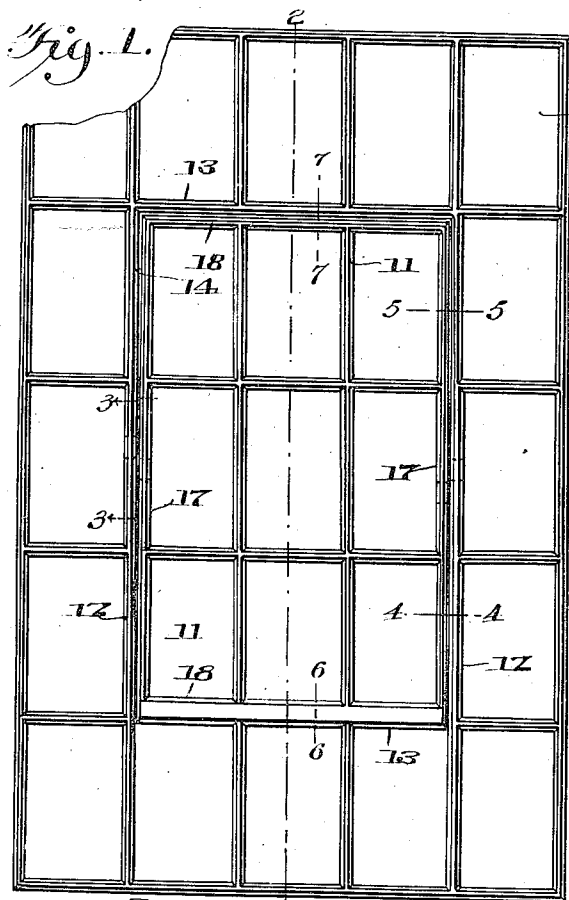
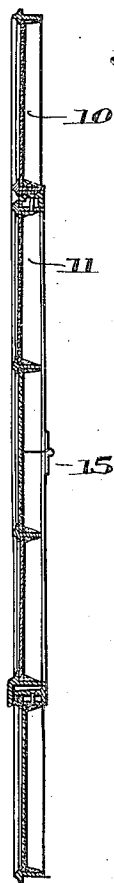
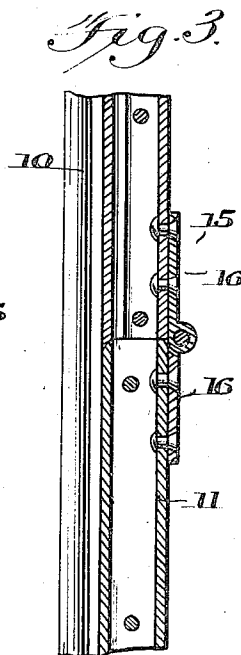
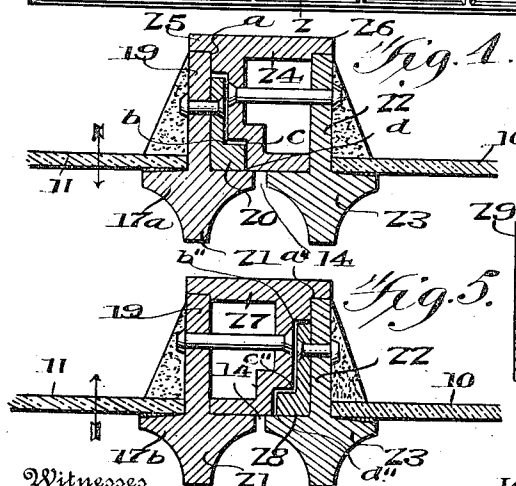
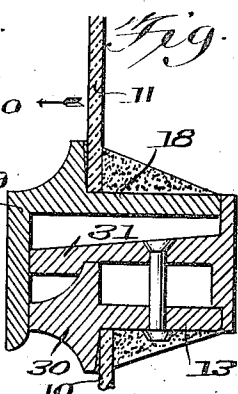
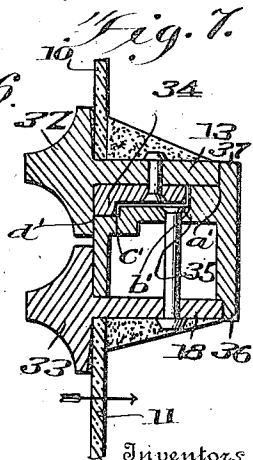


SASH CONSTRUCTION.

1,205,239.

