

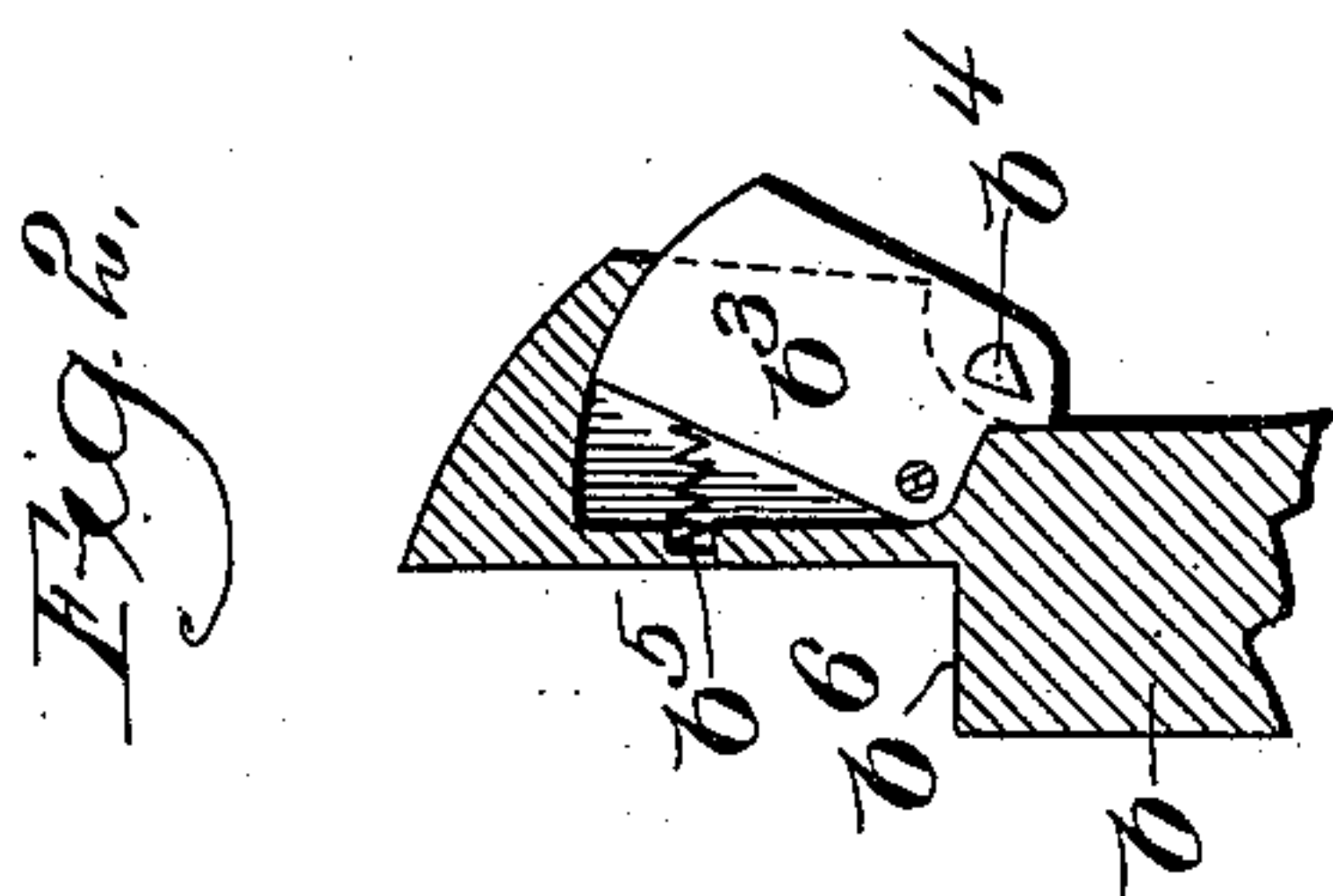
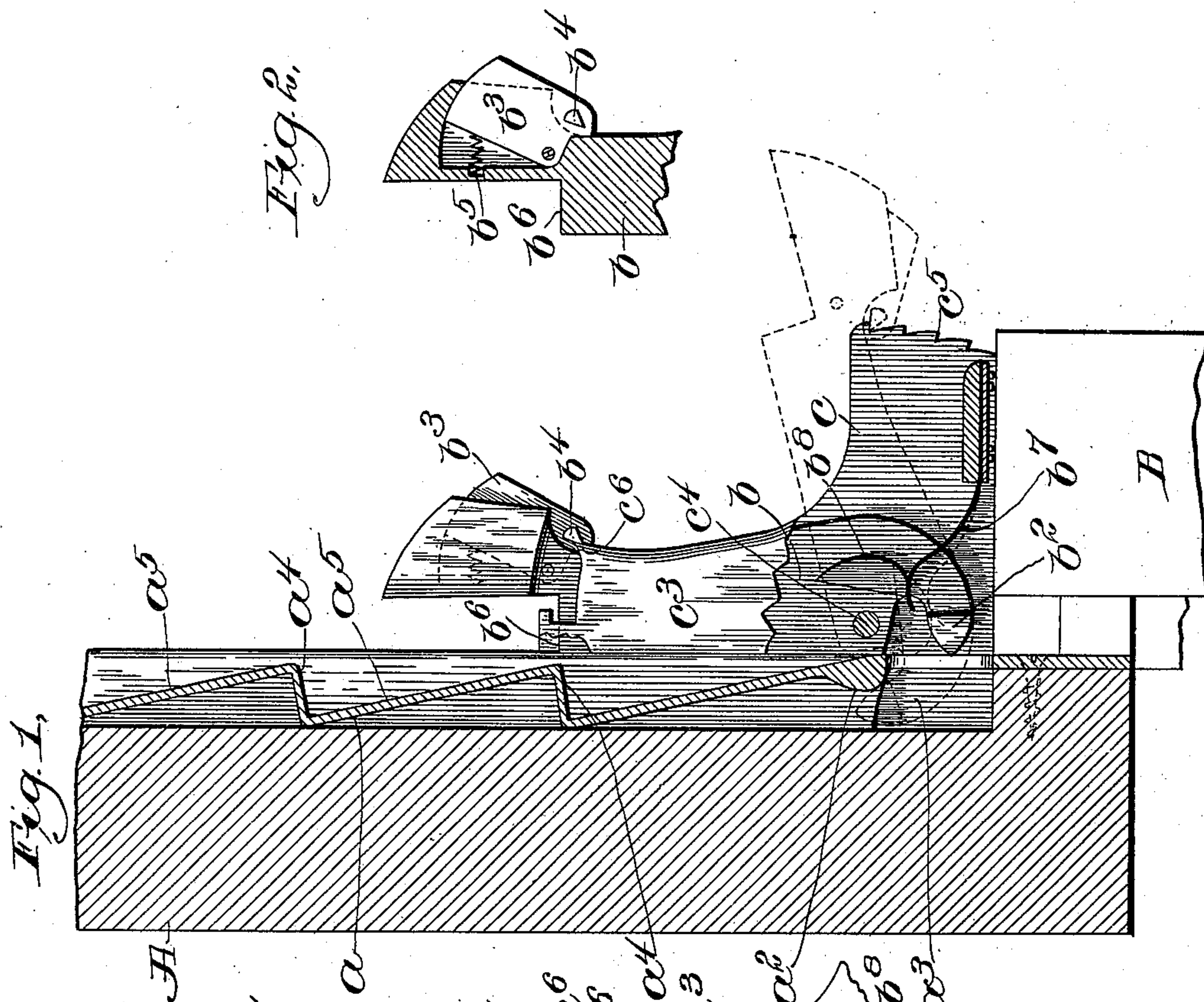
