

(No Model.)

J. BOWBIN & M. H. CROKER.

DEVICE FOR REMOVING WINDOW SASH FROM FRAMES.

No. 318,946.

Patented June 2, 1885.

Fig. 1.

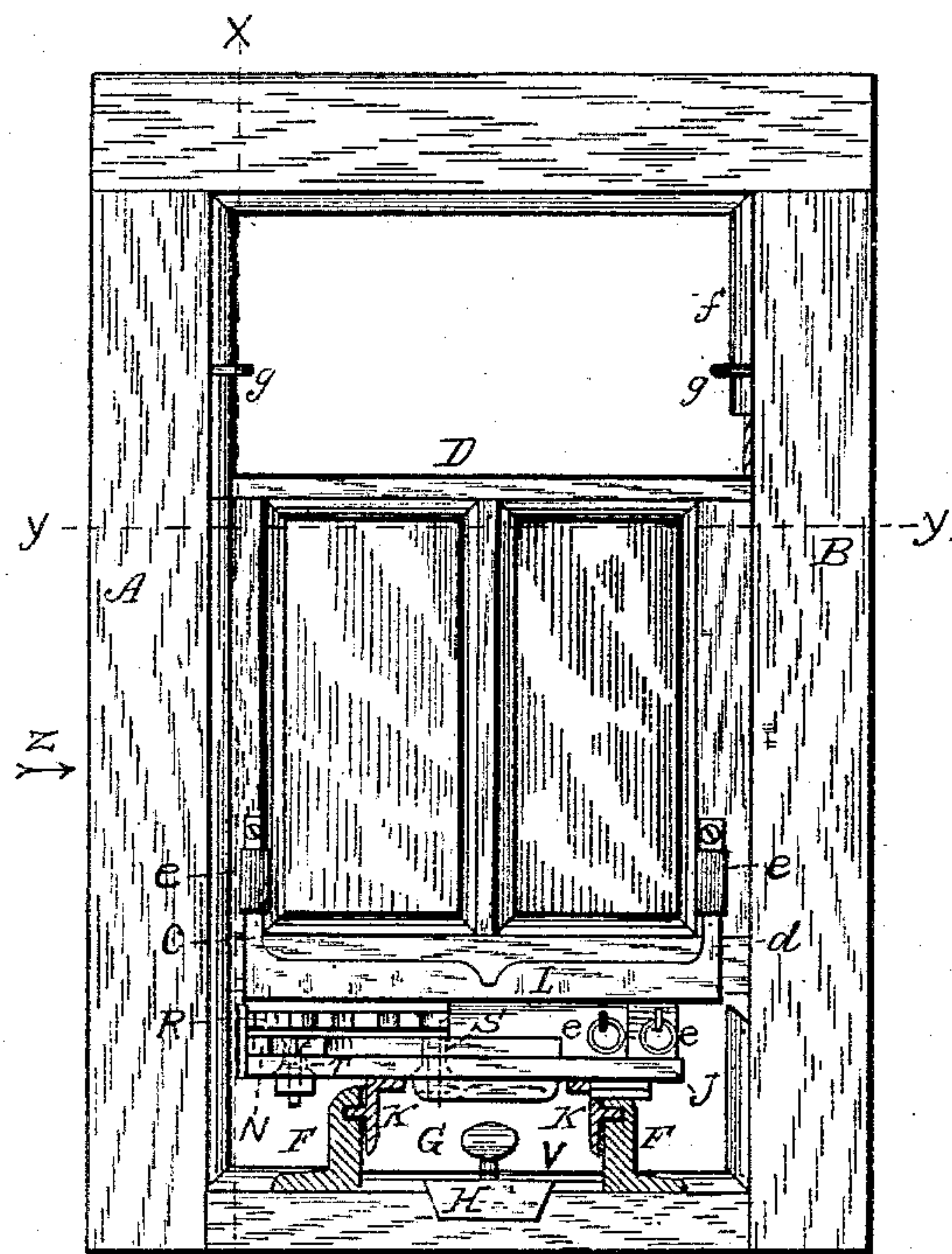


FIG. 2.

