

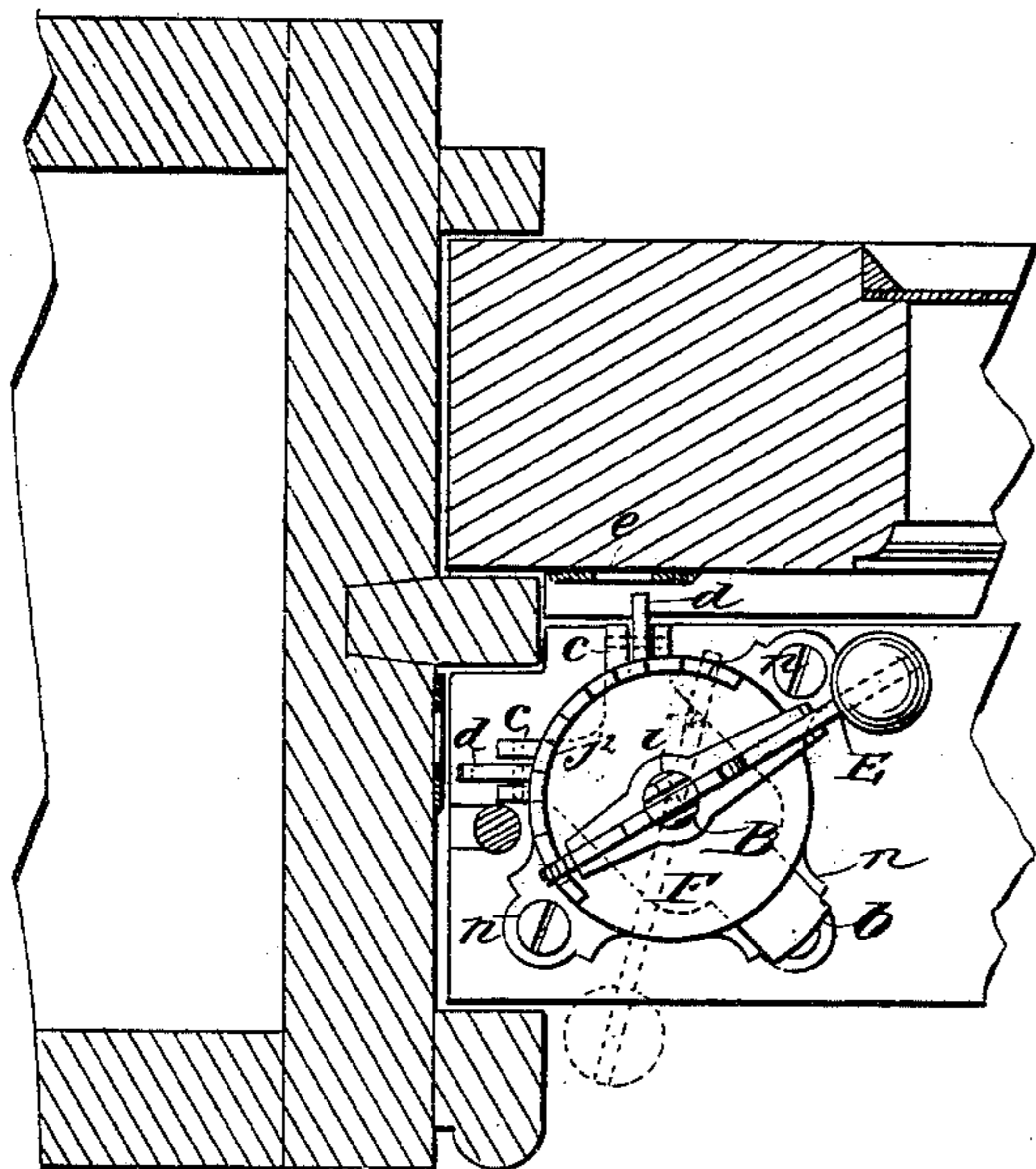
(No Model.)