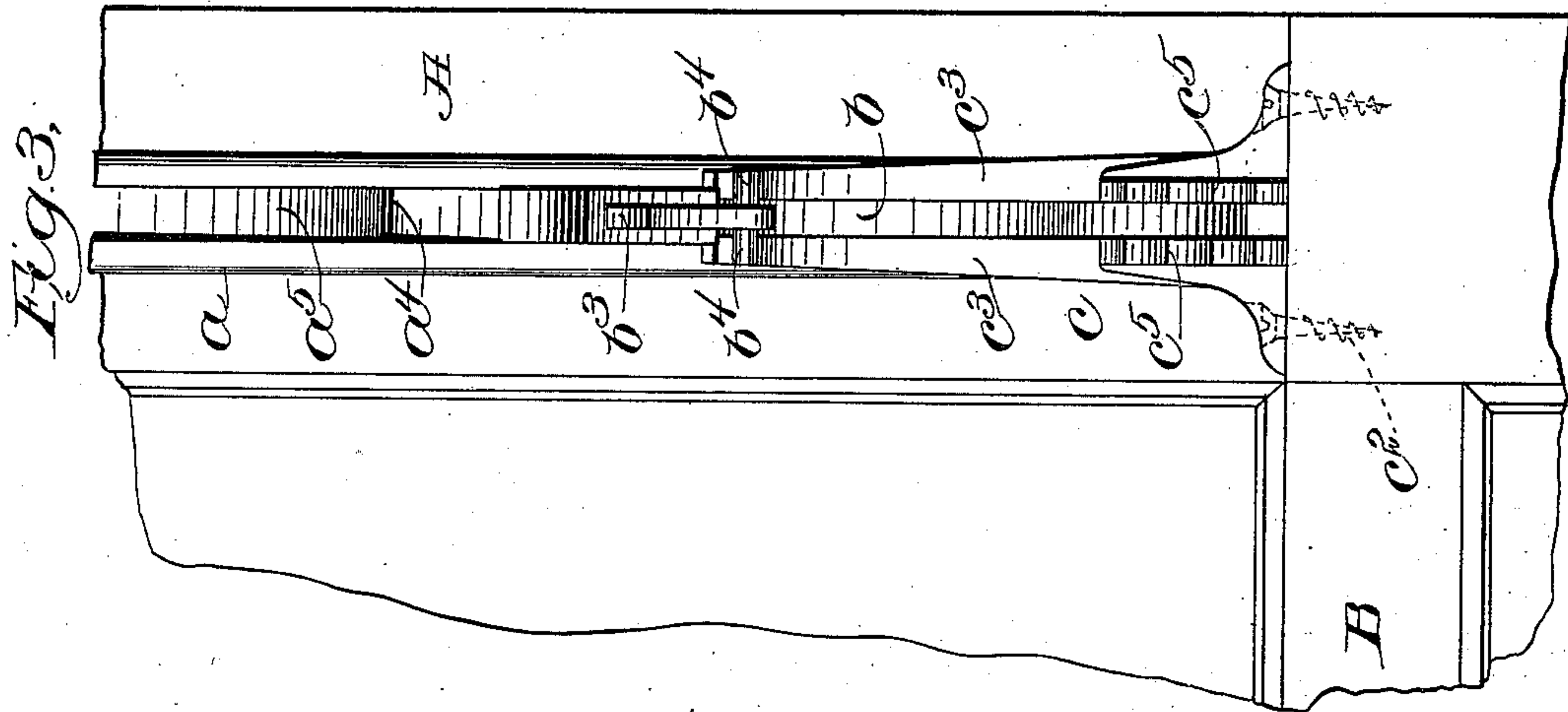
No. 661,131.