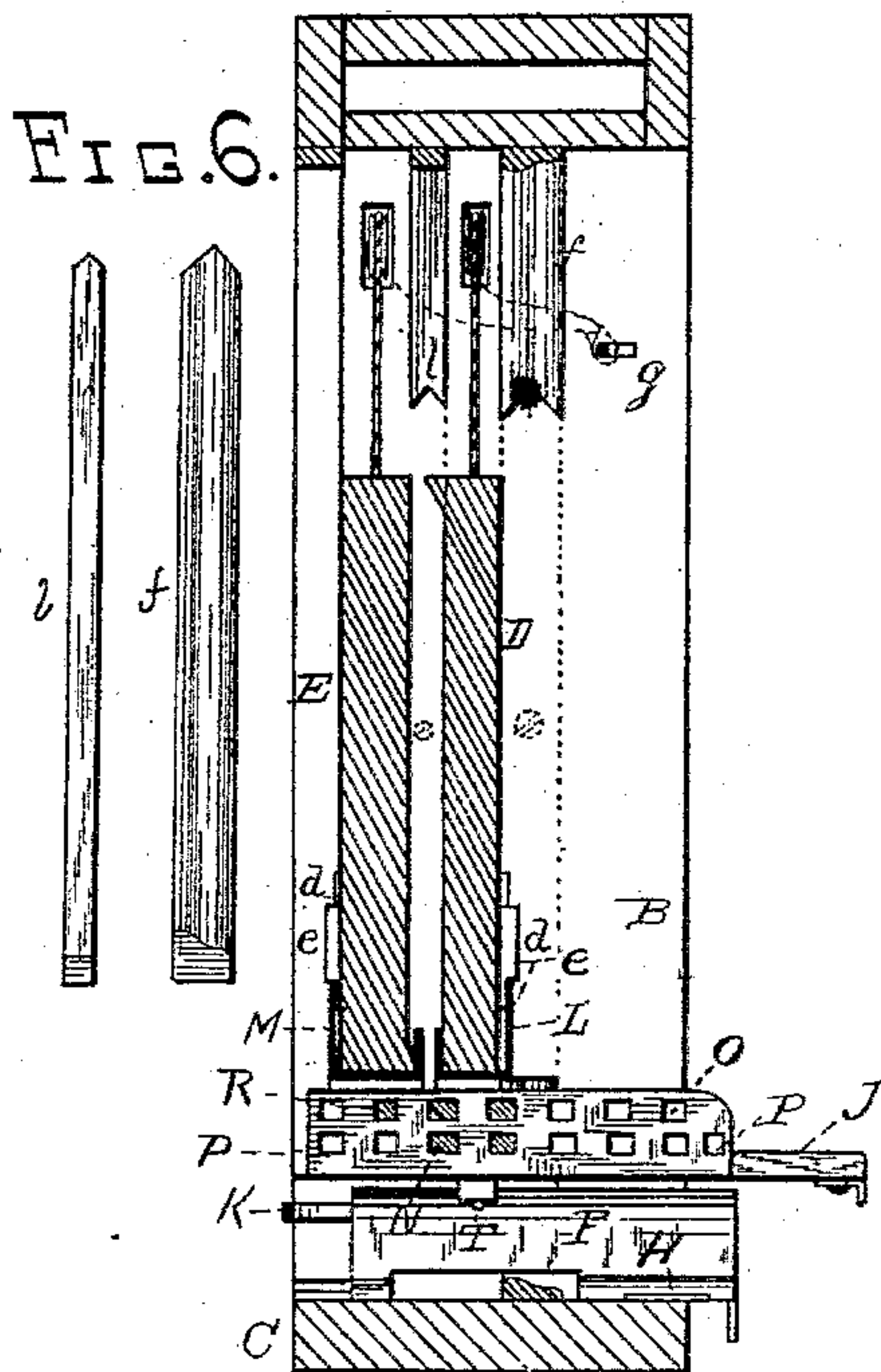


Fig. 3.

