

(No Model.)

C. M. PREVEAR.
ELEVATOR HATCHWAY ATTACHMENT.

No. 489,755.

Patented Jan. 10, 1893.

Fig. 1.

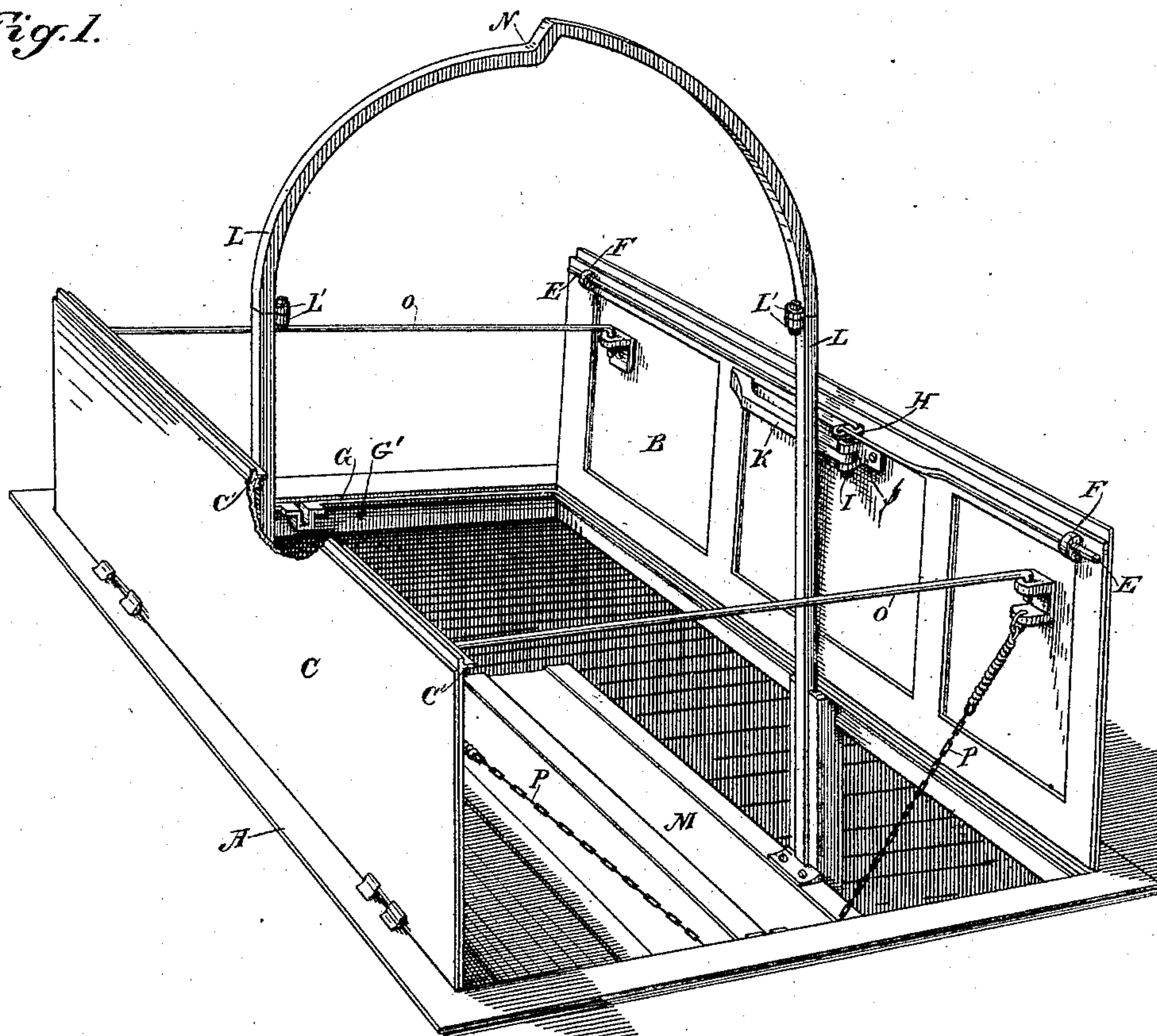
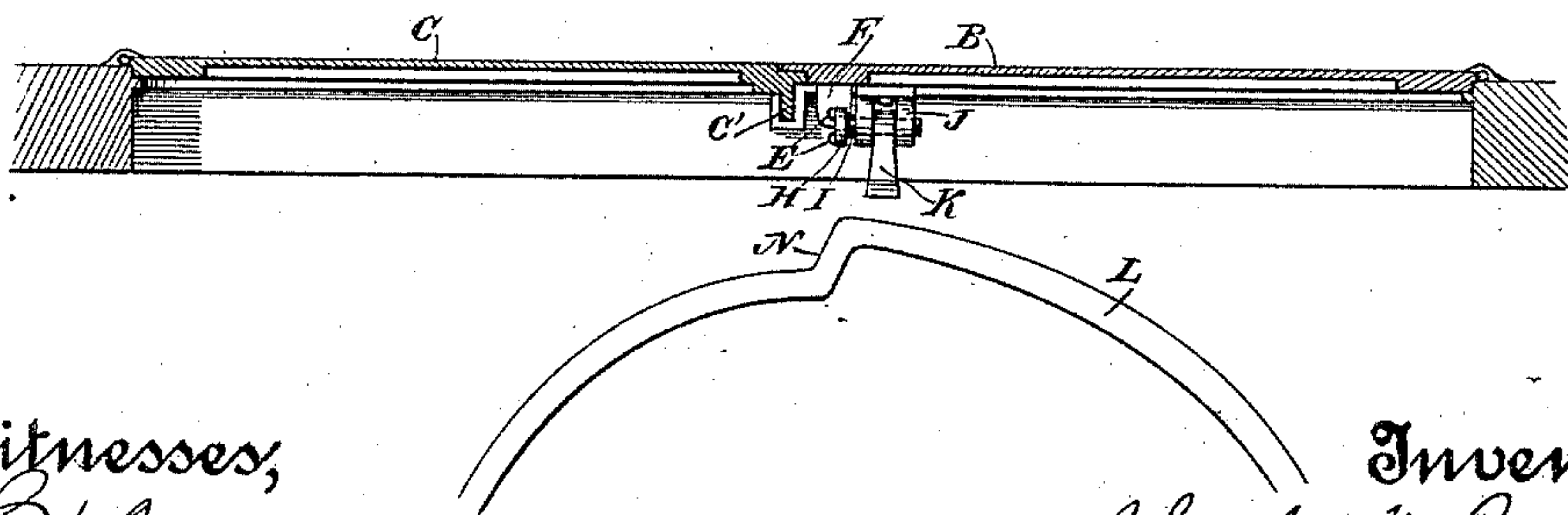