C. W. NIDA.  
SASH FASTENER.

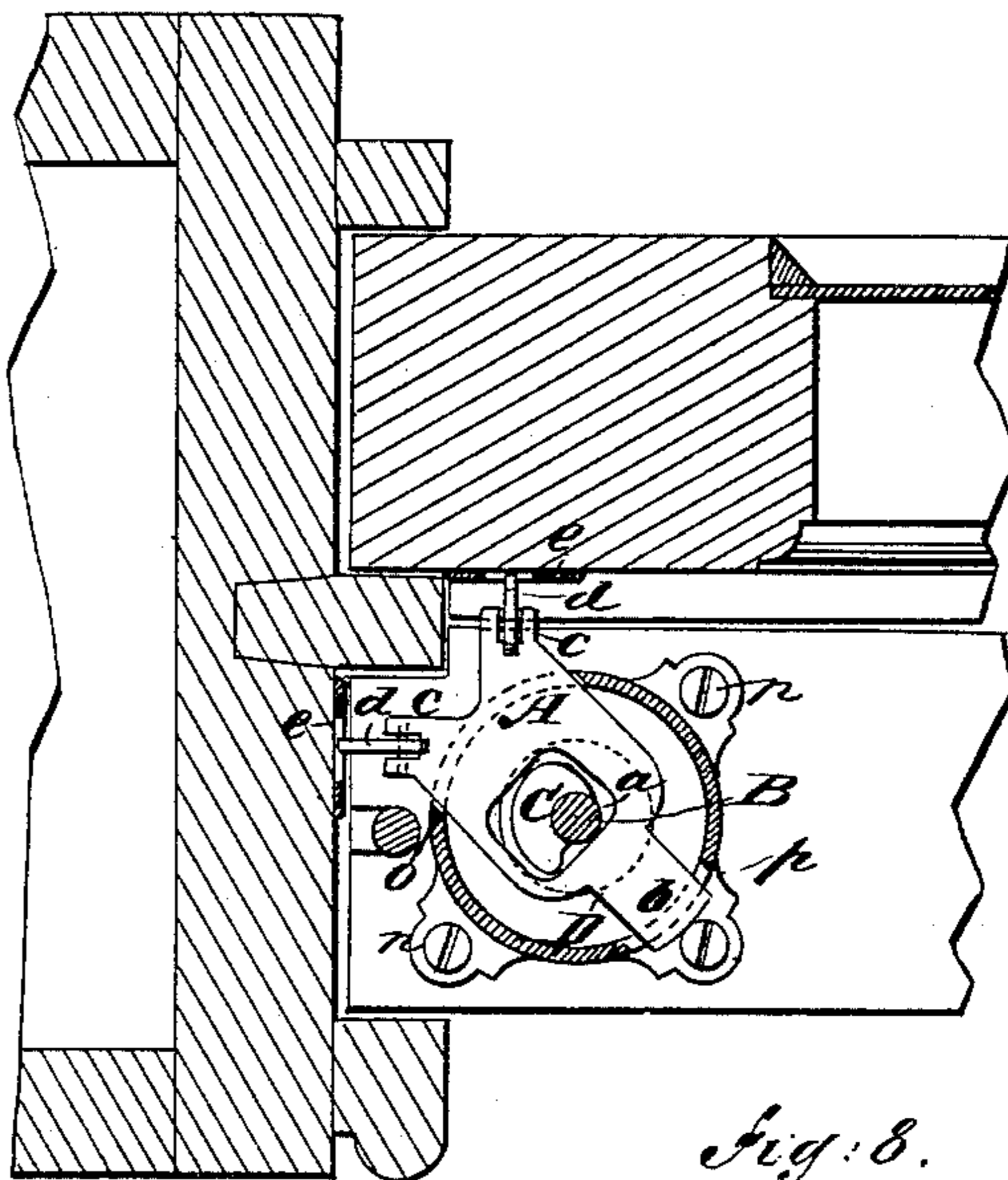
No. 318,576.

Patented May 26, 1885.