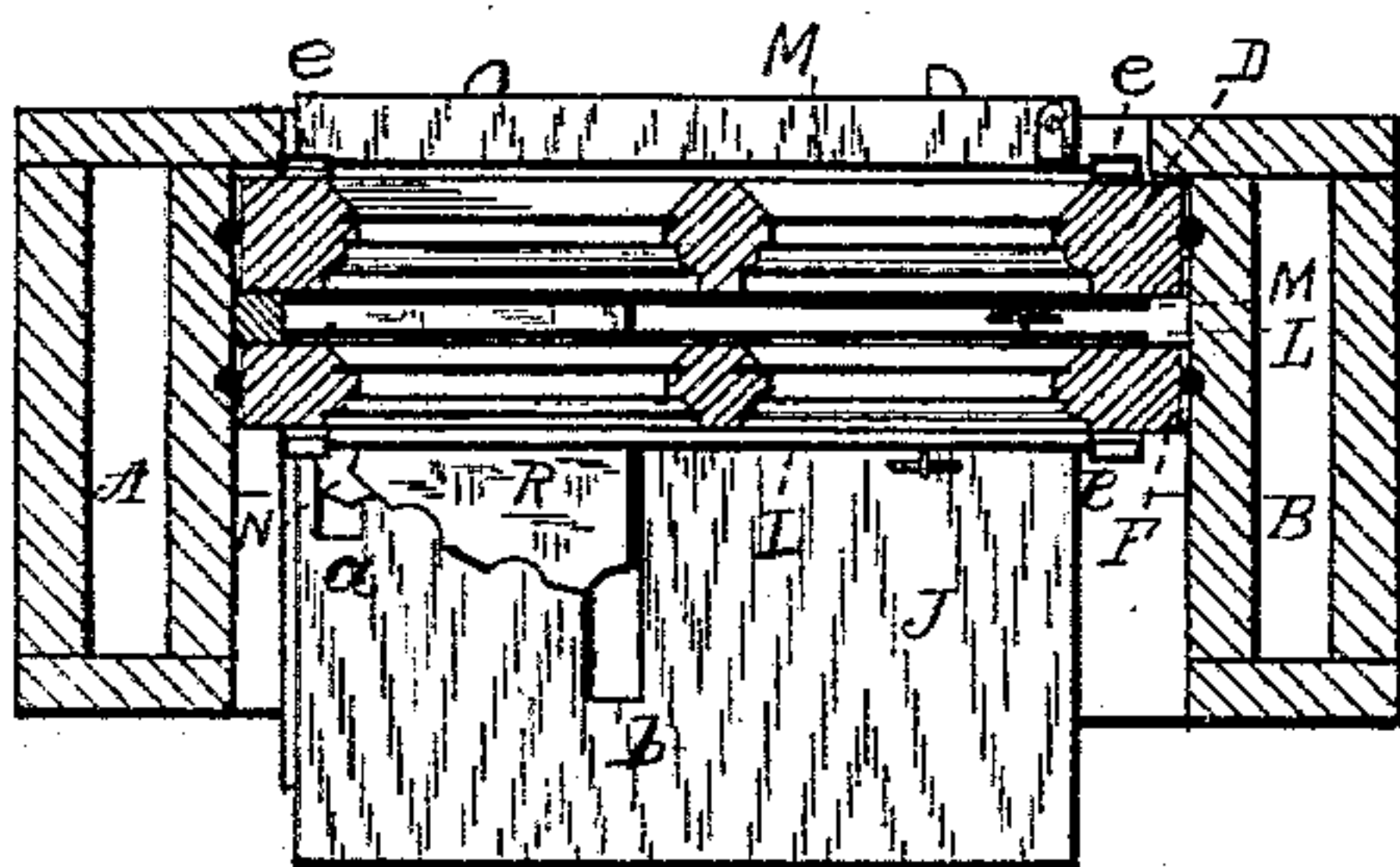


FIG. 4.

