

**No. 702,588.**

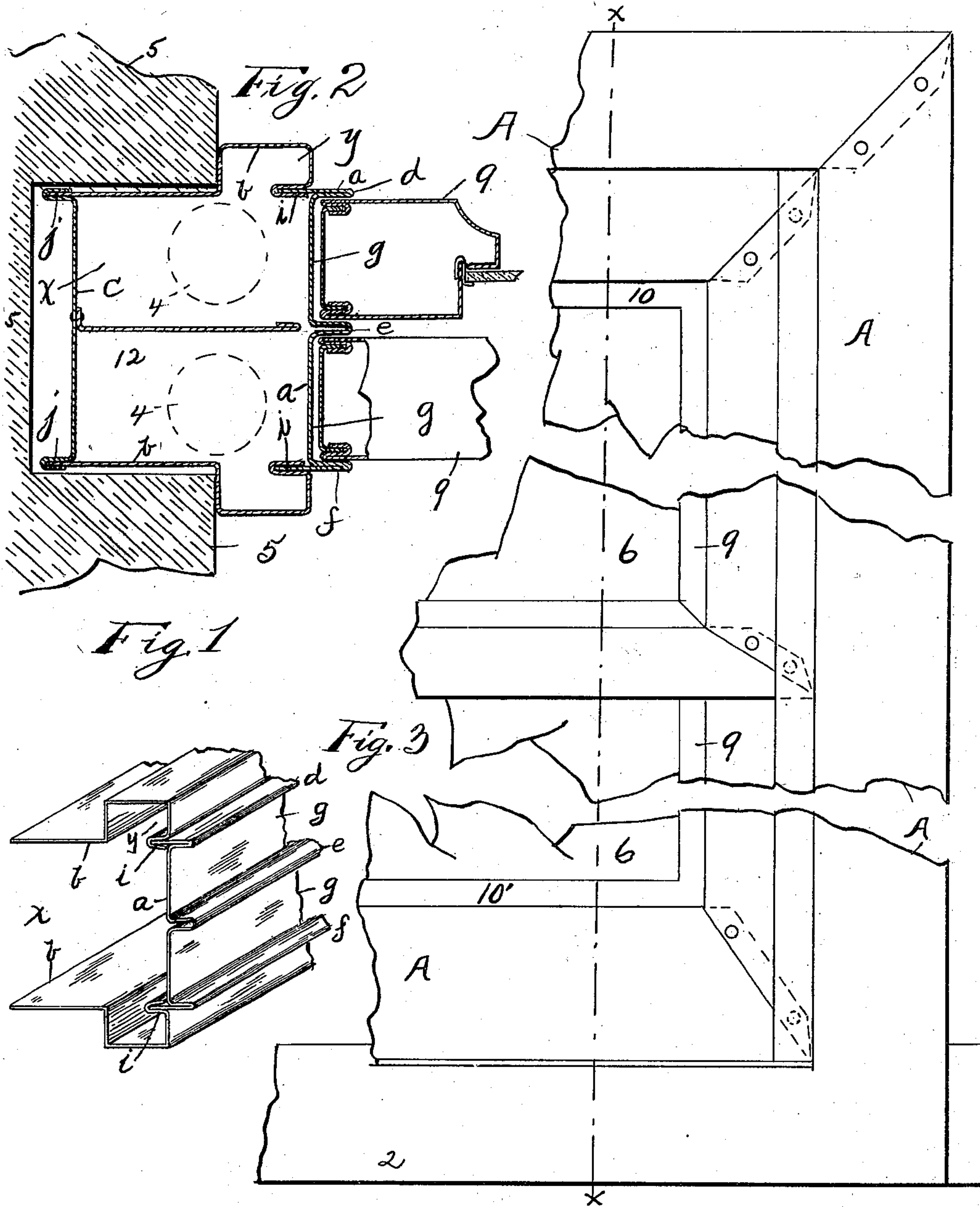
**Patented June 17, 1902.**

**A. RASNER.**  
**WINDOW FRAME AND SASH.**

(Application filed July 30, 1900.)

