

(No Model.)

H. SCHUHMANN.
METALLIC WINDOW SASH BAR.

No. 415,068.

Patented Nov. 12, 1889.

Fig. 1.

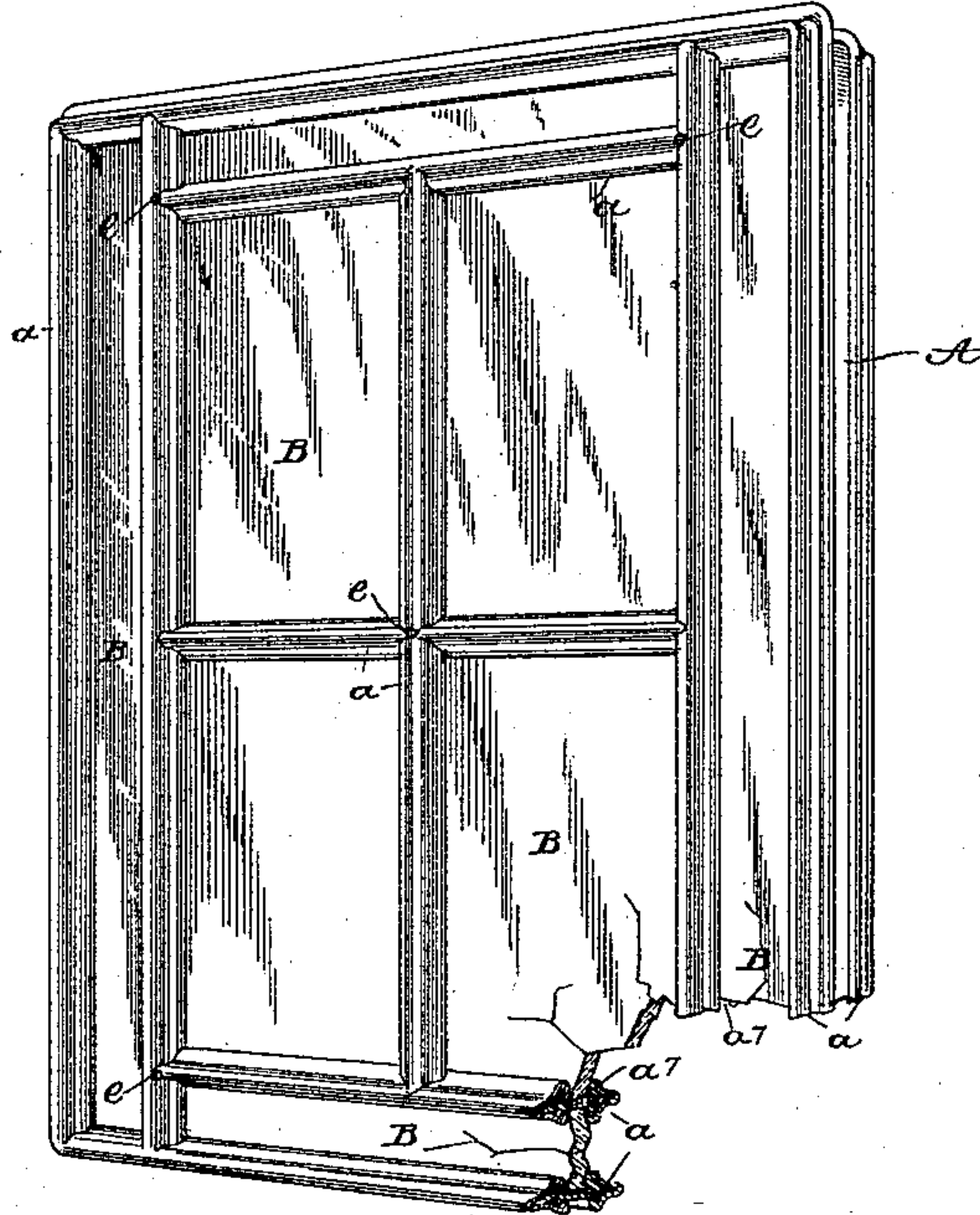


Fig. 2.