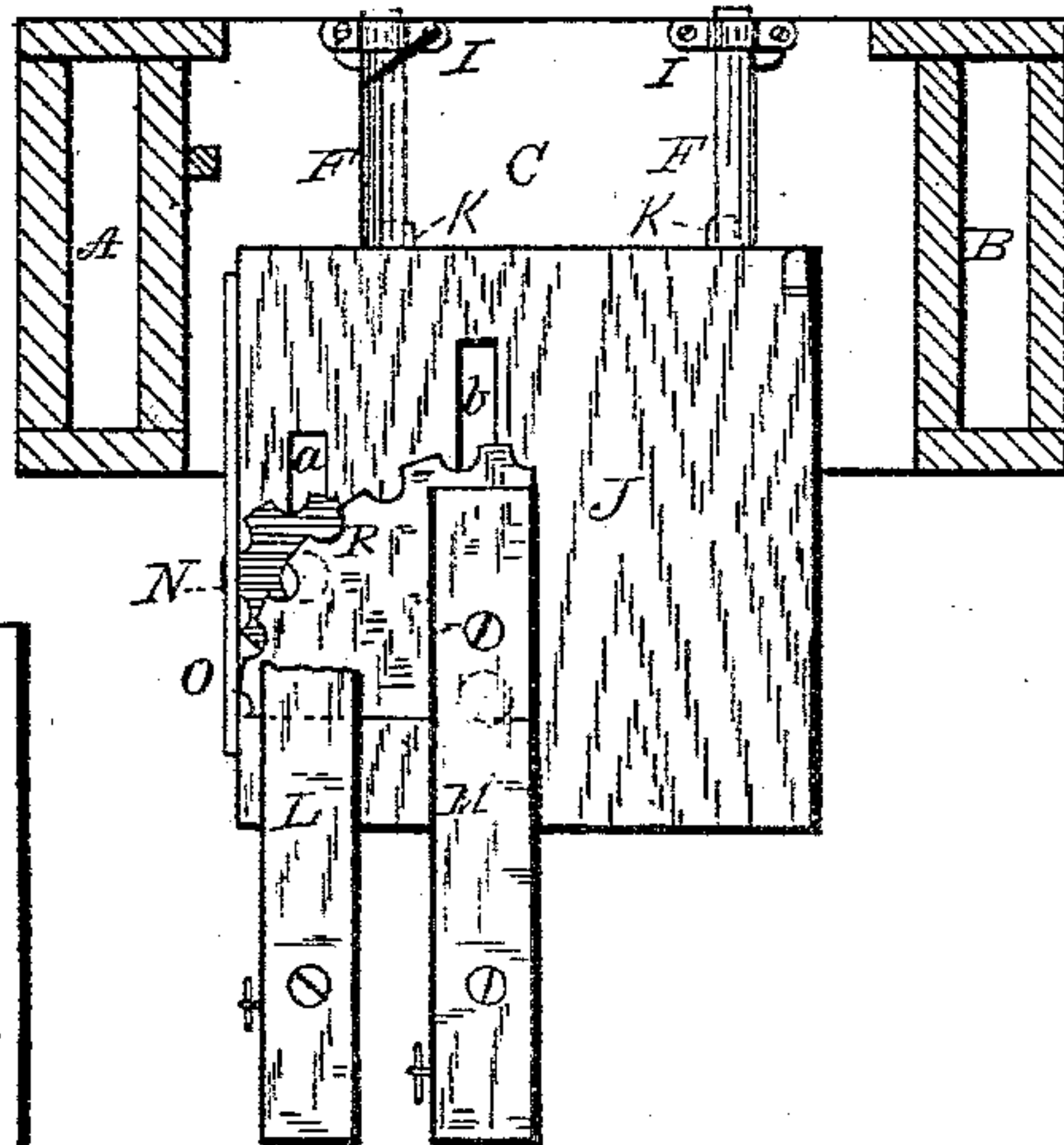
