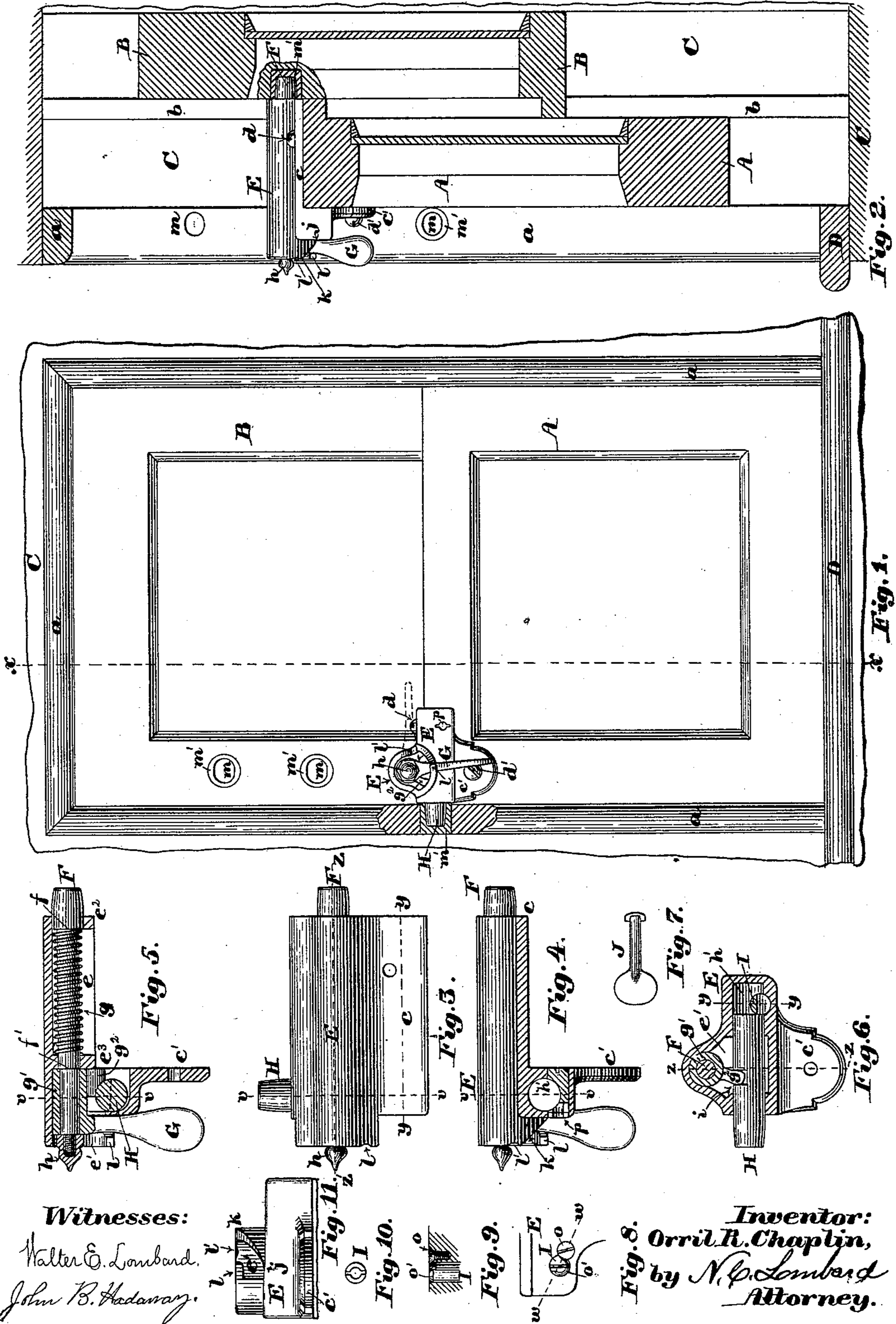


(No Model.)

O. R. CHAPLIN.  
WINDOW FASTENER.

No. 453,178.

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Witnesses:  
Walter E. Lombard,  
John B. Hadaway.

Inventor:  
Orril R. Chaplin,  
by N. P. Lombard  
Attorney.

# UNITED STATES PATENT OFFICE.

ORRIL R. CHAPLIN, OF BOSTON, MASSACHUSETTS.

## WINDOW-FASTENER.

SPECIFICATION forming part of Letters Patent No. 453,178, dated June 2, 1891.

Application filed February 6, 1891. Serial No. 380,468. (No model.)

*To all whom it may concern:*

Be it known that I, ORRIL R. CHAPLIN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Window-Fastenings, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to window-fastenings for securing the two vertically-sliding sashes of an ordinary window together; and it consists in certain novel features of construction, arrangement, and combination of parts, which will be readily understood by reference to the description of the drawings and to the claims hereinafter given, and in which my invention is clearly pointed out.