(No Model.)

**2 Sheets—Sheet 1.**



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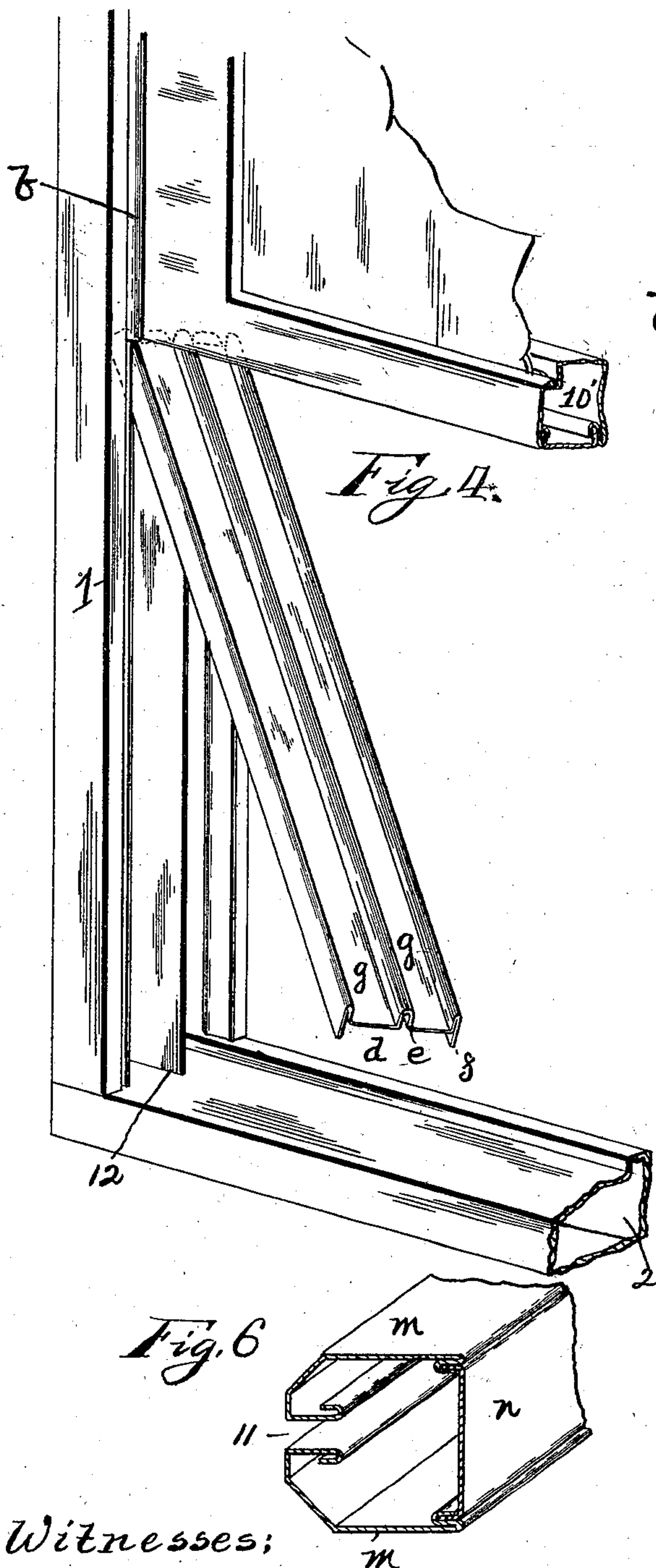
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WINDOW FRAME AND SASH.

(Application filed July 30, 1900.)

(No Model.)

**2 Sheets—Sheet 2.**



Witnesses;  
C. Williams  
Richard D. Harrison.

Inventor  
Abraham Gasner  
Per- John H. Roney  
His Attorney.



