

No. 765,857.

PATENTED JULY 26, 1904.

A. RASNER.
WINDOW FRAME AND SASH.

APPLICATION FILED OCT. 1, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

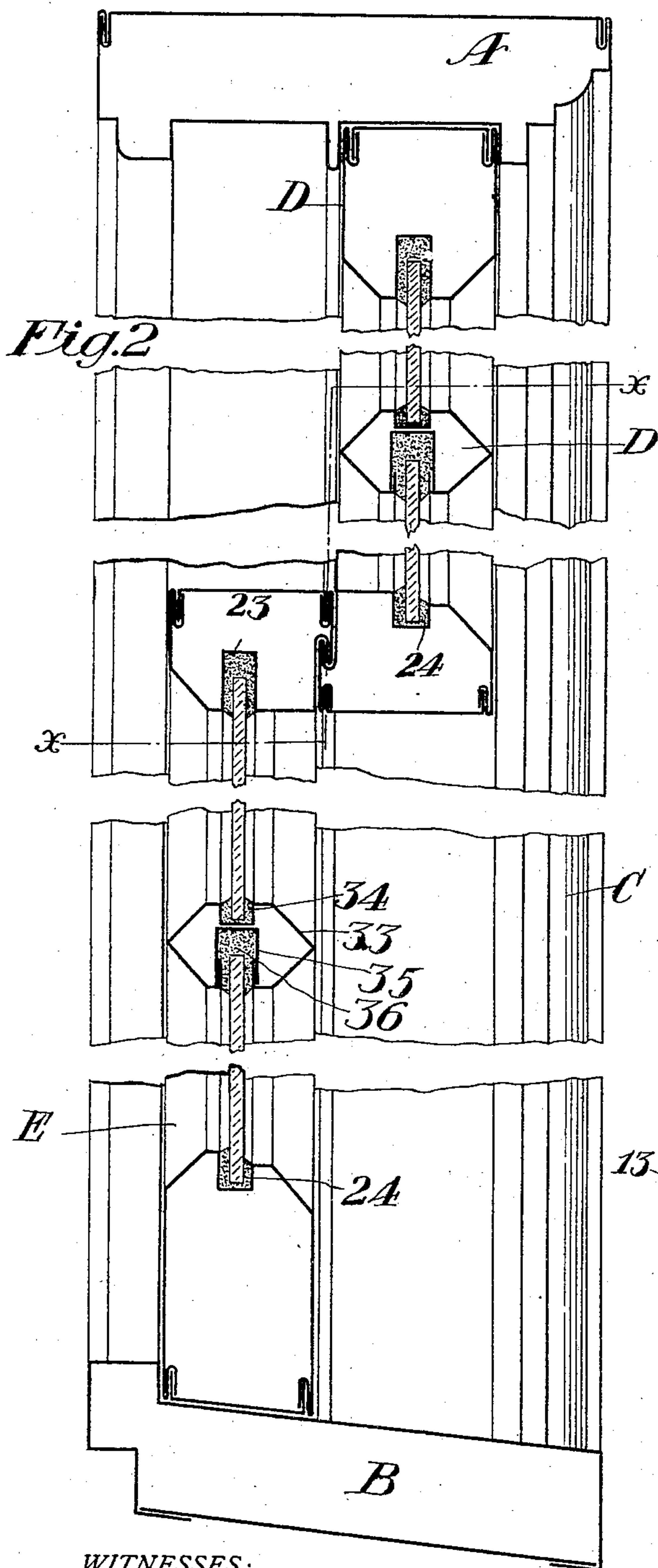
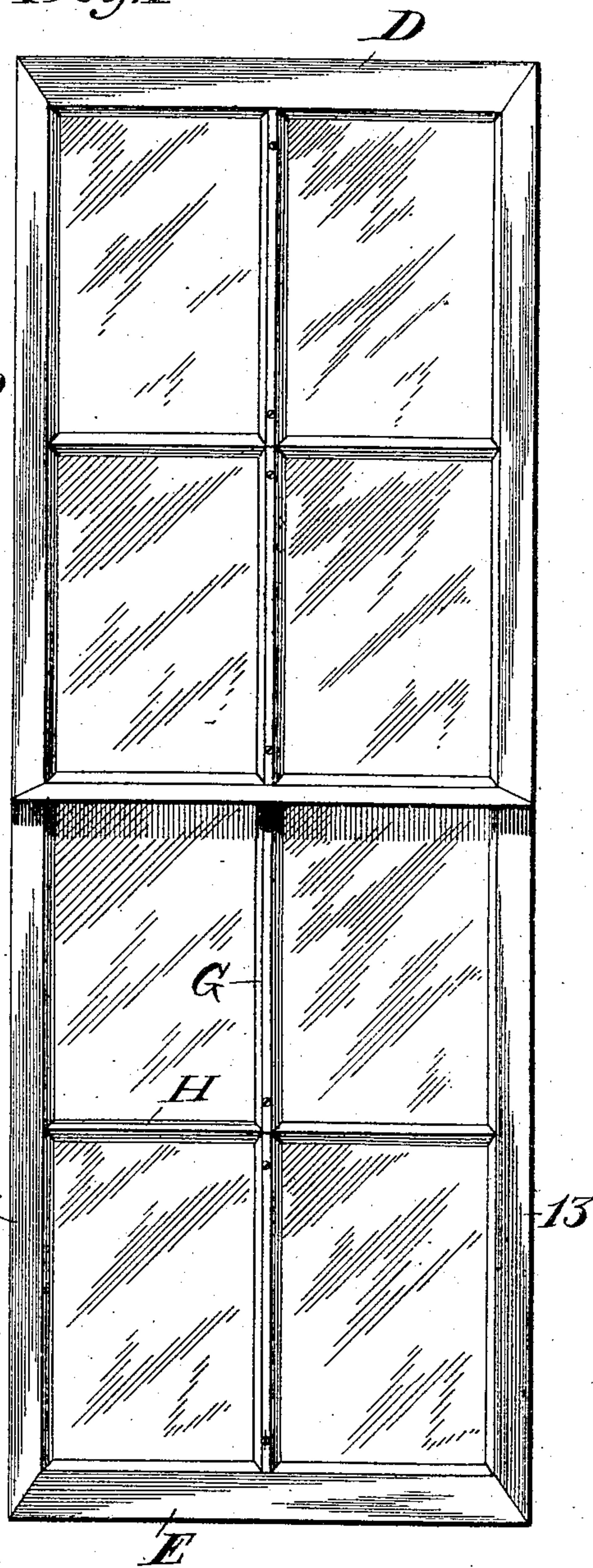