Patented Nov. 6, 1900.

J. M. PORTER.  
SASH FASTENER.

(Application filed July 30, 1900.)

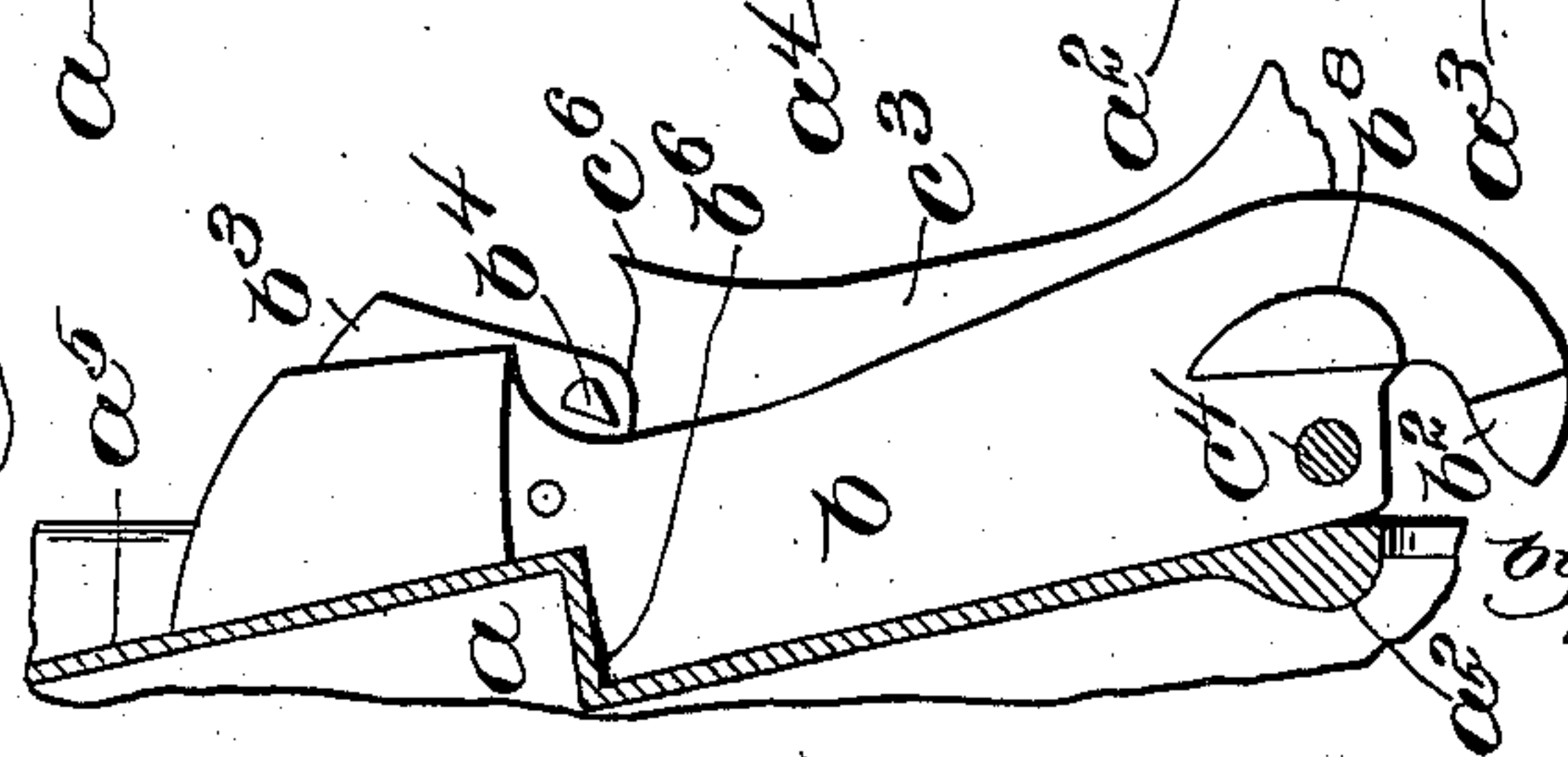
(No Model.)



Witnesses:

Jas. J. Maloney.  
Nancy P. Ford.

Fig. 4.



Inventor,

John M. Porter,

by J. Paul & J. W. Swann,  
Attys.



# UNITED STATES PATENT OFFICE.

JOHN M. PORTER, OF BOSTON, MASSACHUSETTS.

## SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 661,131, dated November 6, 1900.

Application filed July 30, 1900. Serial No. 25,248. No model.

*To all whom it may concern:*

Be it known that I, JOHN M. PORTER, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement  
5 in Sash-Fasteners, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The present invention relates to a sash-  
10 fastener and is embodied in a device which is arranged to securely fasten the meeting-rails together when the window is closed and also to draw them toward one another and make a tight joint in cases where the sashes  
15 are loose in the window-frame. The fastening device is also arranged to constitute means for fastening the sashes when the window is partly open, so as to prevent a further opening movement thereof, it being  
20 practicable, therefore, to fasten the window in a partly-open position for purposes of ventilation without leaving the window unguarded.

In accordance with the invention the stile  
25 of the upper sash is provided with a fastening-plate having an engaging portion for fastening the window wholly closed and one or more additional engaging portions for fastening the window when partly open, and  
30 the meeting-rail of the lower sash is provided with a locking-lever pivoted in a frame secured to said meeting-rail and arranged to have two fastening positions—one for the window fully closed and one for the window  
