

No. 692,003.

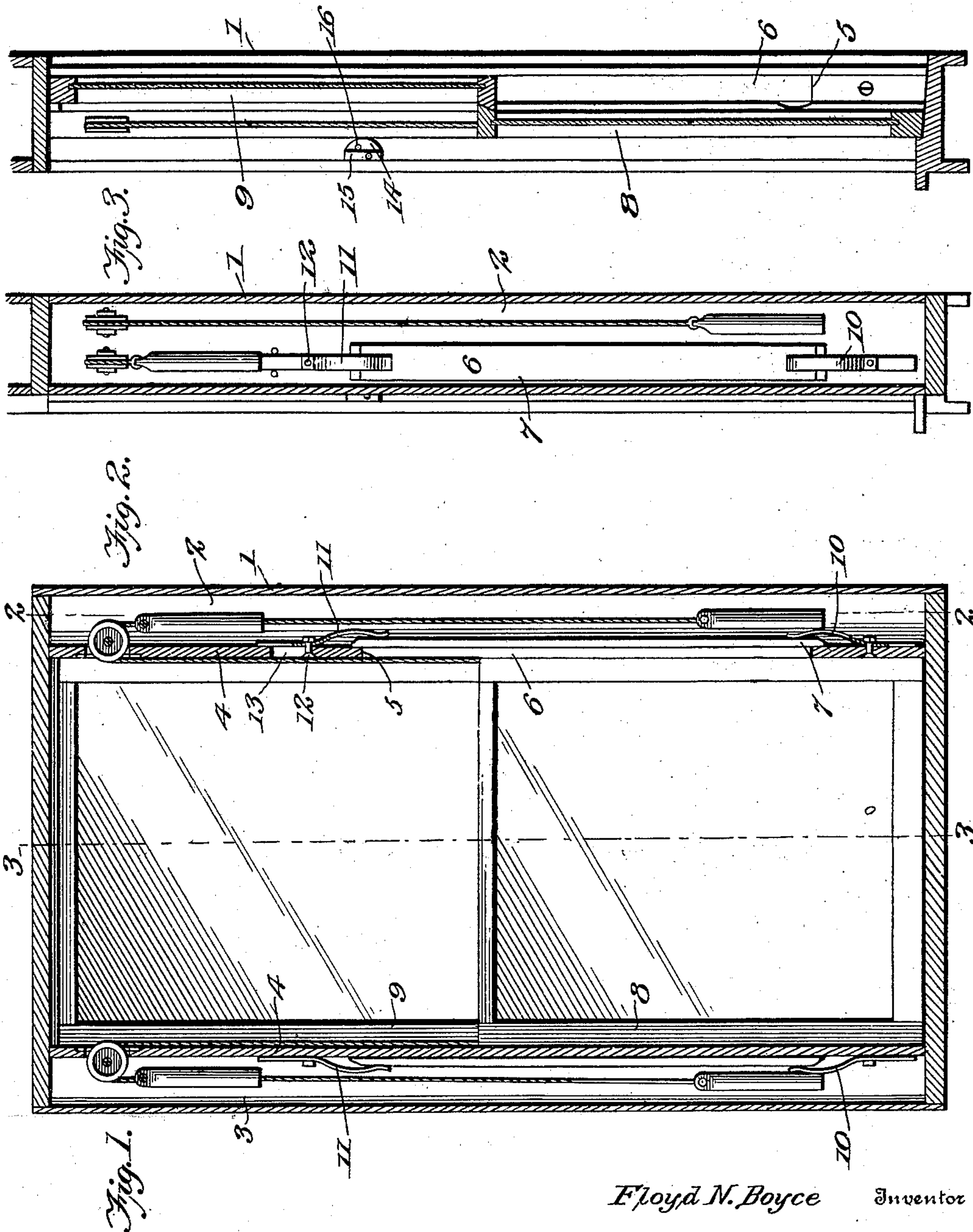
Patented Jan. 28, 1902.

F. N. BOYCE.  
WINDOW FRAME.

(Application filed May 25, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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Witnesses  
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By Victor J. Evans.  
Attorney