# UNITED STATES PATENT OFFICE.

ABRAHAM RASNER, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO RASNER & DINGER COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## WINDOW FRAME AND SASH.

SPECIFICATION forming part of Letters Patent No. 702,588, dated June 17, 1902.

Original application filed January 21, 1898, Serial No. 667,386. Divided and this application filed July 30, 1900. Serial No. 25,279. (No model.)

*To all whom it may concern:*

Be it known that I, ABRAHAM RASNER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Window Frames and Sashes, of which the following is a specification.

The invention of the present application, which is a division of my copending application, Serial No. 667,386, filed January 21, 1898, relates to improvements in sheet-metal window-frames, and specifically to the form of window-frame illustrated in Figure 1 of the accompanying drawings.

The object of the invention is to produce a window-frame having hollow top, bottom, and side members, the outer walls or face of the side members adjacent to the sashes being bent up so as to form two vertically-disposed channels, constituting guides for the retention of the sashes in the frame.

A further object is to so construct the outer walls or face of said side members that the lower section of the same or the whole thereof may be readily removed to enable access to be had to the interior of the chamber; and a still further object of my invention is to so construct the frame and sashes that the joints thereof, while entirely fireproof, will permit expansion under heat and contraction when cooling.

These and other novel features of construction, hereinafter more specifically described, are fully illustrated in the accompanying drawings, in which—

Fig. 1 indicates a perspective view of a portion of one of the sides of my improved sheet-metal frame. Fig. 2 is a horizontal section of the side of the frame and a portion of the sash. Fig. 3 is a plan view of the frame and sash. Fig. 4 is a perspective view of a portion of the sash bottom and one side of the frame. Fig. 5 is a vertical section taken on the line *xx* of Fig. 3. Fig. 6 is a perspective view of modified form of top rail of sash-body.

In describing the construction herein shown

I shall employ the following terms for such purpose—that is to say, I shall when referring to the direction toward the outside of the window use the term “outward,” when referring to the direction toward the inside of the window use the term “inward,” when referring to the horizontal direction toward the adjacent wall from either frame-bar use the term “backward,” and when referring to the direction opposite to the last—that is, toward the center of the window opening from the wall—use the term “forward.”

I will now describe my invention, reference being had to the accompanying drawings, which form a part of this specification, wherein like reference characters indicate like parts wherever they occur throughout the several views thereof.

Referring to said drawings, A is the window-frame, which comprises the side sections 1 1, bottom section 2, and top section 3, which are conjoined by riveting or in any other suitable manner. The said side sections are of similar construction and constitute vertical boxes or chambers for the reception of the sash balance-weights 4, the rear or backward portion *x* of said side section being relatively narrower than the expanded forward part *y* and is inserted or inclosed between the masonry walls 5. The walls *a*, *b*, and *c* of said side frame-sections are made of sheet metal, the forward wall *a* being bent or pressed to form outwardly-projecting ribs *d*, *e*, and *f*, which constitute the sides of channels or guides *g g* for the retention of the sashes 6 6 and is formed in two sections, one of which—*i. e.*, that one below the meeting-rail of the sashes—being detachably secured in the loops or grooves *i*, formed in the forward part of the walls *b*, so as to permit the same to be readily removed to enable access to be had to the interior of the frame. The ends of the wall *c* are likewise provided with loops or grooves *j* for the reception of the inner ends of the walls *b*. The upper section of said wall *a* is provided with openings 7 for the passage of weight-chains (not shown) over the pulleys 8, which are mounted in the interior of



the chambers, at or near the top thereof, said weight-chains being adapted to be secured in any suitable manner to the sashes and at the opposite end to said weights 4.