Fig. 1



WITNESSES:
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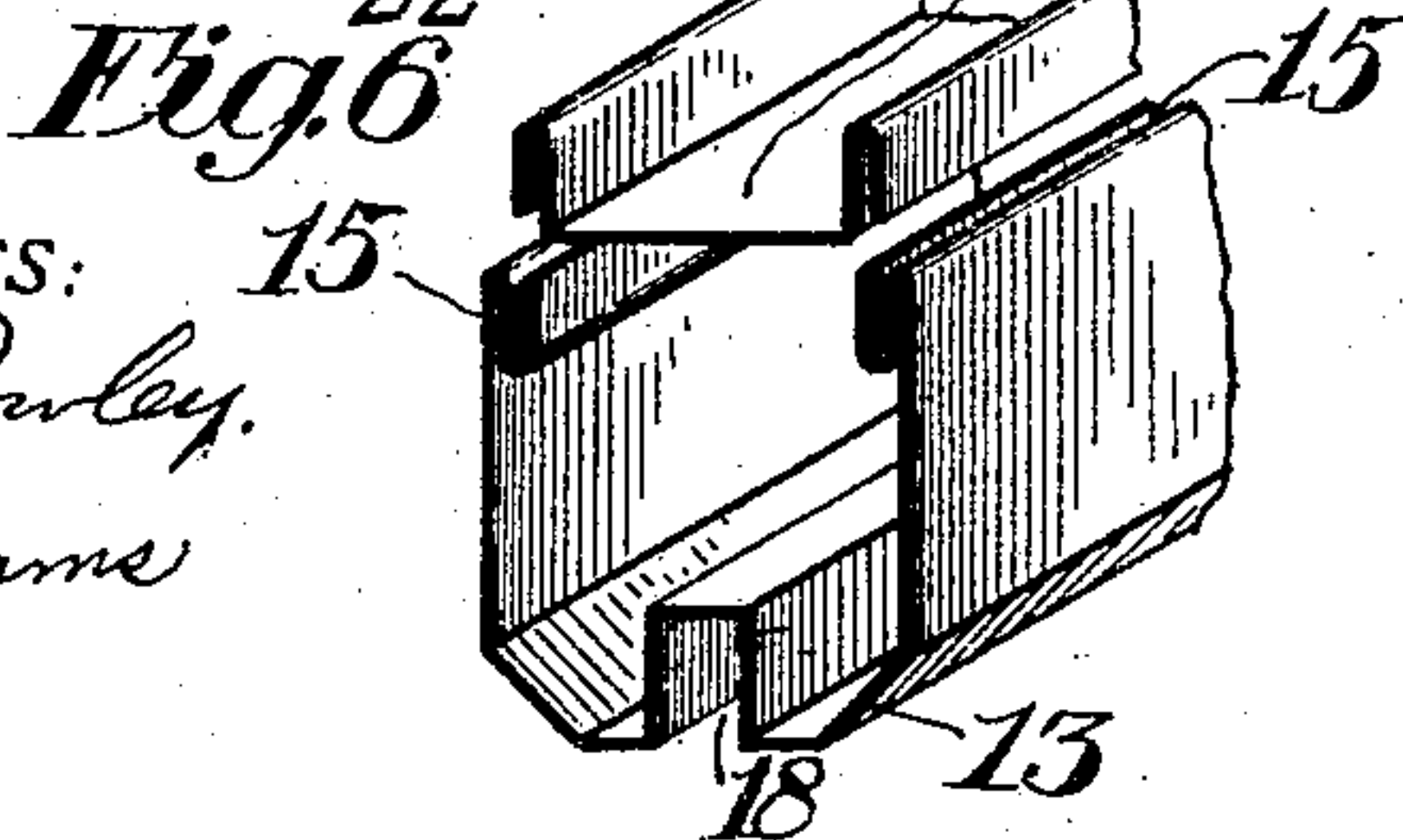
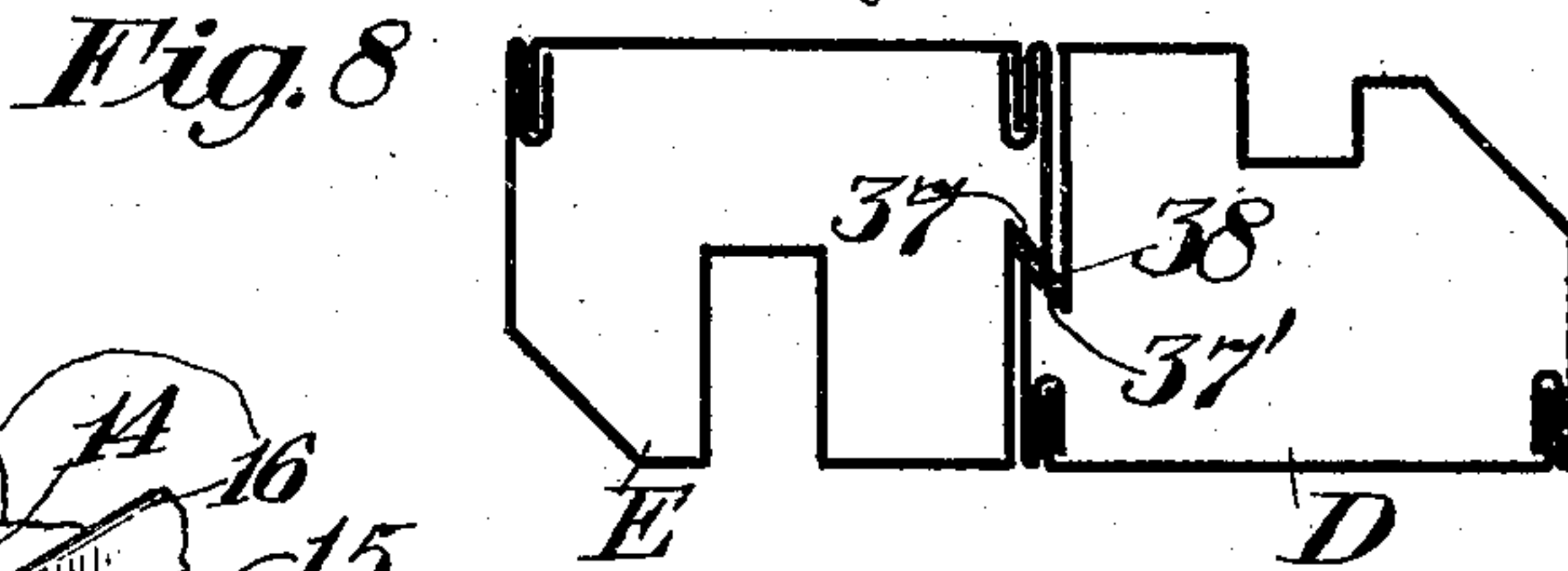