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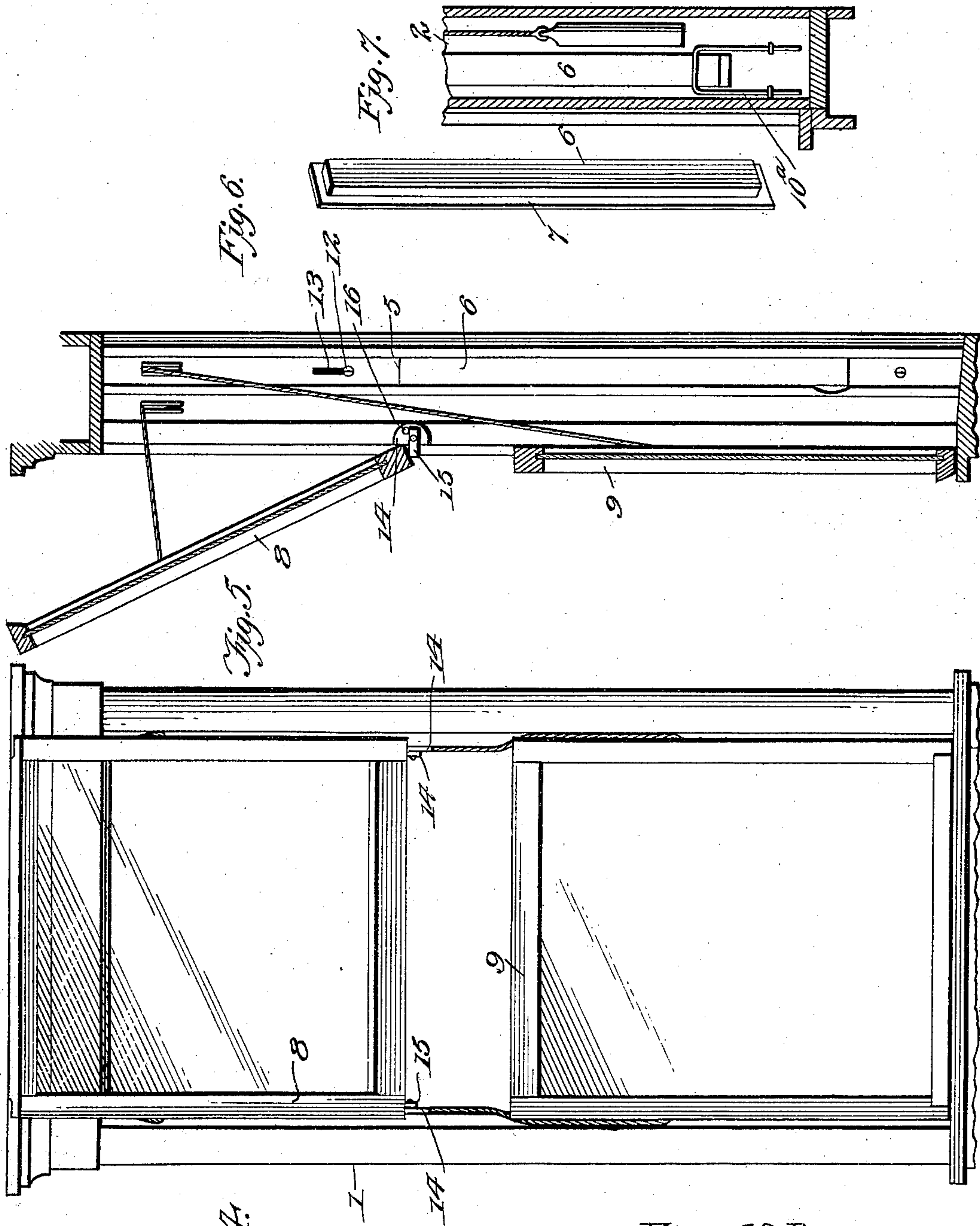
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# UNITED STATES PATENT OFFICE.

FLOYD N. BOYCE, OF BATTLECREEK, MICHIGAN.

## WINDOW-FRAME.

SPECIFICATION forming part of Letters Patent No. 692,003, dated January 28, 1902.

Application filed May 25, 1901. Serial No. 61,902. (No model.)

*To all whom it may concern:*

Be it known that I, FLOYD N. BOYCE, a citizen of the United States, residing at Battlecreek, in the county of Calhoun and State of Michigan, have invented new and useful Improvements in Window-Frames, of which the following is a specification.

This invention relates to sashes; and the primary object thereof is to provide an improved means to enable the removal and replacing of the upper and lower sashes in the process of cleaning the window-panes; and a further object is provide means whereby access to the weights on the pulley-cords may be readily had.

With these objects in view the invention consists in providing a removable strip forming part of a stile of the window-frame, whereby the upper and lower sashes are enabled to be conveniently removed.

Further objects, as well as the novel details of construction of the invention, will be clearly described hereinafter, and defined in the claims.

In the drawings, Figure 1 represents a vertical longitudinal sectional view through a window-frame constructed in accordance with my invention. Fig. 2 is a vertical cross-sectional view on the line 2 2 of Fig. 1. Fig. 3 is a similar view on the line 3 3 of Fig. 1. Fig. 4 is a front elevation of a frame, showing the position of the sash when it is necessary to gain access to the weights or when the window-panes are being cleaned. Fig. 5 is a vertical longitudinal section therethrough. Fig. 6 is a detail view of one of the removable strips. Fig. 7 is a fragmentary sectional view showing the construction of the modified form of the spring and the relative position thereof.

Referring now to the drawings by numerals of reference, 1 designates the window-frame, having the usual weight-compartments 2 and 3 on the respective sides thereof, in which are located the usual cords and weights, the said cords passing over pulleys in the upper part of the frame.