- 5 The sashes 6 6 comprise side rails 9 9 and top and bottom rails 10 and 10'. The preferable form of said top rail is shown in Fig. 6, which comprises the parts *m m* and *n*, the said parts *m* having on their upper edges U-  
10 shaped flanges adapted to receive the downwardly-projecting flange of the part *n*, which is detachably secured therein and constitutes the top of said rail, the sides of the same being formed by the parts *m m*. The said parts  
15 *m* at their lower edges are bent upwardly and inwardly to form an inserting-space 11 for the glass.

A partition 12 is secured to wall *c* and projects outwardly toward the front wall of the  
20 side frame, thereby subdividing the frame into two separate compartments, in which the counterweights are respectively contained, whereby the same are prevented from interfering.

- 25 What I claim, and desire to secure by Letters Patent, is—

1. A window-frame composed entirely of sheet metal bent up to form a hollow body having top, bottom, and side members, the  
30 walls of said side members adjacent to the sashes being pressed or bent to form outwardly-projecting ribs which form the sides of channels or guides for the retention of the sashes, substantially as set forth.

35 2. A window-frame composed entirely of sheet metal bent up to form a hollow body having top, bottom, and side members, the walls of said side members adjacent to the sashes being formed in two sections the lower  
40 one of which is detachably secured to the body of said side members and the said walls being pressed or bent to form outwardly-projecting ribs to form the sides of channels or grooves for the retention of the sashes, substantially as set forth.

45 3. A window-frame composed entirely of sheet metal bent up to form a hollow body having top, bottom, and side members, the walls of said side members adjacent to the sashes being pressed or bent to form outwardly-projecting ribs which form the sides of channels or grooves for the retention of the sashes, in combination with counterbalance-weights operating in said hollow side  
50 members and the sashes connected with said weights, substantially as shown and described.

4. In a fireproof window, a sash having a hollow sheet-metal top rail slotted vertically  
60 for the introduction of the window-glass, the edges of the top of said top rail having downwardly-projecting prongs adapted to be detachably secured in the loop on the body of said rail, substantially as set forth.

5. In a fireproof window, a sash having a  
65 hollow sheet-metal top rail slotted vertically for the introduction of the window-glass, the body of said rail terminating on top in separated downwardly-bent lips forming guides, and a slide forming the top of said rail and  
70 substantially flush with the vertical front and rear faces of the rail-body, said slide being movable lengthwise of the body of the rail, into and out of engagement therewith and having guides engaging the guides on the rail-  
75 body and consisting of lips bent around the said lips or guides on the rail-body.

6. In a fireproof window, the combination with a frame composed of sheet metal having its side members bent to form three sides of  
80 an inclosure, the end wall forming the fourth side of said inclosure, said end wall having the extreme edges doubled back upon themselves, to form grooves, and the other having its edges fitted into said grooves, and said end  
85 wall being provided with an inward-turned sheet-metal partition dividing said inclosure into two compartments, and said frame having a part thereof arranged to engage with the masonry of the wall, substantially as de-  
90 scribed.

7. In a fireproof window, the combination with a frame, of a sash having at each side a vertical part composed of two strips of metal, the outer one of which constitutes one of four  
95 margins of the sash while the inner one is bent at an angle to form a ridge or flange extending lengthwise of said outer strip, said strips being secured together by the edges of one folding around the edges of the other. 100

8. A window-frame having hollow metallic side walls adapted for the guiding of the respective window-sashes and provided with a transverse partition extending substantially  
105 thereacross, which defines independent chambers for the movement of the sash-weights.

9. A window-frame having hollow metallic side walls or members comprising a back piece, side pieces, and an outer or front piece which is adapted for the guiding of the sashes,  
110 all of said pieces being independently constructed, and being attached to each other.

10. A window-frame having hollow metallic side walls or members comprising a back piece, side pieces, an outer or front piece, and  
115 an interior partition-piece, said front piece being adapted for guiding the sashes and the partition being adapted for preventing interference of the sash-weights, all of said pieces being independently constructed, and being  
120 attached to each other.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ABRAHAM RASNER.

In presence of—

CLARENCE A. WILLIAMS,  
JOHN H. RONEY.