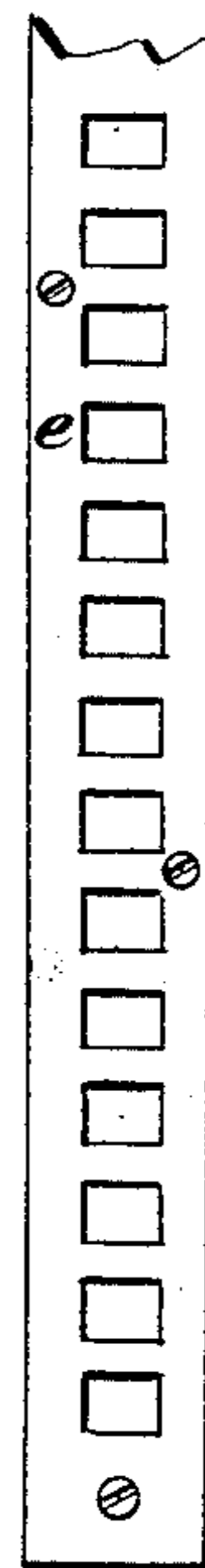
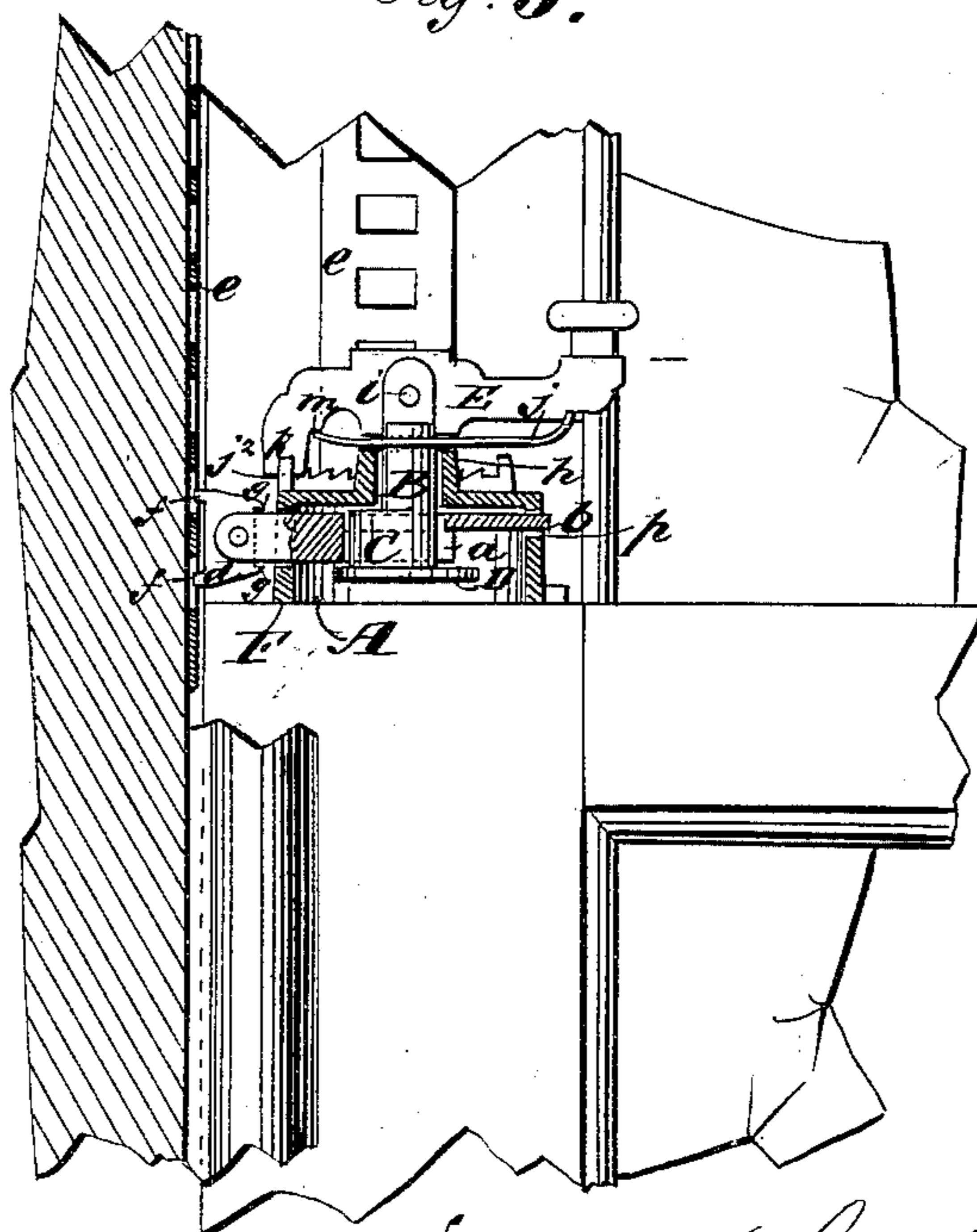
*Fig: 1.*