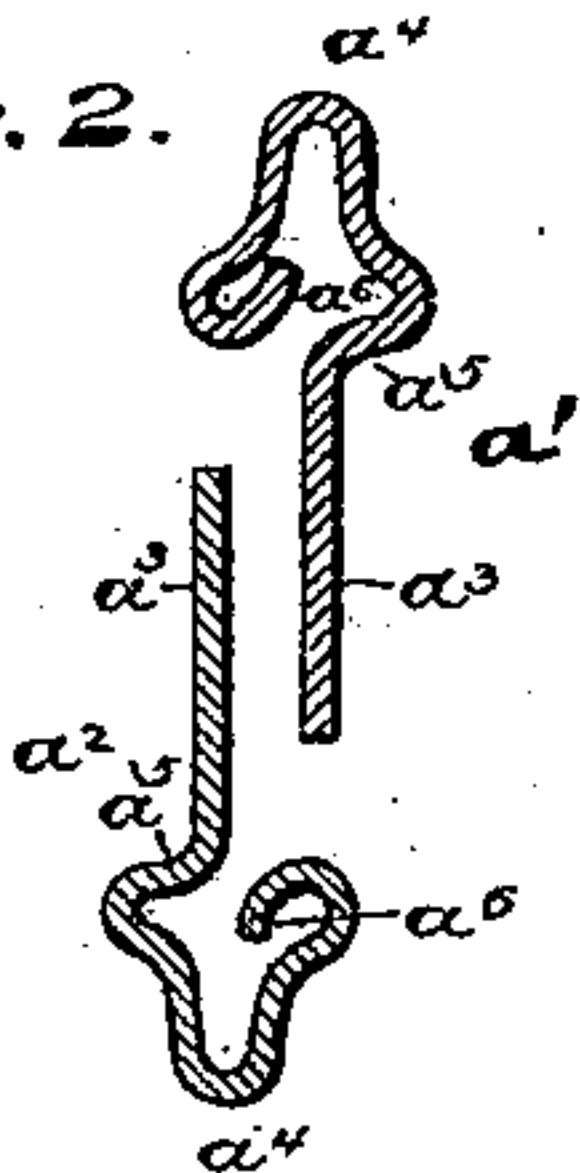


Fig. 4.

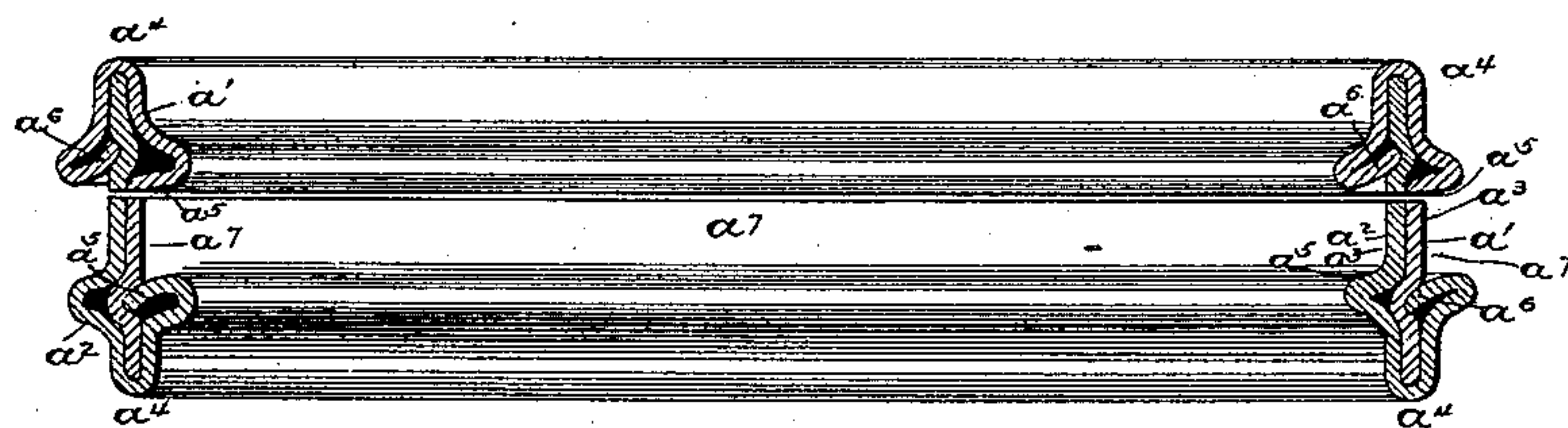


Fig. 3.

