When closed, they may be locked at a^* to the partitions a. The boxes may be filled through openings e' in the back A′, as shown in Fig. 4, and the back end of the bottom protected by a guard, i. In this example of my invention the only connection between the bottom B and door C′ is formed by a cord or chain, g^*, attached to the bottom near or at its back end, and passing upward over a pulley, *, and attached to the upper part of the door C′ at a distance from its hinges d^2. The opening of the door C′ serves, through the connection g^*, to raise the bottom B. Where boxes are not arranged one above another, they may be open at the top to afford provision for placing articles in them, and if arranged in tiers the upper box of each tier may be open at the top.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a box for mail or other matter, having a bottom hinged at the front thereof and supports for said bottom when lowered, of a connection, substantially as set forth, attached to the rear end of said bottom for tilting it forward to facilitate the discharge of its contents, substantially as and for the purpose herein described.

2. The combination, with a box for mail or other matter, having a bottom hinged at the front thereof, and supports for said bottom when lowered, of a door hinged at the front of the box and a connection between the said bottom and door to produce the simultaneous raising of the bottom and opening of the door, substantially as and for the purpose herein described.

3. The combination, with a box for mail or other matter, having a bottom hinged at the front thereof, and supports for the bottom when lowered, of a hinged door at the front of the box, a connection between the bottom and the door to produce the simultaneous raising of the bottom and opening of the door, and a curved guard, i, adjacent to the rear end of said hinged bottom, substantially as and for the purpose herein described.

4. The combination, with a box having the bottom B hinged at b, and provided with cleats c, for supporting said bottom when lowered, of the door C, hinged at the upper edge, the connection g, for tilting the bottom, and a link connection, h, between said bottom and door, substantially as and for the purpose herein described.

5. The combination, with a box having the bottom B hinged at b, and provided with hooks f, of the supports c, for the bottom when lowered, the door C, hinged at the upper edge, the connection g, for tilting the bottom, and a link connection, h, between said bottom and door, substantially as and for the purpose herein described.

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