35 partly closed—and an intermediate position in which the sashes are not connected together. The said lever is provided at its lower end with a hook-shaped projection which is adapted to enter a recess in the fastening-plate upon the upper sash, the said  
40 recess being undercut and the hook portion so related to the pivotal support of the lever that as the said lever is turned upon its pivotal support the said hook will engage the  
45 inner wall of said undercut recess and tend to draw the upper and lower meeting-rails together as well as to fasten the same. The opposite end of the lever is provided with an engaging shoulder adapted when the said lever  
50 is turned in the opposite direction upon its pivot to engage a similar shoulder in the fastening-plate and also prevent an opening

movement of either sash. The plate is preferably provided with several of such shoulders, between which there are inclined faces, 55 so that the sash can be fastened in one or more positions, the fastening, while preventing any movement of the sashes, not preventing the window from being closed, since the lever, which is held on a spring in engagement with the fastening-plate, can travel 60 along inclined surfaces from one shoulder to the next in the closing movement of the sash. By so positioning one of the said shoulders that the lever will engage the same when the 65 window is closed the said device constitutes a supplemental locking device, so that if the window is closed after being fastened in a partly-open condition and by carelessness the lever is not moved to lock the window in the 70 ordinary way the window will still be prevented from being opened, the lever in either of its extreme positions constituting an effectual locking device. The lever is acted upon by a spring, which tends to hold the 75 same in its supplemental locking position, and in order to free the sashes a catch is provided to hold the lever in an intermediate position, such that neither end thereof will engage the fastening-plate. 80