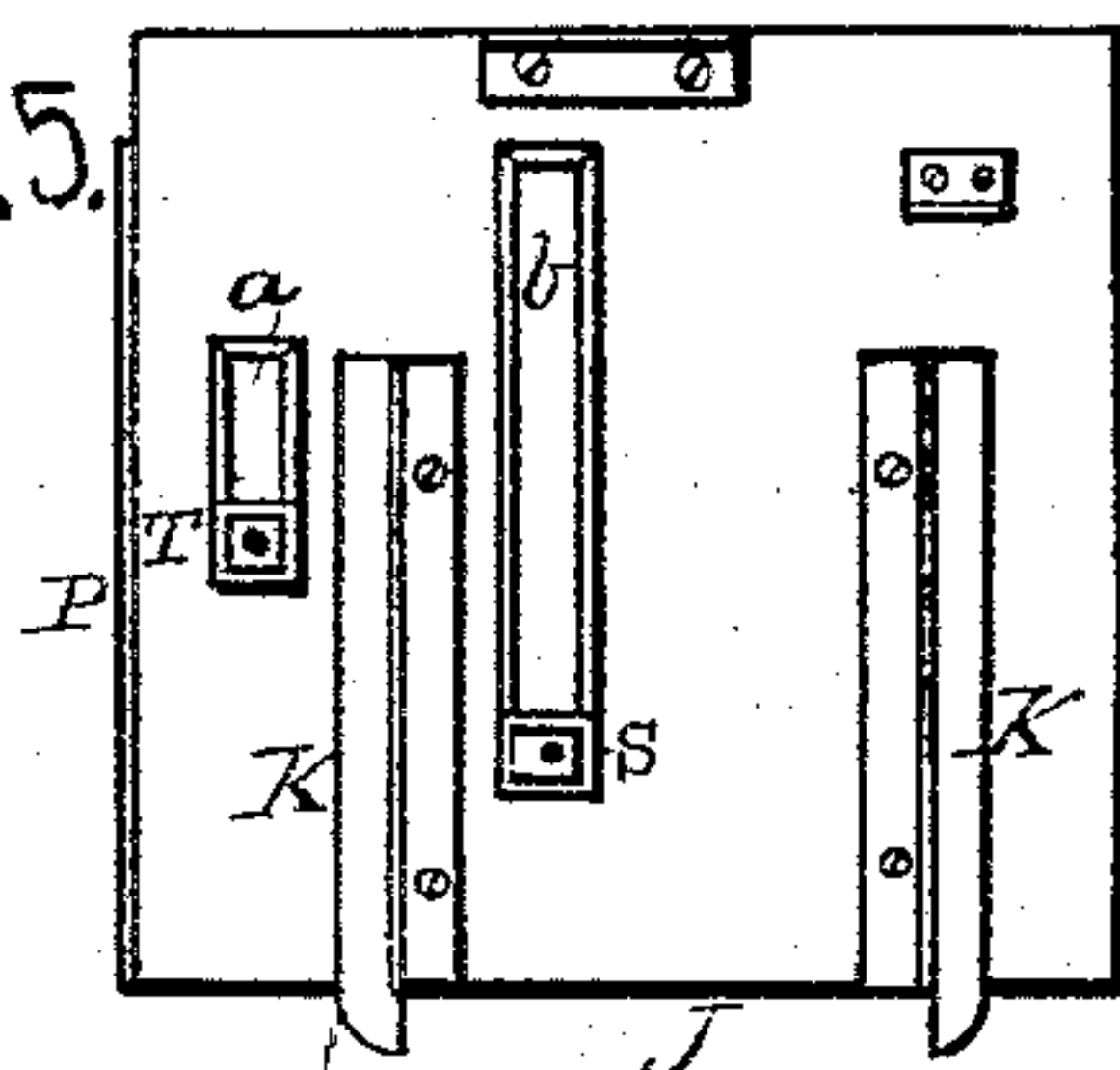


