

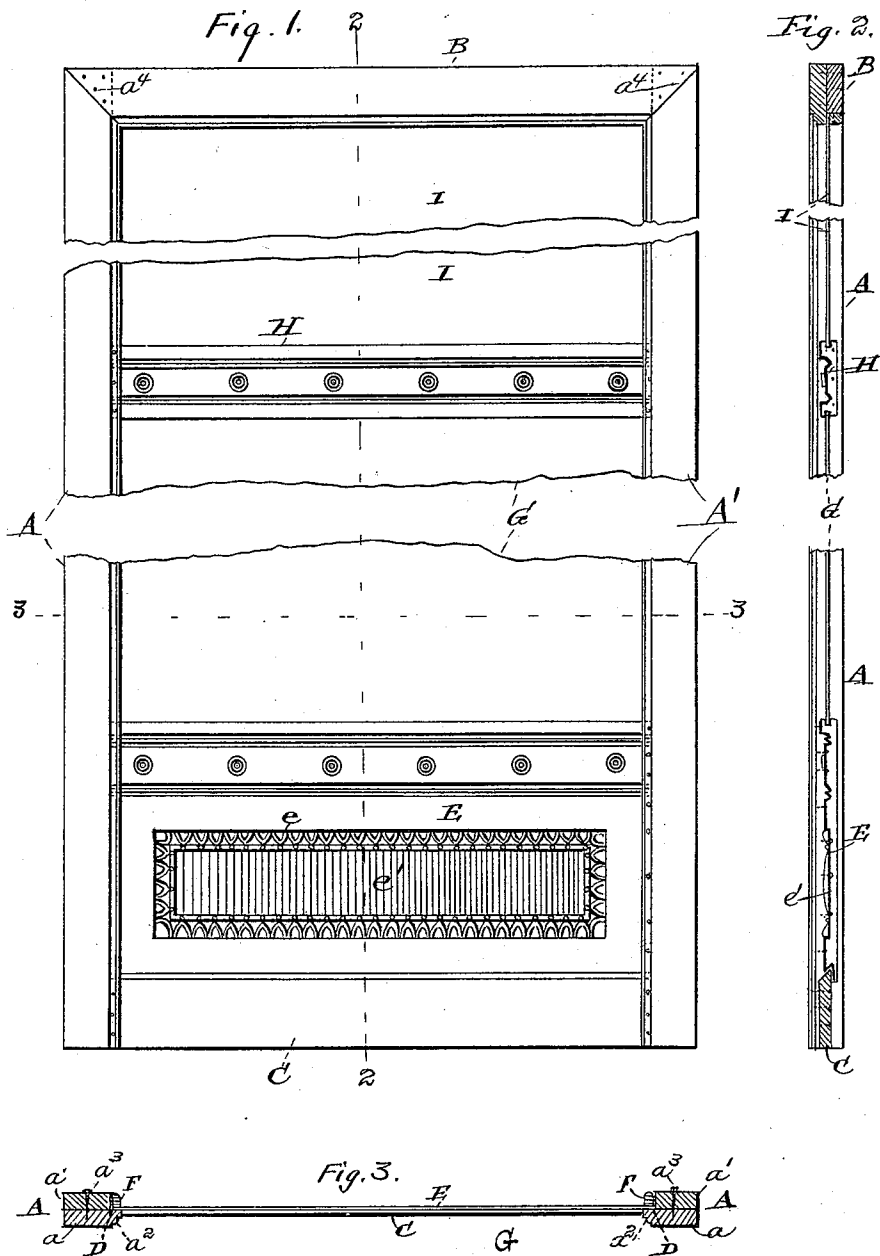
(No Model.)

2 Sheets—Sheet 1.

F. MESKER & T. O. ARBEGUST.
WINDOW SASH.

No. 460,479.

Patented Sept. 29, 1891.