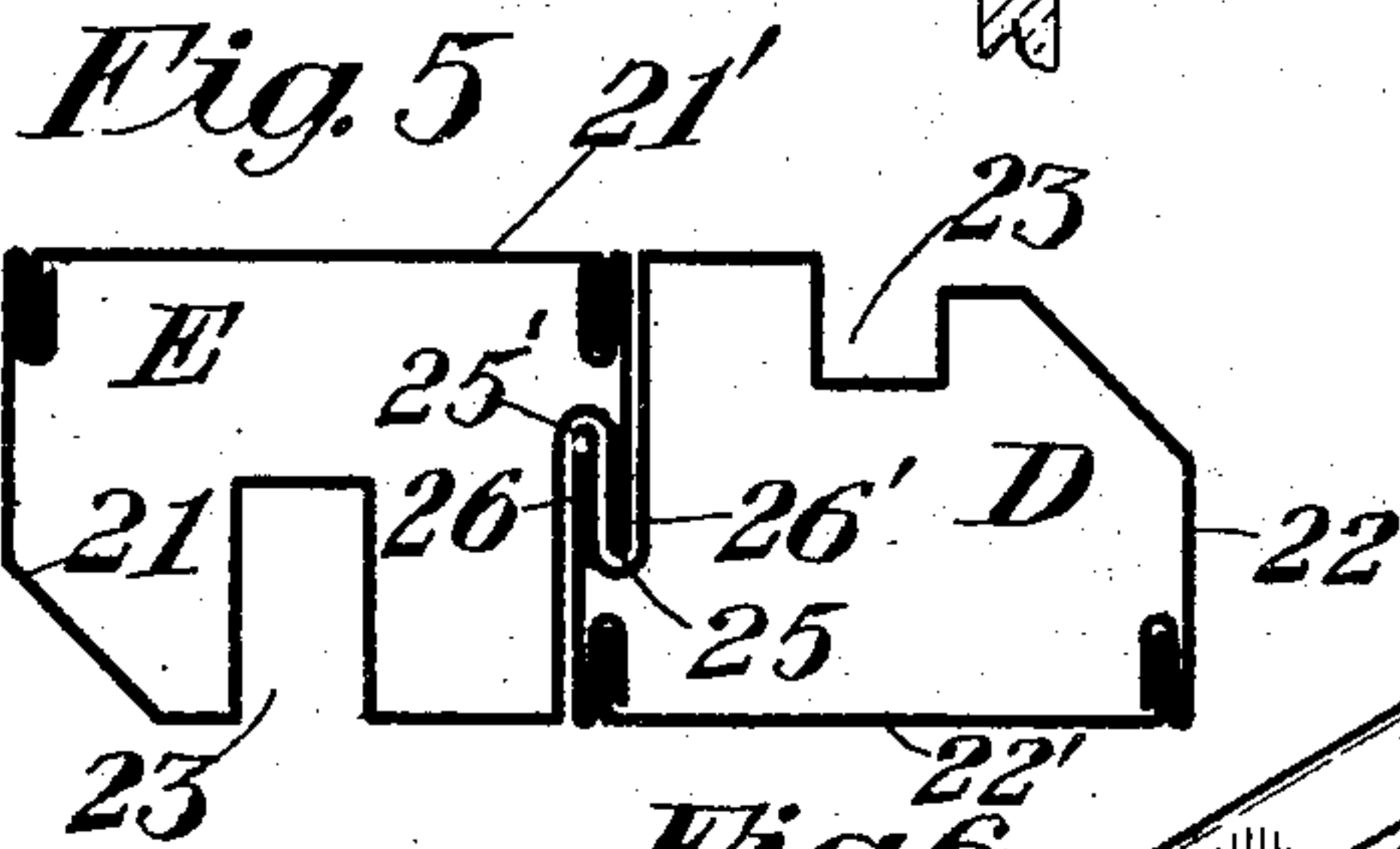
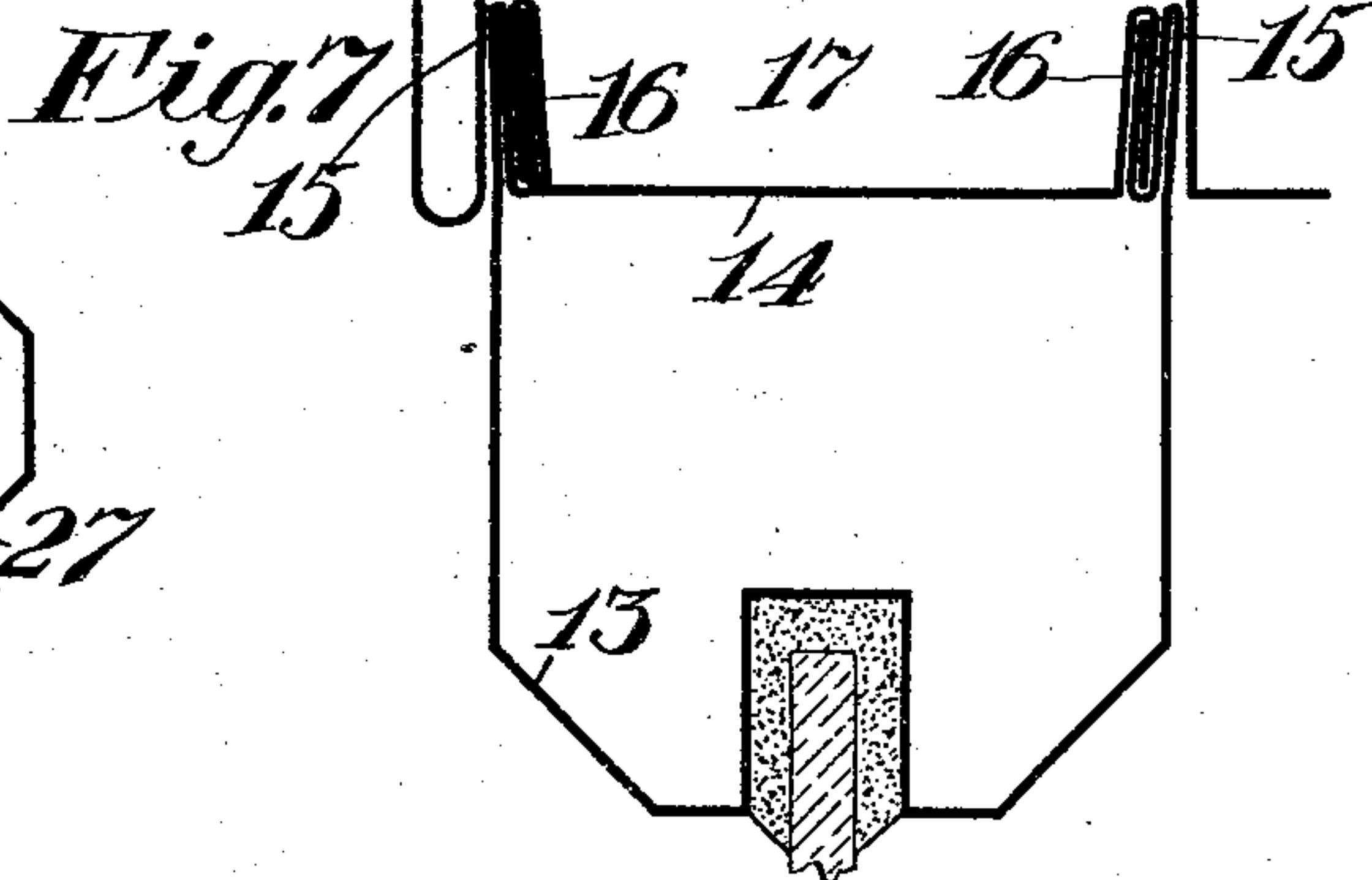