Figure 1 of the drawings is an elevation of a window with my invention applied thereto, the same being viewed from the inside of a room and a portion of one of the stop-beads being cut in section and the sashes being closed. Fig. 2 is a vertical section on line  $x$  on Fig. 1 and showing the parts at the left of said line in elevation and the sashes in a partially-opened position. Fig. 3 is a plan of my improved fastening. Fig. 4 is a sectional elevation, the cutting-plane being on line  $yy$  on Figs. 3 and 6, with the tumbler in unlocked position. Fig. 5 is a sectional elevation, the cutting-plane being on line  $zz$  on Figs. 3 and 6. Fig. 6 is a vertical section on line  $vv$  on Figs. 3, 4, and 5, with the tumbler in locked position. Fig. 7 is a side elevation of a key for operating the tumbler for locking the bolts in engaged positions. Fig. 8 is a partial inside elevation, and showing the inner end of the locking-tumbler and the stop-screw for limiting its motion. Fig. 9 is a partial section on line  $ww$  on Fig. 8. Fig. 10 is an end view of the locking-tumbler shaft, and Fig. 11 is a partial inverted plan showing the cam and locking-lip.

In the drawings, A is the lower sash, and B is the upper sash, both fitted to be movable up and down in the window-frame C in the usual manner.

D is the window-sill.

$a$   $a$  are the stop-beads, and  $b$  is the "parting-bead," so called.

E is the frame or case of my improved fastening, provided with the horizontal flange or

lip  $c$  and the vertical flange  $c'$ , by means of which and the screws  $d$  and  $d'$  it is secured to the meeting-rail of the lower sash at one end thereof or immediately in front of one of the side rails of the upper sash, as shown in Fig. 1.

The case E is chambered on its under side, as shown at  $e$  in Fig. 5, and in its front end, as at  $e'$ , Figs. 5 and 6, and has fitted to bearings  $e^2$  and  $e^3$  in its upper portion the bolt F, provided with the shoulders  $f$  and  $f'$  and having fitted thereon between the shoulder  $f$  and the bearing  $e^3$  the spiral spring  $g$ , the tension of which tends to move the bolt F toward the right of Figs. 2 and 5.

The bolt F has secured upon its front end by means of the nut  $h$  the lever G, having the long hub  $g'$ , from the rear portion of which projects the short arm  $g^2$  at a slight angle to the lever G, as shown in Fig. 1.

The pendent portion of the case E has formed therein a cylindrical chamber or bore  $h'$ , open at one end and closed at the other, in which is fitted the bolt H, the axis of which is parallel with the inner face of the flange  $c'$ , said bolt having formed in its upper side near the middle of its length the rectangular notch  $i$ , with which the lower end of the arm  $g^2$  engages, as shown in Fig. 6.

The wall surrounding the chamber  $e'$  in the front of the upper portion of the case E projects beyond the pendent portion and its under side is cut away to form the cam-surface  $j$   $k$  with the overhanging lip  $l$ , as shown in Fig. 11, and also has formed therein, just above the termination of said cam-surface at  $k$ , the indentation  $l'$ , as shown in Figs. 2, 3, and 4.

When the lever G is in the position shown in full lines in Fig. 1, the bolts F and H project from the casing E, as shown in Figs. 3, 4, 5, and 6, in which positions the bolt F engages with shoulders or sockets in the side rail of the upper sash, and bolt H engages with similar shoulders or sockets in the stop-bead  $a$  or the jamb of the window-frame. These sockets or shoulders may be formed in a variety of ways without affecting the principles of my invention—as, for instance, a simple pole  $m$ , of a vertical height equal to the diameters of the bolts F and H, may be formed in the sash or stop-bead, or both, as

shown in the upper part of the stop-bead in Fig. 2, or a larger hole may be made in the stop-bead and sash, and metal bushings  $m'$ , having the oval holes  $m$  formed therein, may  
5 be inserted therein, as shown.

By moving the lever  $G$  into the position shown in dotted lines in Fig. 1, so that its inner edge rests in the indentation  $l'$ , the moving of the lever  $G$  up the cam-surface  $j$   $k$   
10 causes the bolt  $F$  to be moved endwise toward the front of the case, thereby withdrawing it from engagement with the shoulder or socket  $m$  in the upper sash with which it was in engagement, and at the same time the arm  
15  $g^2$ , acting upon the shoulder formed by the side of the notch  $i$ , withdraws the bolt  $H$  from the socket in the stop-bead.

When the lever  $G$  is in the position shown in full lines in Fig. 1, both sashes are locked  
20 so that neither can be moved up or down until the bolts  $F$  and  $H$  are withdrawn by moving the lever  $G$  into the position shown in dotted lines.

A plurality of shoulders or sockets are preferably formed in the upper sash and also in the stop-bead or jamb of the window-frame, so that either sash may be fastened in a closed or open position, or both sashes may be fastened in a partially-opened position and so  
30 that neither can be moved from the outside.