Figure 1 is a vertical section of the upper stile, the fastening-plate, and the lever-supporting frame on the lower stile, the locking-lever being mainly shown in elevation. Fig. 2 is a sectional detail of the upper part of 85 the locking-lever. Fig. 3 is a front elevation, partly in section, of the locking device; and Fig. 4 is a detail view showing the locking-lever in its supplemental locking position.

The upper stile A is provided with a locking-plate  $\hat{a}$ , which may be set into or otherwise secured to the front of the said stile, the said locking-plate having at its lower end an engaging surface  $a^2$ , beneath and behind 95 which is a recess  $a^3$  to receive the hook-shaped end  $b^2$  of the locking-lever  $b$ . The said locking-lever is pivotally connected with a supporting-frame  $c$ , secured, as by screws  $c^2$ , Fig. 3, to the top of the meeting-rail B of the 100 lower sash, the said frame having two vertical members  $c^3$ , between which the lever is supported, the pivot  $c^4$  extending across from one of said members to the other through a suitable opening near the lower end of the



lever. As shown in Fig. 1, the lever  $b$  is in a neutral position, such that no part of said lever will engage the locking-plate  $a$ , the sashes being free to move one past the other, so that the window can be opened. The pivotal support  $c^4$  is so positioned relative to the lever that when said lever is moved from the position shown in full lines, Fig. 1, to the position shown in dotted lines, Fig. 1, the hook  $b^2$  will enter the recess  $a^3$  and will engage the surface  $a^2$ , the final movement of said lever tending to crowd the said surface toward the pivotal support of the lever, thus drawing the meeting-rails of the sashes together. There is, moreover, a considerable upward movement of the said hook as the lever is swung on its pivot, so that in cases where the meeting-rails are not exactly on the same level there will still be room for the hook to enter the recess, while the movement of the lever will tend to crowd the said meeting-rails into their proper position relative to each other. To fasten the lever in its locking position, the said lever is provided with a latch  $b^3$ , pivoted to the end thereof and provided with latching projections  $b^4$ —one on each side—adapted to engage ratchet-teeth  $c^5$ , formed at the rear of the frame  $c$ , so that as the said lever is pushed into locking position the said latch, which is provided with a spring  $b^5$ , will ride over the said teeth and be automatically fastened thereby. As indicated, there are several of such teeth, so that if the meeting-rails will not come together properly and the lever cannot be fully pushed home it will nevertheless be fastened in such a position as to securely lock the window.

In order that the window may be left partly open for purposes of ventilation and still prevented from any further opening movement from the outside, the lever  $b$  is also arranged to constitute a supplemental locking device for this purpose, the opposite end of said lever from that which is provided with the hook  $b^2$  having a shoulder  $b^6$ , which is adapted to engage a shoulder  $a^4$ , formed in the plate  $a$ , there being preferably a number of said shoulders arranged in the form of ratchet-teeth, as indicated. When, therefore, the lever is swung on its pivot in the direction opposite to that which has been described, the shoulder  $b^6$  will lie in the path of the shoulders  $a^4$ , the face of the lever lying against one of the inclined surfaces  $a^5$ , which extend from one shoulder  $a^4$  to the next, as shown in Fig. 4. The lever is provided with a spring  $b^7$ , the specific construction of which will be hereinafter described, the said spring being so arranged as to throw the lever toward the plate  $a$  and cause the shoulder  $b^6$  to lie in the path of the shoulders  $a^4$ . The window, therefore, can be opened to a certain extent and the locking-lever thrown into engagement with the plate  $a$ , it being obvious that while the window can be closed without manipulating the locking device it is impossible to open it beyond a certain extent be-

cause the shoulder  $b^6$  will come into engagement with one of the shoulders  $a^4$ .