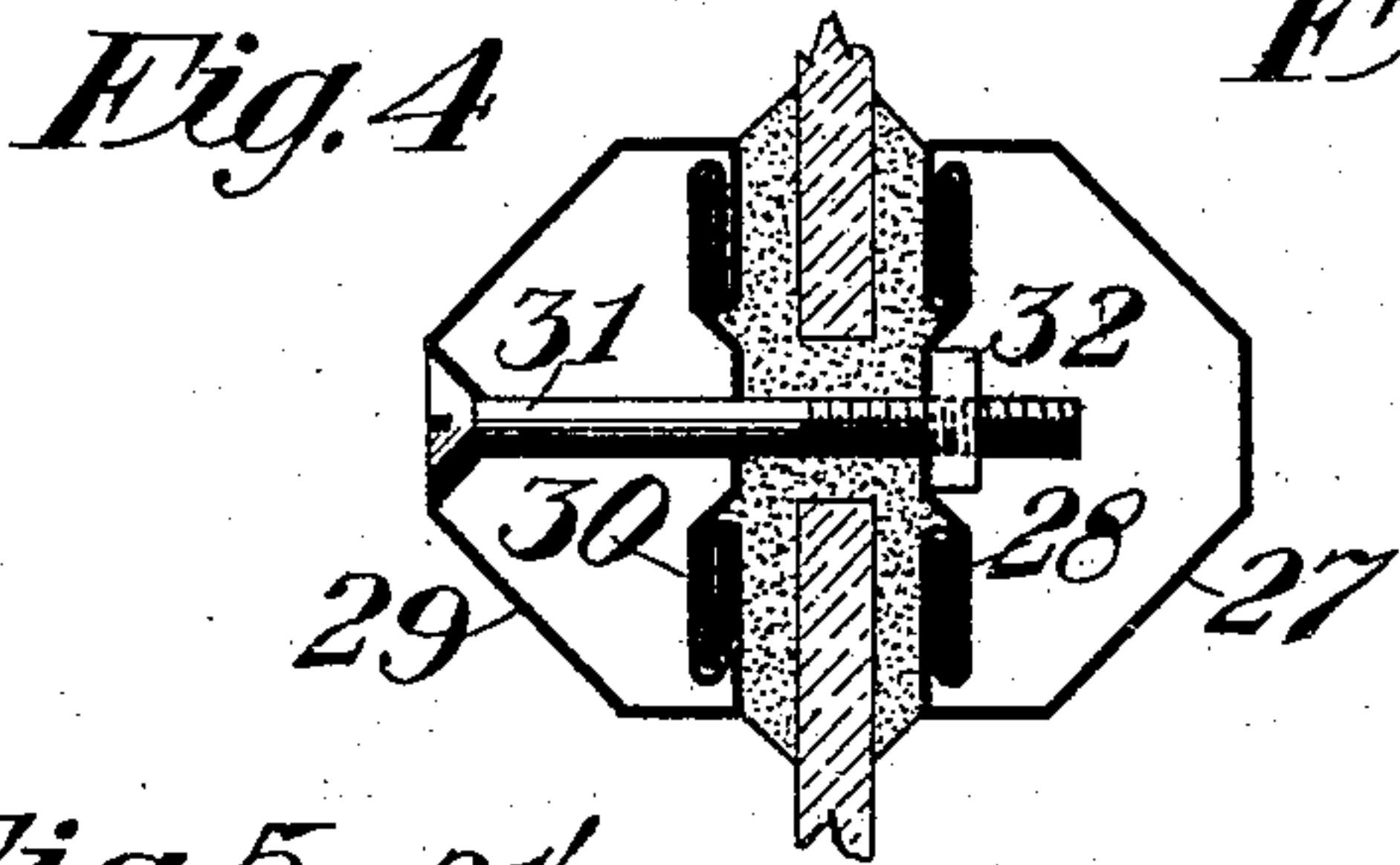
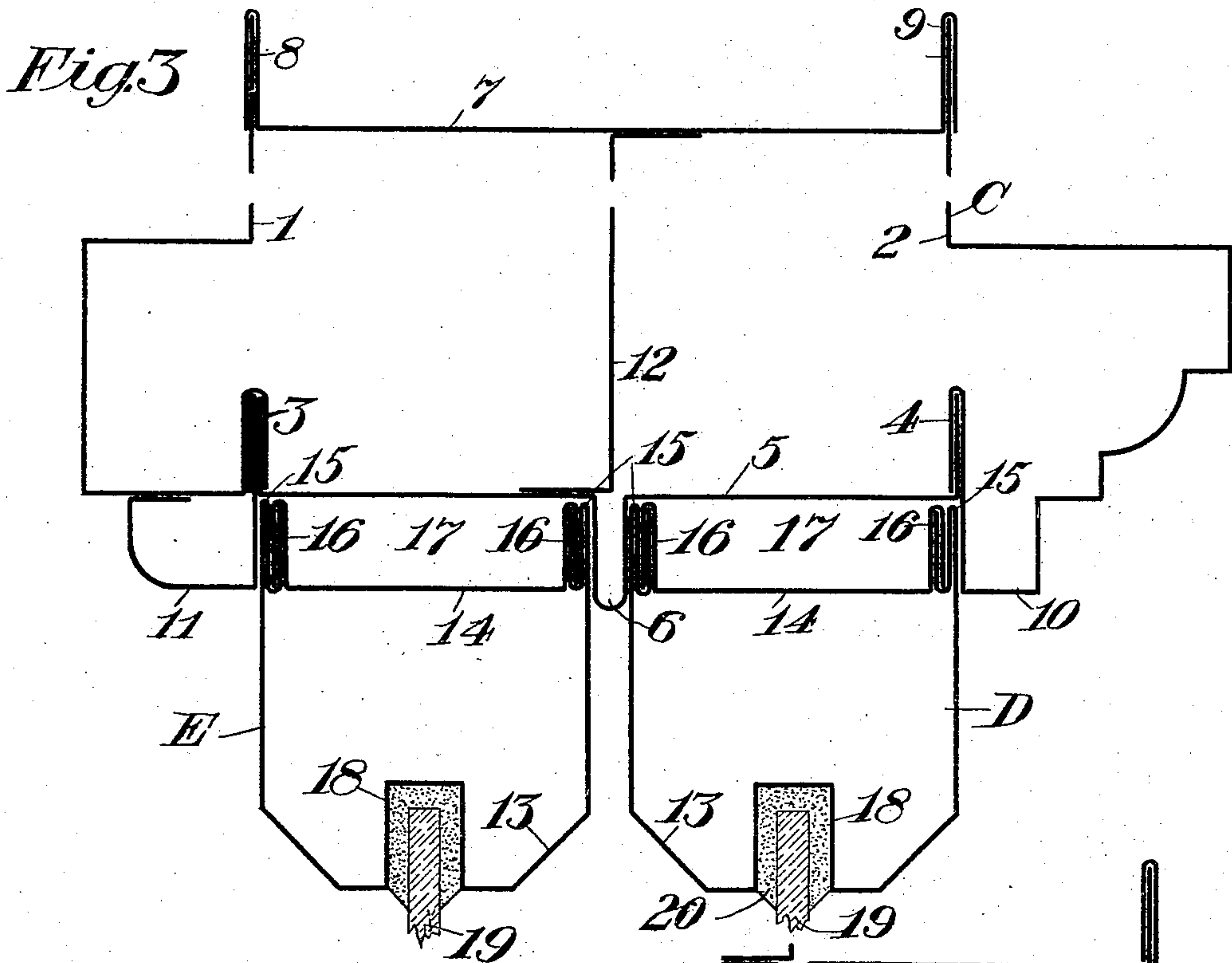
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2 SHEETS—SHEET 2.