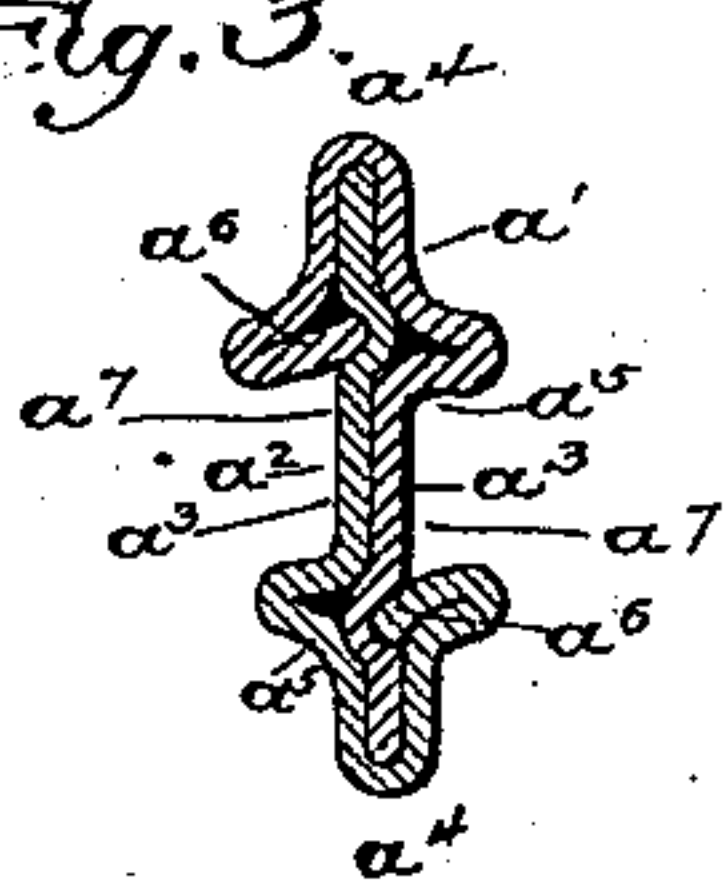


Fig. 5.