Fig. 2.



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UNITED STATES PATENT OFFICE.

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ELEVATOR-HATCHWAY ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 489,755, dated January 10, 1893.

Application filed October 13, 1892. Serial No. 448,769. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. PREVEAR, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Elevator-Hatchway Attachments; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to attachments for elevator hatchways, which are especially applicable to that class known as side-walk elevators.

It consists in certain details of mechanism whereby the hatchway is opened by the rising of the elevator, and closed and locked automatically as the elevator sinks below the side-walk.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1—is a view of the hatchway and elevator. Fig. 2—is a vertical cross section of the same showing it in the closed position.

A is the frame of a hatchway made in the floor or side-walk and B and C are doors, hinged at opposite sides, so that when closed, one overlaps the other at the meeting edges, to form a tight joint. Each of the doors is made with a surrounding frame of iron, covered with a plate of iron which is bolted thereto. The door C has an angle iron strip C' bolted to the edge which meets the opposite door, this angle iron serving as a strengthening bar for the meeting edges of the door without the use of any supplemental cross-bar at this point. The ends of the angle iron are supported on the hatchway sides at G. E are sliding bolts fitted to move in guides F, near the edge of the door B, and the frame work of the hatchway is provided with sockets G' into which these bolts are moved after the doors are closed so as to lock them in place, or they may lock beneath the flanges of the hatchway frame. The inner ends of the bolts E are connected with a yoke H which is formed with a shank or spindle I, journaled in a support J which is bolted to the lower side of the door.

K is a lever fixed to the spindle I, extending to one side as shown. This lever is of sufficient weight to turn the spindle, and the yoke H, and move the bolts E so that they will enter the sockets G', after the door is

closed. This lever is moved to withdraw the bolts and unlock the door by means of a bail L, which has an arched top as shown, and parallel sides, which are secured to the elevator platform M, and the bail also lets the lever swing down gradually as the elevator sinks below the hatchway, and thus actuates the bolts. These sides L travel in guides upon opposite sides of the elevator well, or they may be made of flat pieces of iron bolted together in case they are not used as guides. The top of the arch has an offset as shown at N, this offset being made so as to receive the angle iron C', which is secured to the edge of the door C. This allows the other side of the arch to act upon the lever K, when the elevator rises, first swinging it up into position against the lower side of the door B, thus withdrawing the bolts E from the sockets G, and afterward raising the door B, (the edge of which overlaps the door C when they are closed,) thus allowing the other side of the curve to act upon the door C, and both doors are opened as the elevator rises. When the latter has reached the level of the side-walk, the doors may be held in place as long as it is desired to keep them open, by means of the hook rods O, which engage eyes upon each of the doors as shown.

P, P, are springs connecting flexible ropes or chains with the doors, and with some fixed point, so that the doors will close automatically when the rods O have been removed, and the elevator depressed until the bail L has passed below the level of the doors. The doors pressing upon the top of the bail follow it down, the door C, first reaching its seat on account of the offset N, and the door B, closing over it. Further depression of the elevator platform and bail allows the lever arm K to swing downwardly, and thus force the bolts B into the locking sockets, thus securing the elevator hatchway without further attention.

The bail L may be made in one or more pieces. If it is desirable to sometimes remove the top of the bail, this portion may be made separate from the sides, and by means of flanges as shown at L', it may be bolted or secured to the upright portion. It may be permanently pivoted to one of the uprights, so as to swing about that pivot without being

permanently removed in which case the other end would be locked by means of a cam or other suitable device.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is,

1. An elevator hatchway having the two part doors hinged to opposite sides so as to close with the meeting edge of one overlapping the other, an angle iron bar secured along the edge of the lowermost door, and movable therewith, longitudinally sliding bolts mounted along the edge of the other door, sockets in the hatchway frame, into which the ends of the bolts enter to lock the doors, a yoke to which the inner ends of the bolts are connected and a weighted lever so as to automatically actuate the bolts, and lock the doors after they are closed substantially as described.

2. In an elevator hatchway having the two-part doors hinged to opposite sides and adapted to close with the meeting edge of one overlapping the other, the combination of the sliding bolts mounted on one of said doors and adapted to engage sockets in the hatchway

frame, an oscillatory yoke with which the inner ends of the bolts are connected, and a weighted lever connected with the yoke, a bail fixed to the elevator platform, having an offset at the top, whereby the lever is first moved as the bail rises to release the bolts and allow the doors to be opened, substantially as herein described.

3. In an elevator hatchway, the combination with hinged doors overlapping each other at their meeting edges, and the locking bolt mechanism, of the bail or arch extending upward above the elevator platform to engage and operate the locking bolt mechanism, said bail being made in separable sections jointed together, with the upper arched portion movable to have a clear opening, and means for uniting and locking the parts together, substantially as herein described.

In witness whereof I have hereunto set my hand.

CHARLES M. PREVEAR.

Witnesses:

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