WITNESSES:
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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. 765,857, dated July 26, 1904.

Application filed October 1, 1902. Serial No. 125,525. (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 a new and useful Improvement in Window Frames and Sashes, of which improvement the following is a specification.

My invention relates to improvements in metallic window frames and sashes, and particularly to the side and meeting rails and munnions of the sashes.

Heretofore, so far as I am aware, in the manufacture of metallic window-sashes it has been a very difficult matter to obtain a neat and satisfactory fit of the side rails in the channels or guides of the frame between the rabbets, as when the rail was too narrow it could not be expanded or if too wide could not be contracted to fit neatly in the guides, the result being, in the first instance, annoying rattling due to looseness, and, in the second instance, binding of the sashes in the guides, making it difficult to raise and lower the same. Another disadvantage in the use of metallic window-sashes was the difficulty of producing a weather and dust proof joint at the meeting-rails, and a further disadvantage in this character of sashes with cross-munnions was the difficulty of inserting and securing the panes or lights of glass within the same.

The objects of my present invention are, first, to produce a side rail or rails for metallic window-sashes the inner edges of which are capable of being expanded or contracted, so that they may be adjusted to fit neatly between the rabbets of the frame when the same varies in width therefrom; secondly, to produce a meeting rail or rails for metallic sashes adapted to interlock and form a dust and weather proof joint when the windows are closed; thirdly, to produce a vertical munnion-rail for metallic sashes the front of which is removably secured to the rear part thereof for the purpose of enabling the glass to be readily and easily inserted when the sash is divided with horizontal munnions; and

it consists in other novel features of construction hereinafter more specifically described, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 indicates a front elevation of the top and bottom window-sashes. Fig. 2 is a sectional view of the frame and sash. Fig. 3 is a transverse section taken on the line *xx* of Fig. 2. Fig. 4 is a transverse section of the central or vertical munnion. Fig. 5 is a section through the meeting-rail of the sashes, showing the interlocking thereof. Fig. 6 is a sectional perspective view of a portion of the side rails of the sash. Fig. 7 is a transverse section of side rail of sash, showing the expansible and contractible joint thereof. Fig. 8 is a modified form of interlocking meeting-rails.

Like reference characters indicate like parts wherever they occur throughout the several views.

Referring to said drawings, A and B are the top and bottom, respectively, of the window-frame. C is one of the sides thereof. D is the top or outside sash, and E is the bottom or inside sash. The sides of the frame comprise the parts 1 and 2, which are respectively provided with U-shaped flanges 3 4, adapted to receive the straight flanges or bent ends of the part 5, the said part 5 being provided with an outwardly-projecting U-shaped portion 6, which constitutes the partition-strip between the sashes D and E, respectively. 7 is a part which constitutes the inner wall of the sides of the frame and is provided with U-shaped flanges 8 9, adapted to receive the inner ends of the parts 1 and 2, respectively. The outer front portion of the part 2 is provided with an outwardly-projecting part 10, which constitutes one of the rabbets of the frame, and 11 is a detachably-secured piece which constitutes the inner rabbet of the frame, between which and the partition-strip 6 channels or guides are formed for the reception of the side rails of the sash.

12 is a plate or strip which extends from the front to the rear wall of the side of the

frame, being secured thereto in any suitable manner, and constitutes a partition subdividing the hollow space within the walls of said frame into two separate chambers for the reception of the pulley-weights (not shown) and to keep the same separate.