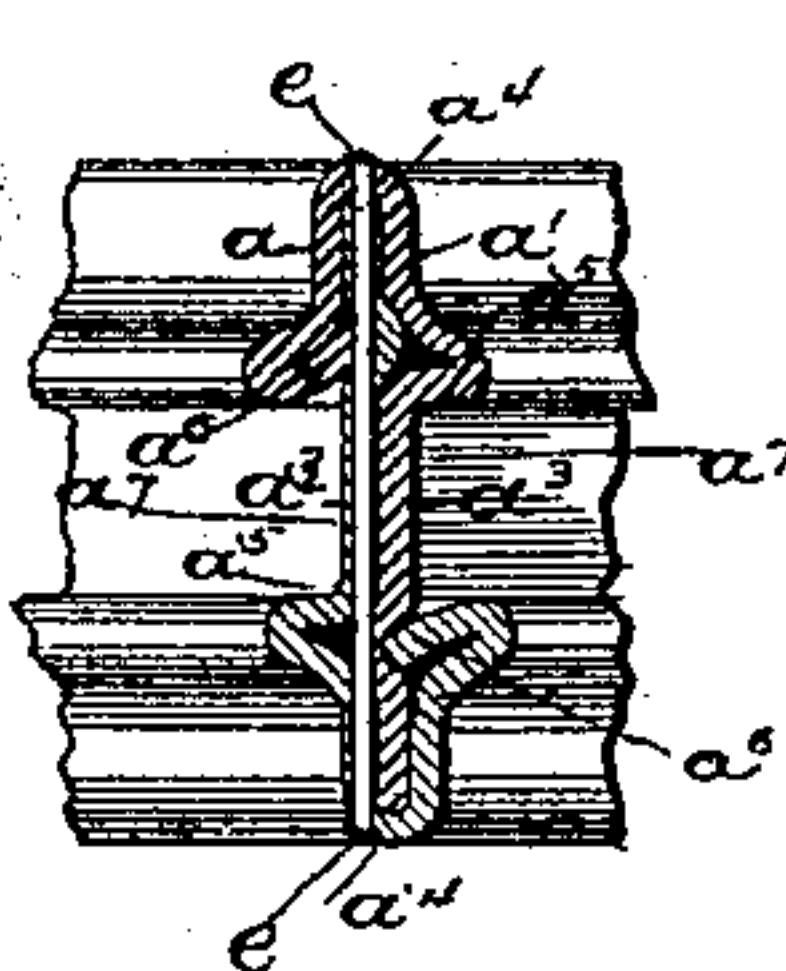
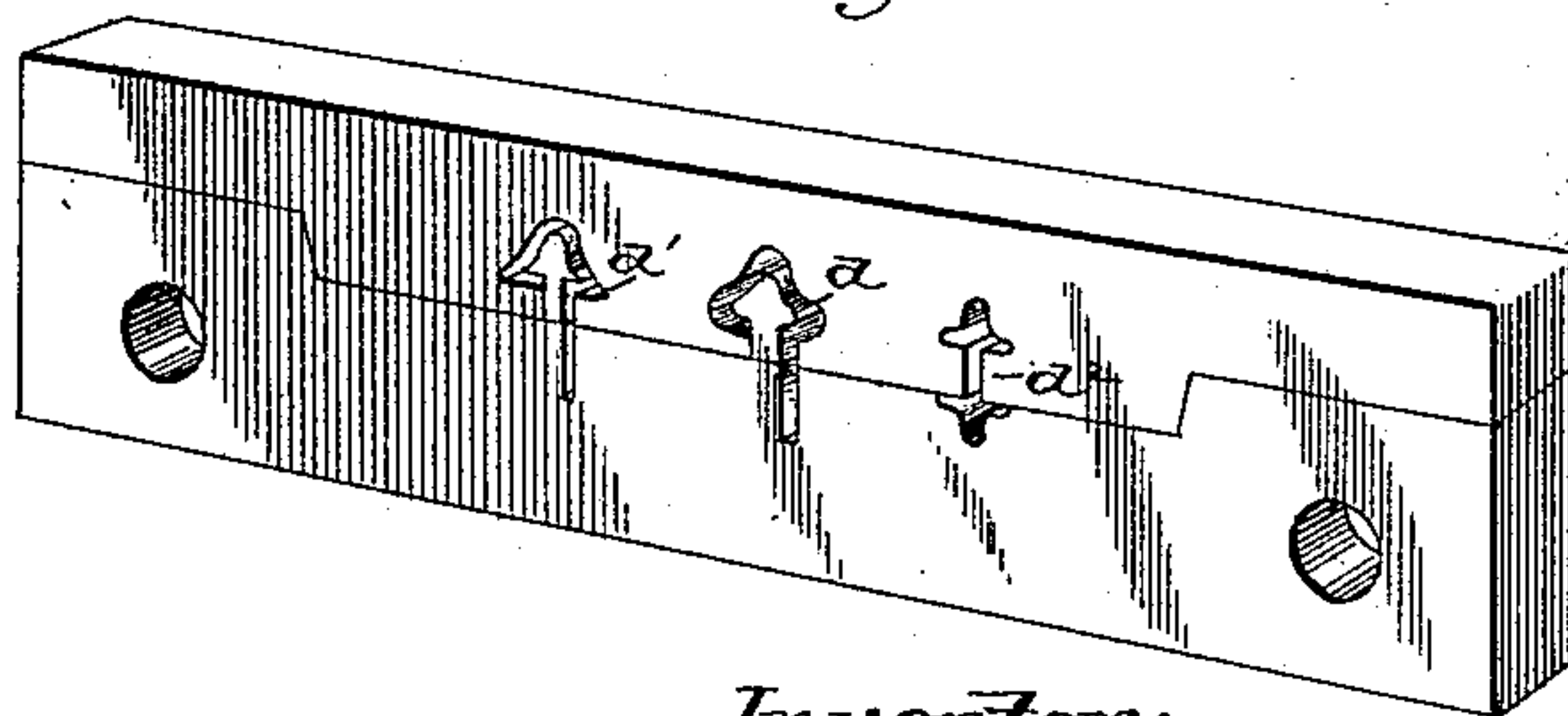


Fig. 6.



Witnesses:

H. H. Northrup
H. R. Kennedy

Inventor:

Herman Schuhmann
By Phil. F. Dodge Atty.

