

(No Model.)

H. B. NEWHALL & J. H. COOK.
DOOR BINDER.

No. 579,074.

Patented Mar. 16, 1897.

Fig. 1

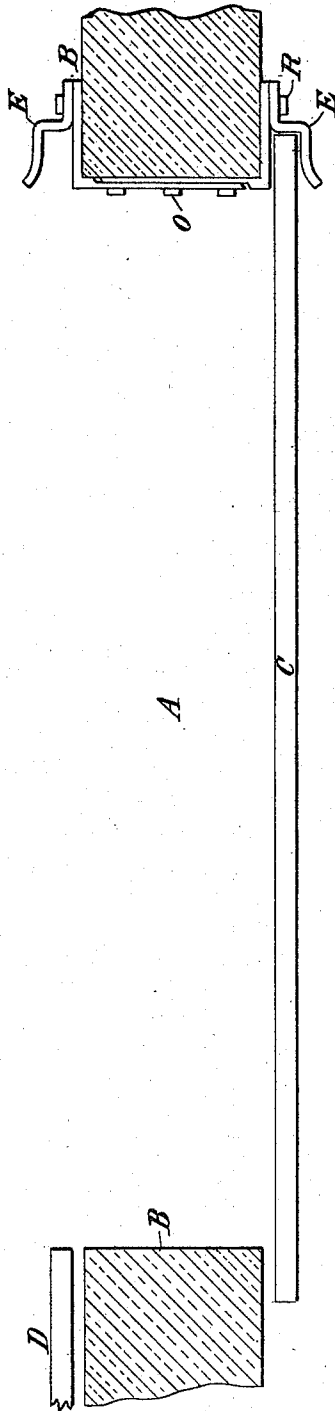
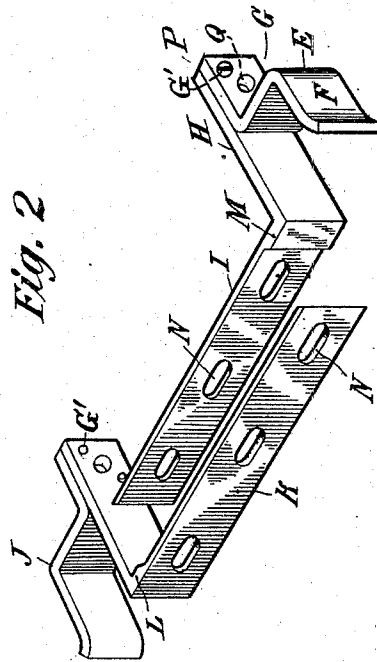


Fig. 2



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UNITED STATES PATENT OFFICE.

HENRY B. NEWHALL, OF PLAINFIELD, NEW JERSEY, AND JOHN H. COOK, OF
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DOOR-BINDER.

SPECIFICATION forming part of Letters Patent No. 579,074, dated March 16, 1897.

Application filed January 19, 1897. Serial No. 619,749. (No model.)

To all whom it may concern:

Be it known that we, HENRY B. NEWHALL, of Plainfield, county of Union, and State of New Jersey, and JOHN H. COOK, of Brooklyn, county of Kings, and State of New York, have invented a certain new and useful Improvement in Door-Binders, of which the following is a description, reference being had to the drawings accompanying and forming a part of the same.

The present improvements relate to a new and improved device for binding or holding a door, especially a fire-door, tightly against the walls of the door-space.

The improvements also relate to a combination of binders for duplicate or multiple doors—that is, doors arranged one to close a door-space on the inside of a building-wall and one to close the space from the outside of the wall.

As is well understood, fire-doors are usually arranged as on an inclined track and with proper releasing devices to automatically close in event of a fire should they have been left open, as during the use of the doorway-space in business hours. It is desirable that, whether the doors be closed by hand or mechanically, means be provided whereby the doors be engaged and held tightly to the wall of the spaces they are designed to close and protect.

The invention consists of two strap-like sockets carried on separate strips or bands turning at right angles to the socket and adapted to be adjustably fastened to the wall of the doorway-space, whereby is provided a binder for an inside and one for an outside door, whatever in ordinary limits be the thickness of the wall between the inside and outside door.

Referring to the drawings, Figure 1 shows a horizontal section of the walls of a doorway-space, one of these walls being shown as bearing our improved door-binder mechanism. Fig. 2 is a perspective view of the two parts of the binder, these being separated and the wall and doors being omitted.

Referring to the views in detail, A represents a doorway-space, and B B side or vertical wall inclosing the same.

C represents an outside door in closed position, while D represents an inside door in open position. These doors are supposed to be hung on trolley-tracks and ordinarily would be provided with mechanism adapting them to automatically close upon the occurrence of a high or unsafe temperature in their neighborhood, various means for causing the doors to close and for releasing them so that they can close being well known.

E represents one of the binders, which is composed of the curved cleat F and the buffer-bracket G, adjustably attached by screws G' to the side bar H, which in turn is carried by the slide-bar I, these parts being preferably cast or otherwise formed in one piece.

J represents the other binder, and K its slide-bar. The two bars I and K are thinned to about one-half the thickness of the other parts, so that when they are secured together, as shown in Fig. 1, they will have about the same thickness as the other parts. At the ends L M of these bars they have full thickness, whereby is produced a bearing L on the outer bar adapted to rest at all times upon the masonry of the wall, whatever the adjustment of the bars I relatively to each other, and each bar is stiffened by the extra thickness at the corner when the most strain comes on it, especially in the case of the doors suddenly closing.

The bars I and K are provided with extended slots N, through which pass anchor bolts or screws O and which hold the binders anchored to the wall. The buffer part G of the binder bends back upon the side bars H, producing the lug P of double thickness, specially adapted to sustain the shock of the closing door against the buffer and prevent the binder spreading, and this lug is pierced by an anchor-bolt Q, which receives the anchor-bolt R.

By these means we provide a double-door binder mechanism of simple yet effective construction which is particularly adapted to sustain the shock of a closing fire-door and yet is capable of adjustment for various thicknesses of wall. Another advantage to be noted is that in case of excessive temperatures, such as might weaken the holding ac-

tion of the bolts R, the binder would still be securely held by the bolts O and its right-angular engagement with the wall.

What is claimed as new is—

- 5 1. A door-binder consisting essentially of the cleat F, the side bar H carrying the same and the bar I secured at right angles thereto and adapted to be fixed to the wall of the door-space, substantially as set forth.
- 10 2. In a binder mechanism for doors two binder locks or cleats each shaped and adapted to engage the edge of a door and hold the same in closed position against a wall, and bars carrying said binders and arranged at
15 right angles thereto, and means for adjustably securing the said bars together and to the doorway-face of the wall, substantially as set forth.
- 20 3. In combination with the binders F F carried by the bars I and elongated holes N in

said bars whereby they can be secured together and to a wall and adjusted to different thicknesses of walls.

4. In combination with the binders E J and the bars I K carrying the same, the bars being thinned or cut away as shown and provided with the bearing parts L M for the purpose set forth, and means for securing the said bars together and to the wall of a doorway.

5. In combination with the binders E J secured to the side bars H by the lugs P, the bars I K attached to said side bars at right angles, and means for adjustably securing said bars to the face of a doorway-wall.

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Witnesses:

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