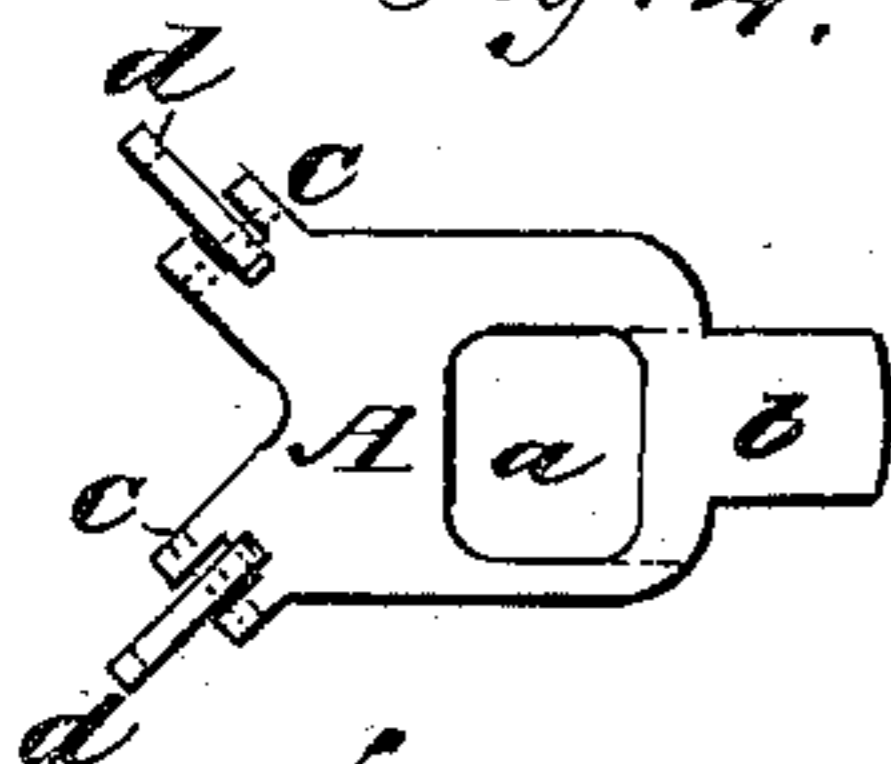
*Fig: 2.*



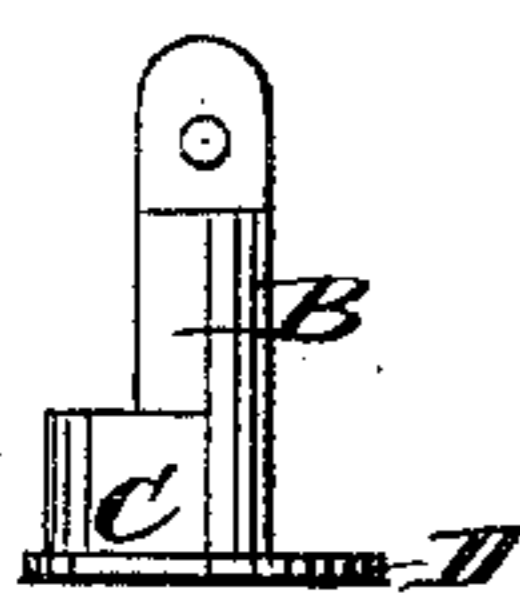
*Fig: 3.*



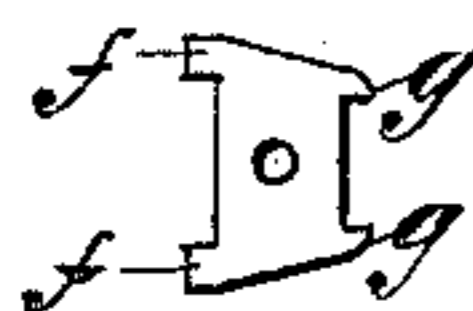
*Fig: 4.*



*Fig: 5.*



*Fig: 6.*



WITNESSES:

*F. M. Apple.*  
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INVENTOR:

*Chas. W. Nida*

*Fig: 7.*



# UNITED STATES PATENT OFFICE.

CHARLES W. NIDA, OF NEW YORK, N. Y.

## SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 318,576, dated May 26, 1885.

Application filed January 15, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES W. NIDA, of New York city, in the county and State of New York, have invented a new and useful  
5 Improvement in Sash-Fasteners, of which the following is a full, clear, and exact description.

The object of my invention is to furnish a reliable sash-fastener, which will lock the upper and lower sashes of a window by one operation in a closed or open position, and which  
10 cannot be unfastened by introducing a knife or similar contrivance between the sashes from outside the window, and that can be applied to any window without cutting or injuring the same in any way, and that shall be simple in  
15 construction, ornamental in appearance, effective in operation, and can be applied or attached without the aid of skilled labor.