To free the sashes, or, in other words, to hold the lever in an intermediate unfastening position, the upper portion of the frame  $c$  is provided with projections  $c^6$  in the path of the latch projections  $b^4$ , the said shoulders being so positioned, as indicated in Fig. 1, that when the latch projections  $b^4$  are in engagement with the outer surface thereof the lever will be held in an intermediate position, the body of the lever being parallel with the plate  $a$  and no part of the said lever projecting beyond any of the engaging portions of said plate. By pressing upon the front of the latch member  $b^3$  the projections  $b^4$  will be lifted out of engagement with the shoulders  $c^6$ , and the lever will then spring into its supplemental locking position, and if the window is shut it will be locked automatically even if the usual manipulation of the locking device is forgotten.

The upper portion of the lever  $b$ , which is provided with a recess to contain the latch member  $b^3$ , is made, as shown, in the form of a flat tongue one surface of which when the lever is in its supplemental locking position will lie in engagement with the plate  $a$ , so that it is practically impossible for any one from the outside when the window is partially open to insert a stick or wire behind the said tongue for the purpose of pulling the lever out of engagement with the plate.

The spring which acts upon the locking-lever is so arranged as to act mainly when the said lever is in its supplemental locking position, there being substantially no tension upon the spring when the lever is in its main locking position, in which position it is positively fastened. To this end a pair of steel springs are employed, the bodies of said springs being fastened to the lower part of the frame  $c$  and the ends thereof bearing against cam-shaped projections  $b^8$ , formed on opposite sides of the lever, the said projections being so shaped that as the lever is moved toward its main locking position the points where the springs bear on said surfaces will be nearly in line with the pivotal support of the lever, so that the spring has substantially no tendency to turn or swing the lever. When, therefore, the lever is disconnected from the latching-shoulders  $c^5$ , it will not tend to fly upward into its other position, the spring not beginning to act to any extent until the lever approaches its vertical position, where the spring is needed to hold it in its supplemental locking position.

I claim—

1. A sash-fastening, comprising a fastening-plate adapted to be secured to the stile of the upper sash and provided with a recess or opening, and one or more shoulders above said recess; and a single fastening member having a pivotal support upon the meeting-rail of the lower sash, one end of said fastening member being adapted to engage with said recess and the other end of said fastening



member being adapted to engage with said shoulder to prevent a further movement of either sash in the direction to open the window, substantially as described.

5 2. In a sash-fastening, a fastening-plate adapted to be secured to the stile of the upper sash and provided at its lower end with a recess having an engaging portion at the front thereof, and above said recess with one or more shoulders; a locking-lever pivotally supported in a frame secured to the meeting-rail of the lower sash; a hook portion at the lower end of said lever adapted to enter said recess and engage the engaging surface at the front of the same when said lever has been moved in one direction upon its pivot; means for fastening said lever to the frame at the end of such movement; and an engaging shoulder at the opposite end of said lever adapted when the lever is moved in the opposite direction to engage one of the shoulders above the recess, substantially as described.

3. A sash-fastening comprising a fastening-plate adapted to be secured to the stile of the upper sash and provided with an engaging portion and one or more shoulders above said portion; a single fastening member having a pivotal support upon the meeting-rail of the lower sash, one end of said fastening member being adapted to engage with said engaging portion, and the other end of said fastening member being adapted to engage the said shoulder; and a spring having a bearing on said member and so shaped as to bear against the same substantially in line with its pivotal support when said member engages said en-

gaging portion and substantially out of line with said pivotal support when said member engages said shoulder, substantially as described. 40

4. In a sash-fastening, a plate secured to one sash and having a series of shoulders with inclined surfaces extending from one shoulder to the next; a lever connected with the other sash and provided with a shoulder to engage said plate; a spring for forcing said lever into engagement with said plate; and a fastening-catch to hold the said lever out of engagement with said plate, as set forth. 50

5. In a sash-fastening, a plate secured to the upper sash and having a series of shoulders with inclined surfaces extending from one shoulder to the next and a recess below said shoulders; a lever connected with the other sash and provided with a shoulder to engage the shoulders on the plate; a spring for forcing said lever into engagement with said plate; a fastening-catch pivotally connected with said lever; a shoulder cooperating with said catch to hold said lever out of engagement with said plate; a locking projection at the opposite end of said lever to engage the recess below the shoulders on the plate; and one or more engaging portions to cooperate with said catch when said locking projection is engaged with said recess, as set forth. 65

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN M. PORTER.

Witnesses:

H. J. LIVERMORE,  
JAS. J. MALONEY.