The inner stiles of the window-frame (designated by the reference-numerals 4) are cut away longitudinally for a portion of their lengths to form slots 5, said slots being normally closed by elongated strips 6, having flanges 7 overlapping the edges of the stiles

4. The slots and corresponding strips are of approximately the same length as the sashes 8 and 9, which are of the usual construction and slide within the stiles provided for that purpose.

In order to retain the strips 6 in position, I use either of the lower or upper leaf-springs 10 and 11 or an inverted-U-shaped spring 10<sup>a</sup> for the lower spring. The leaf-springs are located at the respective extremities of said strips, and said springs are secured to the inner stiles 4 in any suitable manner. I hold that it is immaterial which springs I use for the lower springs, as by means of either I may accomplish the same results. When the leaf-springs 10 and 11 are used, the upper springs 11 are adjustably retained on the stiles 4 by means of bolts 12, which work in longitudinal slots 13 in said stiles, whereby said springs may be moved longitudinally out of contact with the strips.

It will be noticed that the slots (designated by the reference-numerals 5) terminate a short distance above the sill of the frame, and the object of this construction is to prevent any rain from entering the weight-compartments, thereby preventing excessive dampness therein, so as not to rot or impair the frame.

Located on the frame and at a point intermediate the ends thereof are pivot-plates 14, carrying pivot-buttons 15, which are normally turned in a vertical plane, but which can be turned, so as to assume a horizontal position and be retained in such position through the medium of the stop-pins 16, located over the inner ends of the pivot-buttons.

When it is desired to remove either of the sashes, the sash to be removed will be raised or lowered, so as to register with the slot 5 and forced into the said slot far enough to clear the jamb, thereby forcing the strip 6 into the weight-compartment against the pressure of the springs, which will be prevented from falling into the same by means of said springs and which will automatically force the said strip into its normal position after the sash is removed. It will be seen from the above construction that I provide means whereby the sashes are easily removed without necessitating the removal of the jambs or any part thereof. As before stated, the strip



and slot are of approximately the same length as the height of either sash, and this being the case no difficulty will be experienced in removing the sashes.

5 In order to remove either of the strips 6 when I employ the leaf-springs 10 and 11, the upper leaf-springs 11, which are adjustably retained on the left and right stiles 4, respectively, are removed by simply forcing the  
10 bolts 12 upward on one side and downward on the other in their slots and throwing the upper leaf-springs 11 out of contact with the strips 6. This will permit the strips to drop back, and by raising the upper ends within  
15 the weight-retaining compartments the lower ends may be readily forced through the slots 5 and the strips taken out, and when the lower springs 10<sup>a</sup> are used, which are approximately U-shaped, the ends of which terminate at  
20 right angles to the plane of the same, they are secured to the stiles 4 by the said ends being inserted into the stiles and securely held thereto by means of staples. The U-shaped portions of the said springs are large enough  
25 to permit the said strips to be forced through and down or up into the weight-containing compartments, and thereby releasing one end of the said strips, which may be forced through the slots 5 and the strips taken out. With  
30 the strips removed it will be an easy matter to adjust the weights or supply new ones, as the occasion demands.

When the lower sash is cleaned, the pivoted buttons 15 will be turned so as to assume a horizontal position, and the lower sash  
35 will be raised so that its lower edge will rest thereon. The resistance offered by the cords, owing to the weight on the end thereof, will be sufficient to hold said lower sash in a position similar to that shown in Figs. 4 and 5,  
40 so that said sash will be retained out of the

way of the operator, when said upper sash may also receive the necessary attention.

In the check-stop or parting-strip there is a cut-out portion, which is half-elliptical and registers with the slots 5, the said check or  
45 parting-strip being provided with the same in order to permit the parting-rails of the sash to enter said slots.

Having thus fully described my invention, 50 what I claim as new, and desire to secure by Letters Patent, is—

1. A window-frame comprising a sash-stile having a longitudinal slot, a removable strip fitting in the slot and having flanges located  
55 on the inside of the stile, and lower and upper vertically-arranged short springs secured at their inner ends to the inner side of the slotted stile at a distance from the ends of the slot and having their outer ends overlap-  
60 ping the ends of the strip while permitting the endwise movement of the strip therein.

2. A window-frame comprising a stile having a longitudinal strip-slot and a bolt-slot in  
65 alinement with the strip-slot, a removable strip fitting in the strip-slot and having flanges located on the inside of the stile, a lower spring secured at its inner end to the inner side of the stile, and having its outer  
70 end overlapping the lower end of the strip, a bolt adapted to slide in the bolt-slot, and an upper spring secured by its inner end to the inside of the stile by means of a bolt and its outer end overlapping the upper end of the  
75 strip.

In testimony whereof I affix my signature in presence of two witnesses.

FLOYD N. BOYCE.

Witnesses:

S. WATERS,  
J. H. GREEN.