My invention relates to a locking device  
20 for window-sashes wherein the projection or throw of a slotted bolt locks both the upper and lower sashes at the same time, and locks the sashes in an open or closed position by means which will be hereinafter fully de-  
25 scribed and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

30 Referring to the drawings, Figure 1 is a horizontal section through the upper sash of the window, parts being broken away, showing plan view of sash-fastener as it appears applied on the meeting-rail of lower sash.  
35 Fig. 2 is a horizontal section through upper sash, with the casing of sash-fastening bolt in section, showing my sash-fastener in a locked position. Fig. 3 is a front view, partly in section, parts of upper and lower sashes being  
40 broken away, showing the racks and fastener attached to sashes and casing. Fig. 4 is a bottom plan view of my doubly-acting bolt or fastener. Fig. 5 is a side view of cam-spindle, to which actuating-lever is pivoted and used  
45 to project and retract the bolt or fastener. Fig. 6 is a detail of an attachment to bolt. Fig. 7 is a detail of a spring placed under actuating-lever. Fig. 8 is a detail showing front view of one of the racks.

50 A is a bolt with a slot or opening, *a*, formed in it about midway of its length, said slot receiving the cam by which bolt is projected or re-

tracted by the cam working against the faces of said opening. Bolt A is also provided with a tail-piece, *b*, which acts as a guide to the slid- 55 ing movement of bolt by passing through a slot in bolt-casing. Bolt A is also forked at its front end, or rather has two angular projections, *c*, at its forward end, said angular projections being at right angles to each other, 60 and are both slotted to receive and hold in said slots pivoted catches or pawls *d*, one of said pawls in the slot of each projection *c*. Said pawls or catches *d* engage with racks *e* when bolt is shot. The racks *e* are attached 65 one to the stile of upper sash and extending from meeting-rail upwardly ten or twelve inches, and the other to the window jamb or casing close to the parting-strip, and extending from about top of meeting-rail upwardly 70 about six or eight inches. These racks are thin strips of metal provided with necessary screw-holes for attachment, and a number of equidistant perforations, preferably rectangular, to be stamped out of or otherwise formed 75 in said metallic strips.

The pawls *d* are pivoted, as before stated, in the slotted projections *c* of front portion of bolt A in such a manner that a forward movement of bolt A will cause the teeth *f* on their 80 front or outer edges to engage or enter some of the perforations in both racks at the same time and by the same movement, the teeth *f* being far enough apart to admit each individual tooth entering two succeeding holes or 85 perforations in said racks; or, if only one of the teeth *f* should enter, the catches or pawls *d* being centrally pivoted and swinging freely on said pivot, the slightest movement given to sash would cause the other tooth or forward 90 edge of catches *d* to enter next perforation in rack and cause it to firmly bind therein; or, if by mischance or carelessness the teeth *f* should not enter any of the perforations in either rack by not being in line with said per- 95 forations when bolt is shot, so that the teeth *f* will rest on solid portion of rack, the slightest vertical movement of sashes will cause the catch *d* to swing on its pivot by the friction of solid portion of rack against the teeth *f* 100 until either of the teeth *f* meets a perforation, in which it will be forced to enter and bind. To prevent catches *d* from swinging backwardly too far in such a movement I form two:

additional teeth, *g*, on the rear edges of said catches, at top and bottom of same, which, while allowing a slight rotary movement to catches *d*, will bring up solidly against the body of bolt A, directly behind the slots in which said catches *d* are pivoted, as soon as one of the teeth *f* has entered a perforation, and thus lock the sashes, even if but one of the teeth *f* in each catch has entered the respective racks.

From the above it will be seen that my fastener will automatically lock the sashes if any attempt to open the window from the outside is made, even when not set properly.

B is a spindle on which is formed a cam, C, for moving the bolt A, a bottom plate, D, for supporting bolt or fastener A, and a slotted apex to receive the pivoted actuating-lever E. Said spindle is upwardly introduced through slot *a* in bolt A until its bottom plate, D, strikes against the bottom face of bolt A, the cam C in slot *a* and the spindle proper passing upwardly through a neck, *h*, formed on bolt-casing F and projecting therefrom. The pin *i* passes through actuating-lever E and the slotted apex of spindle B, and in connection with a spring, *j*, placed between top of said neck of casing and the bottom edge of lever E, holds all in proper position.