WITNESSES:
W. H. Newstein

INVENTORS
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Thomas O. Arbogust
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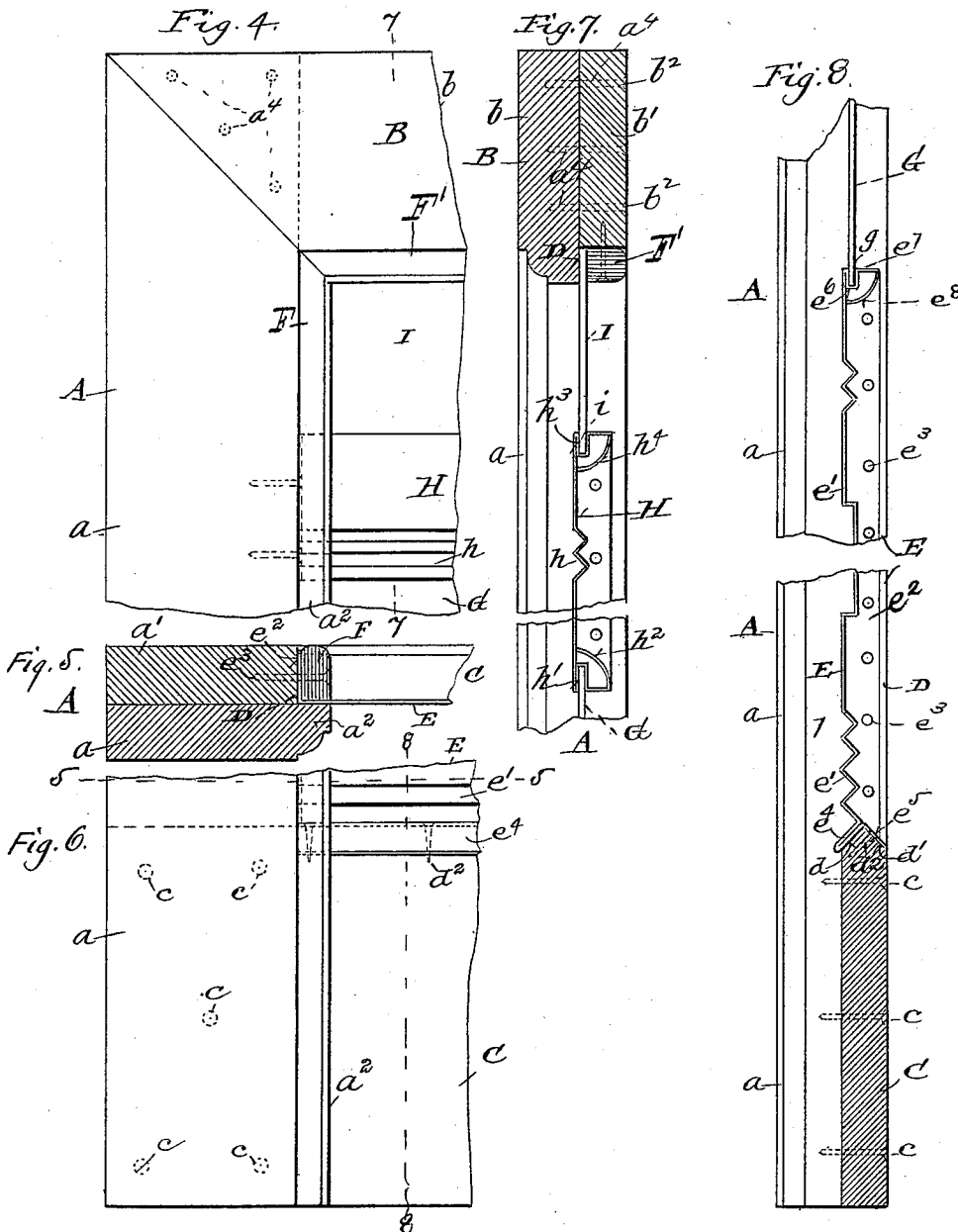
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UNITED STATES PATENT OFFICE.

FRANK MESKER AND THOMAS O. ARBEGUST, OF ST. LOUIS, MISSOURI,
ASSIGNORS TO MESKER & BROTHER, OF SAME PLACE.

WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 460,479, dated September 29, 1891.

Application filed April 23, 1890. Serial No. 349,155. (No model.)

To all whom it may concern:

Be it known that we, FRANK MESKER and THOMAS O. ARBEGUST, of St. Louis, Missouri, have jointly invented a new and useful Improvement in Window-Sashes, of which the following is a full, clear, and exact description.

The improvement consists in a combination of wooden and metal parts, whereby not only the advantages of a sash of comparatively light weight is obtained, but also a sash capable of being readily and economically made and ornamented. The improved sash is also one well adapted to be manufactured in quantities at some central point and thence shipped to points more or less remote and by the consumer readily and accurately fitted for use, all substantially as is hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, in which—

Figure 1 is a front elevation of the improved sash. It is shown in portions broken apart from each other. Fig. 2 is a vertical section on the line 2 2 of Fig. 1; Fig. 3, a horizontal section on the line 3 3 of Fig. 1; Fig. 4, a front elevation of the upper left-hand corner of the sash; Fig. 5, a horizontal section on the line 5 5 of Fig. 6; Fig. 6, a front elevation of the lower left-hand corner of the sash; Fig. 7, a vertical section on the line 7 7 of Fig. 4, and Fig. 8 a vertical section on the line 8 8 of Fig. 6. The last five named views are upon an enlarged scale.

The same letters of reference denote the same parts.