Patented Nov. 21, 1916.



Joseph Matthews
Edward W. Freeman
William H. S. Balcan

364 Victor J. Evans

Attorney

Witnesses

W. S. M. Lowell

P. J. Foster

UNITED STATES PATENT OFFICE.

JOSEPH MATTHEWS, EDWARD W. FREEMAN, AND WILLIAM H. S. BATEMAN, OF
PHILADELPHIA, PENNSYLVANIA.

SASH CONSTRUCTION.

1,205,239.

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Patented Nov. 21, 1916.

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To all whom it may concern:

Be it known that we, JOSEPH MATTHEWS, EDWARD W. FREEMAN, and WILLIAM H. S. BATEMAN, citizens of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Sash Construction, of which the following is a specification.

10 An object of the invention is to provide a sash construction for providing an effective weathering contact to prevent the intrusion of the elements at the points of engagement of the sash with the frame when the sash is closed.

15 The invention contemplates, among other features, the provision of a sash and frame which, when the sash is closed, presents an effective joint or seal against the weather without in any manner preventing the swinging of the sash from a closed to an open position and wherein, furthermore, the closing of the sash on the frame is limited by the construction of the sash and frame along their contacting edges.

20 In the further disclosure of the invention reference is to be had to the accompanying drawings, constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which:

25 Figure 1 is a fragmentary front elevation of the sash and frame; Fig. 2 is a vertical sectional view taken on the line 2—2 in Fig. 1; Fig. 3 is an enlarged fragmentary vertical sectional view taken on the line 3—3 in Fig. 1, showing the hinge supporting the sash upon the frame; Fig. 4 is a fragmentary enlarged horizontal sectional view taken on the line 4—4 in Fig. 1; Fig. 5 is a fragmentary enlarged horizontal sectional view taken on the line 5—5 in Fig. 1; Fig. 6 is a fragmentary enlarged vertical sectional view taken on the line 6—6 in Fig. 1; and Fig. 7 is a fragmentary enlarged vertical sectional view taken on the line 7—7 in Fig. 1.

30 Referring more particularly to the views, we disclose a frame 10 and a sash 11, said frame 10 having sides 12 in the nature of vertical T-shaped strips and top and bottom horizontal strips 13 forming a substan-

tially rectangular opening 14 in which the sash 11 is arranged, said sash being swingingly supported upon the frame 10 by suitable hinges 15 each comprising pivotally connected relatively offset leaves 16, one of said leaves connecting with the frame and the other leaf connecting with the sash, thus permitting the sash to be swung vertically on the frame into an open or closed position relatively to the frame.

35 The sash 11 consists, more particularly, of T-shaped sides 17 and top and bottom strips 18, those portions of the sides lying above the points of connection of the sash with the frame being preferably called upper sash portions and those portions of the sides lying below the points of pivotal connection of the sash with the frame being preferably called lower sash portions. So, also, the portions of the sides of the frame above the hinges are preferably called upper frame portions and those portions below the hinges, lower frame portions.

40 Referring to Figs. 1 and 4, it will be seen that the lower portion of the sash 11 swings forwardly, thus causing the upper portion to swing rearwardly, and to this end the lower sash portions, and which are preferably indicated by the numeral 17^a, have riveted or otherwise secured to a rearwardly projecting web 19, a member 20, said member being secured to the inner side of the web and bearing against a head 21 forming a part of the lower sash portion. The member 20 is substantially L shape and secured to the inner side of a web 22 forming a part of the lower frame portion providing a head 23, is a step-shaped member 24, which has its outer face of a configuration substantially similar to the configuration of the member 20, said member 24 also having a projecting portion 25 thereof lapping over the rear end of the web 19 of the lower sash portion so that when the sash is closed relatively to the frame the member 20 will bear against and fit into the member 24 and the projection 25 of the member 24 will extend across the inner end of the web 19, thus providing similar adjacent weathering contacts at the points where the corners of the member 20 and a corner of the web 19 will

meet corners of the member 24, these points being indicated by the letters *a*, *b*, *c* and *d*. A projection 26 of the member 24, and similar to the projection 25, normally extends across the rear end of the web 22 of the lower frame portion as shown, said member 24 being held rigid with the web by a suitable rivet or the like. It will be understood that both lower side portions of the sash and frame are constructed as mentioned and shown in Fig. 4, and it will be clearly seen by referring to Fig. 4 that the arrow indicates the direction in which the sash is adapted to be swung in order to disengage the lower sash portion relatively to the lower frame portion.