FIG. 5.



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DEVICE FOR REMOVING WINDOW-SASH FROM FRAMES.

SPECIFICATION forming part of Letters Patent No. 318,946, dated June 2, 1885.

Application filed June 30, 1884. (No model.)

To all whom it may concern:

Be it known that we, JOHN BOWBIN and MICHAEL H. CROKER, citizens of the United States, and residents of Chicago, county of Cook, and State of Illinois, have invented new and useful Devices for Removing Sashes from Windows, of which the following is a specification, reference being had to the accompanying drawings, illustrating the invention, in which—

Figure 1 is an elevation of the inside of a window frame and sash with our device in position to commence the removal of the sashes; Fig. 2, a vertical section on line *x*, Fig. 1, looking in the direction indicated by dart *z*; Fig. 3, a horizontal section of the frame and sashes on line *y*, Fig. 1, and a plan or top view of the removing devices; Fig. 4, a plan view of the window-sill and horizontal section of the box-frames with our removing devices in position on the sill; Fig. 5, an inverted plan view of the carriage which supports the sash-chairs. Fig. 6 shows the removed portions of the partition and inside stop.

The purpose of the present invention is to provide more convenient means for removing window-sashes and bringing them to convenient positions for washing them. The means we employ for this purpose consist in swinging chairs which hold the sash, and are so hung to a carriage as to be turned to bring the sash out from the window-frame to convenient positions to be washed. The carriage is supported on a track temporarily fastened to the window-sill, so that the carriage may be drawn out to bring the sashes entirely out from their frames, if so desired. The partition and inside stop of one side of the frame are made in sections, so that their middle parts can be easily removed or placed in position by the manipulation of a screw or stop-pin that the sash may be removed, as before stated.

A B represent the box-frame, C the sill, and D E the sashes, of an ordinary window.

F F represent tracks, which are constructed to be held together by a metal tie, V, and to be held across the sill C by a screw, G, turned through the tie and into sill C, and by sockets I, which engage the outer lower ends of tracks F. The carriage is shown at J, and to its under side are attached tongued slides K K,

which run in grooves in the insides of the tracks F F, and thus guide the carriage backward and forth in the window-frame.

On the top of the carriage J are hung chairs L M for the movement of the sashes, chair L being for the lower sash and chair M for the upper sash. Both of these chairs bear on the carriage J, and the chair L is provided at one end with segmental gear N, which is guided in its turning movement by the lower rack, P, Fig. 2, which is attached to one side of the carriage J, and the chair M is provided with a segment-gear, R, which is guided by the rack O. The pivot for chair L is shown at T, and while it permits the segment N to turn in the rack P it allows the chair to swing to the positions shown at Figs. 3 and 4 by sliding in the slot *a*. The pivot to chair M is shown at S, and it also, by sliding in slot *b*, allows the chair to occupy the positions shown in said figures. Both chairs are constructed with upwardly-projecting spindles *c d*, which enter sockets *e e* on the sash, and are of such length and strength as to support the sashes D E in upright positions, as shown at Figs. 1 and 2, and also when the chairs are at right angles to the frame, as shown at Fig. 4.

The segment-gears which guide the rotary movements of the windows, as shown, are of two sizes. The lower gear, N, being of small dimensions, brings the sash D, when swung out, close to the casing A, while the upper and larger gear, R, guides the movement of sash E to swing on a larger circle, so that it is brought to a position some distance from the other sash, D.

It is proper to state that the construction of ordinary windows allows sufficient play to permit the sashes to have this rotary movement when the stops *l f* are removed from one side only of the casings; but if the sash fit perfectly in their guide-stops, then the stops on both sides are to be removed.

The stops *f l* to the frame are made in sections, and the middle sections are removable to allow the sash to swing.

In order clearly to show the removing devices they are shown much larger in proportion to the window-frame than required in practice, the width of the working device being about one-third the width of the window.

The operation is as follows: Place the track

of the device on the sill, as shown, with the carriage J on the track, the lower sash having been previously raised for this purpose, then bring the sash into the chairs L M. The
5 middle sections of stops *l f* (see Fig. 6) are then removed and the sash swung to positions at right angles to the frame A B, hanging the sash-cords over hooks *g g*, to prevent a strain of the sash. Then the carriage J is drawn to
10 the front so far as will give access to all parts of the sashes.

I claim as new and desire to secure by Letters Patent—

1. The chairs L M, constructed to swing as
15 set forth, and combined with the carriage J

and racks P O, for swinging both sash at a desired angle for cleaning purposes, as specified.

2. In devices for removing window-sashes, the chairs L M, constructed with upwardly-projecting sides to support the sash and to
20 swing, as set forth, in combination with the carriage J, guides K, and track F F for swinging the sash and bringing them in from the frame, as and for the purpose specified.

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Witnesses:

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