The lip  $l$ , projecting in front of the lever  $G$ , as shown, prevents the bolt  $F$  being pushed out of engagement with the shoulders or sockets  $m$  by an outsider by means of any  
35 implement inserted between the meeting-rails of the sashes.

For greater security and to guard against the outsider tampering with the fastening by cutting a hole through the glass near the  
40 fastening and inserting his hand therein and unfastening the bolts by turning the lever  $G$ , I insert in a bearing in the pendent part of the case  $E$  the tumbler-shaft  $I$  in a position at the right of the inner end of the bolt  $H$   
45 when said bolt is in its projected position, the axis of said tumbler-shaft being parallel to the axis of the bolt  $F$  and on a level, or nearly so, with the under side of the bolt  $H$ , as shown in Figs. 4 and 6. The tumbler  $I$   
50 has cut transversely across it a curved notch corresponding in shape to a portion of the periphery of the bolt  $H$ , so that when in the position shown in Fig. 4 it presents no obstruction to the retraction of the bolt  $H$ , but  
55 when turned into the position shown in Fig. 6 it will effectually prevent said bolt being retracted, and as one bolt cannot be moved without moving the other so one cannot be locked without locking the other. The bearing for said tumbler does not extend to the  
60 front of the case  $E$ , but is inserted from the rear and is held in place by the head of the screw  $o$ , which extends over the beveled corner of said tumbler, as shown in Figs. 8 and  
65 9. The bevel  $o'$  on the inner end of the tumbler extends only about three-fourths around the circumference thereof, and the ends of

said chamfer, co-operating with the head of the screw  $o$ , serve as stops to limit the movement of said tumbler in either direction. 70

A key-hole  $p$  is cut through the case  $E$  in front of the tumbler  $I$ , as shown in Fig. 1, and the front end of the tumbler has formed therein a correspondingly-shaped recess (see Fig. 10) to receive the end of the key  $J$ , (shown 75 in Fig. 7,) by which said tumbler may be semi-rotated in either direction, so as to lock or unlock the bolts.

I claim—

1. The combination, in a window-fastening, 80 of a frame or case to be secured to the lower sash of a window, two bolts fitted to bearings in said case so as to be movable endwise in directions at right angles to each other, a spring for moving said bolts in one direction, 85 a fixed cam and a lever firmly secured upon and movable about the axis of one of said bolts and connected by its shorter arm to the other of said bolts in contact with said cam for moving them in the opposite direction, a 90 shoulder or socket formed in or secured to the upper sash to engage one of said bolts, and a shoulder or socket in the stop-bead or jamb of the window-frame to engage the other bolt. 95

2. The combination, in a window-fastening, of a frame or case to be secured to the lower sash of a window, two bolts mounted in bearings in said case so as to be movable endwise in directions at right angles to each other, a 100 spring for moving said bolts in one direction, a fixed cam and a lever firmly secured upon and movable about the axis of one of said bolts and connected by its shorter arm to the other of said bolts in contact with said cam 105 for moving them in the opposite direction, a lip or stop to prevent the retraction of either of said bolts without operating said lever, a shoulder or socket formed in or secured to the upper sash to engage one of said bolts, and a 110 socket or shoulder to engage the other bolt formed in or secured to the stop-bead or jamb of the window-frame.

3. The combination of the case  $E$ , the bolt  $H$ , provided with the notch  $i$ , the bolt  $F$ , arranged in a vertical plane at right angles to the bolt  $H$ , the cam-surface  $k$ , partially surrounding said bolt  $F$ , the lever  $G$ , firmly secured upon the bolt  $F$  in position to bear against said cam-surface  $k$  and provided with 120 the arm  $g^2$  to engage the notch  $i$  in the bolt  $H$ , the spring  $g$ , and the lip  $l$  to prevent the retraction of the bolts without operating the lever  $G$ .

4. The combination, in a window-fastening, 125 of a frame or case to be secured to the lower sash of a window, two bolts mounted in bearings in said case with their axes in vertical planes at right angles to each other and constructed and arranged to be moved endwise 130 therein in unison, a spring for moving said bolts in one direction, a fixed cam and a vibrating lever for moving them in the opposite direction, a shoulder or socket formed in

or secured to the upper sash in position to  
engage one of said bolts, a shoulder or socket  
formed in or secured to the jamb of the win-  
dow-frame in position to engage the other of  
5 said bolts, and a locking-tumbler for locking  
said bolts when engaged with said shoulders  
or sockets.

In testimony whereof I have signed my name

to this specification, in the presence of two  
subscribing witnesses, on this 5th day of Feb- 10  
ruary, A. D. 1891.

ORRIL R. CHAPLIN.

Witnesses:

N. C. LOMBARD,  
WALTER E. LOMBARD.