The upper sash portion indicated by the numeral 17^b is similar in every respect and constitutes a continuation of the lower sash portion 17^a, the said upper sash portion 17^b, however, having riveted or otherwise secured thereto a member 27 of step-shape. Thus it will be seen that the only difference between the upper sash and frame portion and the lower sash and frame portion is that the members which are secured respectively to the lower frame portions are reverse in their position of the upper sash and frame sections, the arrow in Fig. 5 clearly indicating that the upper sash portion swings rearwardly whereas, as has been mentioned heretofore and clearly indicated in Fig. 4 by the arrow, the lower sash portion swings forwardly or outwardly from the frame.

In Figs. 6 and 7 we disclose in detail the construction of the top and bottom strips 13 and 18 of the respective frame and sash portions. The bottom strip 18 of the lower sash portion is formed to provide a depending ledge or plate 29 and the lower or bottom strip 13 of the frame portion is adapted to provide a head 30, a horizontal angular member of a substantially T-shape, and indicated by the numeral 31, being riveted or otherwise secured to the lower or bottom strip 13 of the frame and fitted therein so that upon closing the sash the depending plate 29 of the bottom strip 18 will bear against the front edges of the head 30 and member 31 on the bottom strip of the frame, thus preventing the intrusion of the elements from the outside of the sash and frame to the inside thereof, it being further seen that the inner end of the bottom strip 18 of the sash bears against an inner face of the member 31 when the sash is swung into a closed position, said inner face of the member 31 being at all times held rigidly against the inner end of the lower strip 13 of the frame, as will be clearly seen by referring to Fig. 6.

In Fig. 7 we disclose the construction of the top strips 13 and 18 of the frame and sash, and in this instance it will be seen that

the top strip 13 is formed with a head 32 and the lower strip 18 with a head 33. Riveted or otherwise secured to the top strip 13 and bearing against an inner face of the head is a member 34 similar in construction and configuration to the members 20 and 28 of the lower sash and frame portion described heretofore, a member 35 being riveted or otherwise secured to the top strip 18 of the sash and bearing against an inner face of the head 33, said member being similar in construction and configuration to the members 24 and 27, clearly shown in Figs. 4 and 5. To this end, the member 35 is at all times rigid on the strip 18 and has a projection 36 bearing against the inner end of the strip 18 and another projection 37 adapted to bear against the inner end of the strip 13 when the sash is in closed position, thus forming a series of weathering contacts indicated by the letters *a'*, *b'*, *c'* and *d'* and which prevent the intrusion of the elements at the juncture of the upper portion of the sash with the upper portion of the frame.

From the foregoing description it will thus be seen that in each of the instances described the sash, when closed upon the frame, will so have its edges disposed with respect to the edges of the frame that the resulting joints will prevent intrusion of the elements from the exterior to the interior of the frame and sash, the weathering contacts being such that rain, wind and snow or sleet cannot enter at the juncture of the respective portions of the sash and frame, this being due to the fact that portions of the sash, when the same is closed upon the frame, will overlap portions of the frame, as mentioned and described, and thus not only afford effective joints but also limit the closing movement of the sash upon the frame.

Referring to Fig. 5, it will be seen that the weather contacts provided by the juncture of the frame portions with the sash portions are indicated by the letters *a*², *b*², *c*² and *d*², such weather contacts being substantially as effective as those shown in the construction in Fig. 4. With so effectual sealing means between the sash and frame, it will be clearly apparent that when the sash is closed the intrusion of the elements at the juncture of the sash and frame will be effectually prevented.

Having thus described our invention, we claim:

In combination with a frame having T-shaped side strips and top and bottom strips forming an opening, a sash having T-shaped side strips and top and bottom strips, and mounted to swing in the opening of the frame, an L-shaped member secured to the confronting faces of the webs of the T-shaped side members of each the frame and

sash, a step-shaped member also secured to the opposed faces of the webs of the T-shaped side strips of each the frame and sash, said step-shaped members adapted to
5 contact with the terminals of said webs, with said L-shaped member and also with the inner faces of the heads of said T-shaped side strips.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSEPH MATTHEWS.

EDWARD W. FREEMAN.

WILLIAM H. S. BATEMAN.

Witnesses:

WILLIAM KUHN, Jr.,

ALFRED F. DAUBERT.