UNITED STATES PATENT OFFICE.

HERMAN SCHUHMANN, OF CHICAGO, ILLINOIS.

METALLIC WINDOW-SASH BAR.

SPECIFICATION forming part of Letters Patent No. 415,068, dated November 12, 1889.

Application filed July 1, 1889. Serial No. 316,168. (No model.)

To all whom it may concern:

Be it known that I, HERMAN SCHUHMANN, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Metallic Window-Sash Bars, of which the following is a specification.

The aim of this invention is to provide a strong, light, and inexpensive glass-sustaining sash or frame adapted for use in windows, doors, ceilings, and elsewhere.

My frame is adapted to be manufactured rapidly and by machinery, and is suitable for use in all manner of ornamental glass-work as a substitute for the usual lead frames and leading. Each bar of my frame is composed of two like strips of sheet metal, formed by a die or otherwise and fastened together in reverse positions. I commonly construct the sash or frame complete of the desired form, and thereafter saw it apart through the middle in the plane of the glass, after which the glass is introduced between the two parts and the parts reunited by rivets or other fastenings.

In the accompanying drawings, Figure 1 is a perspective view of a sash constructed on my plan, one corner being broken away to show the internal construction and the relation of the glass thereto. Fig. 2 is a cross-section, on an enlarged scale, of the two strips of which my sash-bar is formed. Fig. 3 is a cross-section showing these sections united to form the rail. Fig. 4 is a cross-section showing the manner in which the frame is cut apart to permit the introduction of the glass. Fig. 5 is a cross-section showing the manner in which the parts are reunited to keep the glass in place. Fig. 6 is a view of a die or draw-plate by means of which my sash-bars may be conveniently formed.

Referring to the drawings, A represents my improved sash, formed of the series of bars a , soldered or otherwise firmly united, and B represents the panes or sheets of glass secured therein. Each of the sash-bars consists of two duplicate longitudinal parts or strips a' and a'' , each formed from a single piece of sheet metal. Each of the rail-sections presents in cross-section a flat or substantially flat web a^3 , bent or curled at one edge, so as to present the rib or enlargement a^4 , of a Λ form in cross-section, with a longitudinal shoulder a^5 under one edge and the inwardly-turned lip a^6 at the opposite edge. This strip or section may be formed by drawing the metal successively through the openings d d' of a draw-plate such as shown in Fig. 6, or formed in any other suitable manner. After being formed and cut to suitable lengths one of the sections is reversed in relation to the other, as shown in Fig. 2, their webs or flat portions laid together, and the ends of each inserted within the head or enlargement a^4 of the other, after which the compound or two-part strip is passed through a third opening d^2 in the draw-plate, or otherwise treated so as to close the head or enlargement a^4 of each member down tightly over the edge of the other, the result being such as shown in Fig. 3, with longitudinal glass-receiving grooves a^7 in its opposite sides. After the bars are thus formed they are cut, bent, or otherwise treated and united in the proper relations to produce a frame of the required pattern. This frame is then sawed or otherwise cut apart in the manner represented in Fig. 4, so that it presents two complementary parts with the grooves exposed to permit the insertion of the glass. After the glass is inserted the parts are again brought together to confine the glass, and secured by transverse screws or rivets e , or similar fastening devices.

It will be observed that the essence of my invention resides in the formation of the bars of two parts, flanged at their edges and united so that the flange of one embraces the edge of the other, and, provided this peculiarity is retained, the parts or sections may be modified in form at will.

Having thus described my invention, what I claim is—

1. The sheet-metal sash-bar composed of the duplicate parts, each having one edge folded over the edge of the other.
2. A sash-bar composed of two longitudinal

complementary parts, each enlarged in cross-section at one edge and applied to embrace the edge of the other.

3. The section for use in forming sash-bars,
5 consisting of a metal strip having one edge bent in cross-section to produce the longitudinal shoulder, whereby said strips are adapted to be united in reverse positions to form jointly a bar channeled in its two sides.

In testimony whereof I hereunto set my hand, this 18th day of May, 1889, in the presence of two attesting witnesses.

HERMAN SCHUHMANN.

Witnesses:

D. E. LIVERMORE,
ROBT. G. LINDSAY.