The casing F is provided with a slot, *p*, for the tail-piece *b* of bolt A, and also a slot, *o*, for the front portion of bolt A, and a number of ratchet-teeth, *j*<sup>2</sup>, are arranged in a semicircle on one-half of the top edge of the top plate of said casing. Said ratchet-teeth are to receive and hold the heel *k*, formed on the rear portion of the pivoted actuating-lever E to lock the same.

The spring *j* before mentioned has two semicircular openings of a size sufficient to allow spring to be slipped over the slotted apex of spindle B, and the solid portion or bridge between the openings to rest in bottom of slot in said apex of spindle B. The rear end of spring will rest under a shoulder, *m*, in lower edge of lever E, and the forward end of spring will be bent up and forked or notched to receive bottom edge of said lever E, so as to exert a constant upward pressure against lever E and press the heel *k* of lever E into one of the ratchet-teeth *j*<sup>2</sup> formed on bolt-casing.

The lever E is provided also with a button on the forward part of its top edge. By pressing on this button the forward part of centrally-pivoted lever E and spring *j* is depressed and the heel *k* of lever E raised out of ratchet-teeth *j*<sup>2</sup>. The heel *k* of lever E being now disconnected from ratchet-teeth may be swung around in a semicircle, as shown by dotted lines in Fig. 1, revolving its attached cam C and bottom plate, D, and causing the bolt A to be shot or retracted at will. The button being released the spring *j* will raise front end of lever E and cause the heel *k* to drop into one of the notches or ratchet-teeth *j*<sup>2</sup> and lock bolt A in any desired position.

To put the fastener together, the bolt A is

slipped in casing F, tail-piece first, through slot *o* until tail-piece *b* projects through its own slot *p*. The spindle B is then introduced upwardly through slot in bolt A until the bottom or supporting-plate, D, meets bottom face of bolt A, the spindle B proper passing up through neck *h* of casing F and projecting from top of neck *h*. The spring *j* is now placed over slotted apex of spindle B, as before described, lever E inserted in slotted apex of spindle B, and the forward portion of bottom edge of lever E resting in notched forward end of spring *j*, and the pivot-pin *i* being placed through slotted apex of spindle B, and lever E fastens all together.

The slot *p*, through which tail-piece *b* of bolt A passes, is made wider than tail-piece *b*, to allow of a slight side movement of forward portion of bolt in case there should be a difference in the dimensions of various windows, so that the catches *f* can enter the racks on window-stile and window-casing.

The fastener should be attached on meeting-rail of lower sash, so that a line drawn at an angle of about ninety degrees from the inner corner of parting-strip will pass centrally through the bolt A, and the projections *c* will stand at right angles to lines of sash, as represented in drawings. By this arrangement it is obvious that a window can be left partly open at top and bottom for ventilation, &c., and the sashes securely locked in said open position, so that an outsider could not enter, and it will, also, securely lock the sashes when both are closed, or one closed and one open.

The rack fastened to the window-casing, being made thin, gives plenty of play to the movement of lower sash.

It is evident that the catches or pawls *d* might be dispensed with and the angular projections *c* made to enter perforations in racks, if proper care was exercised in shooting the bolt to see that they both entered a perforation in either rack; but to guard against any such carelessness I have thought it better to add the pawls *d*, to automatically lock the sashes, even if fastener is not properly set, by any attempt to move either sash from outside the window.

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

1. In a sash-fastener, the combination, with a casing, of a bolt in said casing provided with an aperture, a spindle arranged to turn in the casing and provided on its lower end with a cam and a plate below the cam, and a lever pivoted in the apex of said spindle and adapted to turn the spindle, substantially as herein shown and described.

2. In a sash-fastener, the combination, with the casing D, of the spindle B, the bolt A, the lever E, pivoted in the top of spindle B, and a spring, *j*, placed below the lever on said spindle, substantially as herein shown and described.

3. The slotted sliding bolt of the sash-fastener, having locking-projections at its forward

end at right angles, or thereabout, to each other, and provided with pivoted toothed catches arranged for independent operation in relation with the sash and window-frame, substantially as shown and described.

4. A bolt, A, provided at its forward end with angular projections *c*, a centrally-located slot or opening, *a*, and a guiding tail-piece, *b*.

5. The combination, with a casing, of a bolt, A, and catches *d*, provided with teeth on their forward and rear edges, substantially as shown and described.

6. The combination, with said bolt, spindle, and casing, of a lever pivoted in apex of spindle and provided with a button at one end for operating and a heel at the other acting as a pawl, a spring and two perforated metallic racks attached and operating in the manner heretofore shown and described.

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Witnesses:

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F. MCARDLE.