The side rails of said sashes are respectively formed of two independent parts 13 and 14, the inner ends of part 13 being bent backward upon themselves, forming U-shaped flanges 15, in which correspondingly-shaped hooks or flanges 16, formed on the edges of the part 14, are adapted to be secured, forming a space 17 between the outer wall of the sides of the frame and the inner wall of the side rails of the sash for the reception of the pulley-chains, (not shown,) the said U-shaped flanges being capable of being widened and expanded to fit the channel when the sash is too narrow and contracted or forced together more closely to bring the side rails to the required narrowness if too wide to fit neatly in the channel. The outer face of the part 13 is provided with a deep recess 18 for the reception of the sides of the glass 19 and the putty 20 to secure the same therein.

The meeting-rails—i. e., the lower rail of the top sash and the top rail of the lower sash—are formed of two independent parts 21 21' and 22 22', part 21' being the top of the rail of the lower sash and part 22' being the bottom of the rail of the upper or top sash. The part 22 constitutes the upper portion of the rail of the top sash and part 21 the lower part of the rail of the lower sash and are each provided with recesses 23 for the reception of the edge of the glass, the recess in the meeting-rail of the top sash being shallower than the recess in the meeting-rail of the lower sash and comparatively as deep as the recess 24 in the bottom rail of the lower sash, the recess in the meeting-rail of the lower sash being as deep as the recess in the top rail of the upper sash to permit the glass to be easily and readily inserted in the sashes.

The adjacent faces of the parts 21 and 22 of the meeting-rails interlock, as shown in Figs. 2, 5, and 8, to produce a dust and weather proof joint. This interlocking joint on the adjacent faces of the meeting-rails is produced by forming a U-shaped recess or pocket 25 longitudinally of the rail along the upper face of the meeting-rail of the top sash, in which a correspondingly-shaped hook 26', formed on or along the upper face of the meeting-rail of the lower sash, engages, the lower face of the meeting-rail having a similar-shaped recess or pocket 25', inverted, in which a similar hook 26, formed on or along the lower face of the rail of the upper sash, engages, forming a very efficient weather and dust proof joint.

The vertically-disposed munnion-rails G of the sashes are formed of four similarly-con-

structed parts 27 28 29 30, the parts 27 28 being interlocked, forming the rear wall of the munnion in which the putty and glass are inserted, the front and rear portions of the munnion being secured together by a bolt 31, which passes through the parts 29, 30, and 28 and through the nut 32, which is secured or fastened upon the part 28, whereby the front part of the munnion may be removed to insert the glass. The horizontally-disposed munnion-rails H are formed of a single piece 33, the upper face or edge thereof having a recess 34 for the reception of the lower edge of one light of glass and the opposite edge or side of the munnion having an inverted U-shaped or V-shaped piece 35, forming a pocket 36 for the reception of the putty and the adjacent light of glass.

In Fig. 8 of the drawings I show a modified form of interlocking meeting-rail, the interlocking portions 37 37' thereof instead of being U-shaped are V-shaped and have upon the adjacent meeting or interlocking surfaces a strip of felt 38 or other suitable material, which forms a yielding dust and weather proof joint at such point.

I claim as my invention and desire to secure by Letters Patent—

1. A metallic window-sash having a horizontal munnion-rail formed of two independent pieces, each having a groove to receive a window pane or light and one piece being nested or contained as an entirety within the other piece.

2. A metallic window-sash having munnion-rails, the horizontal members of which are formed of two independent pieces and the vertical members having the front detachably secured to the rear.

3. A metallic window-sash having a vertical munnion-rail formed of two independent tubular inner and outer pieces arranged on opposite sides of the window panes or lights, each of said pieces bridging the adjacent vertical edges of the panes or lights, and an adjustable fastening member extending through one of said independent pieces from the outside thereof and thence through the bridge part of the other independent piece, said fastening member being adapted for drawing the two parts of the munnion-rail together to any desired extent.

4. A metallic window-sash having a vertical munnion-rail formed of two independent members located on opposite sides of the panes or lights, each comprising a bridge-piece extending across the meeting edges of the panes, and a cap, said caps and their bridge-pieces having interlocking lips to hold them together, and a fastening connecting said independent members of the munnion-rail.

5. Metallic window-sashes having box-like meeting-rails each composed of a body and a

cap having interlocking lips and each meeting-rail having a groove to hold the window-pane and provided with an independent lip to engage the corresponding lip on the other meeting-rail when the sashes are closed.

be expanded or contracted to fit the channels 10 of the window-frame.

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

ABRAHAM RASNER.

In presence of—

CLARENCE A. WILLIAMS,

JOHN H. RONEY.

5 6. A metallic window-sash having stiles of general box-like form composed of a body and a cap of substantial U shape and lips connecting the cap and box, whereby the lips can