A A' represent the stiles of the sash, B the top rail, and C the bottom rail, all of wood. The stiles are rabbeted from bottom to top. The rabbet D is formed, preferably, by making the stiles each of two strips *a* and *a'*, the outer strip *a* at its inner edge *a²* projecting sufficiently to form the rabbet, and the two strips being nailed together, substantially as indicated at *a³*. The bottom rail C extends the width of the sash, and in thickness is equal to that of the inner strip *a'*, which at its lower end rests upon the rail C, and the rail C and outer strip *a* are nailed together, as indicated at *c c*. The upper rail B is of the same thickness as the stiles A A', but in place of extending squarely to the full width of the sash its outer part *b* is preferably united, as

indicated, to fit the correspondingly-shaped upper end of the outer strip *a*, and the top rail B and inner strip *a'* are nailed together, as indicated at *a⁴*.

E represents a metallic panel, usually of sheet metal, and, while capable of being made plain, is usually ornamented with any suitable design *e*, and as the design can be produced by crimping or corrugating the metal, as illustrated at *e'*, for instance, the panel can be stiffened by the same operation which produces the ornamental design. The panel at its side edges is fitted to the rabbets D in the stiles, respectively, and is provided with or shaped to form flanges *e²*, (see Fig. 5,) adapted to be nailed, as indicated at *e³*, to the stile. A confining-strip F may be applied to the outside of the flange *e²* and the nails *e³* passed through the strip and then through the flange *e²* and into the stile-strip *a'*. At its lower edge the panel rests upon the bottom rail C, and is secured thereto and combined therewith, preferably, in the following manner: The panel edge is first folded, as shown at *e⁴*, and the fold is inclined to fit upon the beveled outer edge *d* of the bottom rail and preferably to project slightly in front of the front face of the bottom rail, and then the panel edge is extended at *e⁵* to form a downwardly-inclined flange which fits upon the beveled inner edge *d'* of the bottom rail, and the panel is secured to the bottom rail by means of nails *d²*. At its upper end the panel is shaped to form a groove *e⁶*, in which is received the lower edge *g*, Fig. 8, of the glass pane G, which occupies the sash above the panel and extends upward in the sash to any desirable height and to meet the bar H. After forming the groove *e⁶* the panel is extended horizontally at *e⁷* and then downward, and returning to cause the edge *e⁴* of this returning part to encounter the main portion of the panel below the groove *e⁶*, and thereby strengthen the panel and brace its grooved portion. The bar H is fitted in the rabbets D D, and is attached to the stiles A A' in manner analogous to that of the panel E. It also can be ornamented and strengthened, as at *h*, in a manner similar to that of the panel E. Its lower edge is grooved at *h'* and then shaped at *h²* to strengthen the bar and grooved portion, similarly to the grooved upper edge of the

panel—that is, the bar H drops onto the pane G, whose upper edge enters the groove h' . The upper edge of the bar has a similar groove h^3 to receive the lower edge i of the pane I, and the bar beyond the groove h^3 is extended at h^4 to strengthen and support the bar and its groove, as before. The pane I at its upper edge is confined by a suitable strip F'. The strips F F are also used to confine the panes G I and the bar H at the side edges thereof. The stiles A A' can be made in a single piece.

The various parts of the sash—that is, the stiles, top and bottom rails, panel, bar, and panes—can be shipped separately to the location where the sash is to be used, and after reaching their destination in this form be assembled in the manner described. The rabbet in the stiles enables the sash parts to be readily united. After the stiles and rails are united the panel is put in place, then the pane G, then the bar, and finally the pane. The confining-strips F F F' are suitably applied to enable the formation of the sash to be completed. The top rail, like the stiles, is formed with a projecting edge to support the pane I, and it is preferably made in two parts $b b'$, as shown, and suitably nailed together. The bottom rail is desirable in that it serves as a guard and to take the wear and tear which would come upon the panel if that part were extended to the bottom of the sash; also, to stiffen the sash. It is also readily renewable, and it can be made of any height to enable the person who sets up the sash to readily adjust the bar, panel, and panes to each other, and thus easily overcome any difficulty in obtaining a perfect fit of the va-

rious parts. The projecting lower edge of the panel protects the bottom rail from drip water.

We claim—

1. In a window-sash, the combination of the bottom rail having a beveled upper edge, the panel having the folded and flanged lower edge and grooved upper edge extended at $e^7 e^8$, and the pane, substantially as set forth.

2. In a window-sash, the combination of the bottom rail having the beveled upper edge, the panel having the folded and flanged lower edge and the grooved upper edge extended at $e^7 e^8$, the cross-bar, and the panes arranged one above and the other below said bar, substantially as set forth.

3. The combination of the bottom rail having the beveled upper edge and the panel having the folded and flanged lower edge, as described.

4. The combination, in a sash, of the bottom rail and the panel, said panel at its lower edge projecting in front of the front surface of the bottom rail and deflected downward, whereby the bottom rail is protected from water dripping from the panel, as described and shown.

5. The combination of the panel having the grooved edge extended at $e^7 e^8$ and the pane, as described.

Witness our hands this 21st day of April, 1890.

FRANK MESKER.

THOMAS O. ARBEGUST.

Witnesses:

C. D. MOODY,

B. F. REX.