No. 750,999. PATENTED FEB. 2, 1904.

E. OHNSTRAND.

WINDOW SASH.

APPLICATION FILED FEB. 20, 1903.

NO MODEL.

Fig. 3

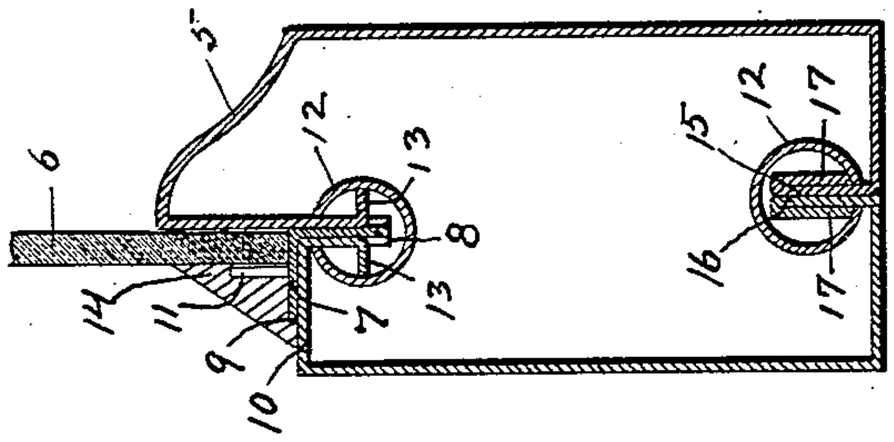


Fig. 2

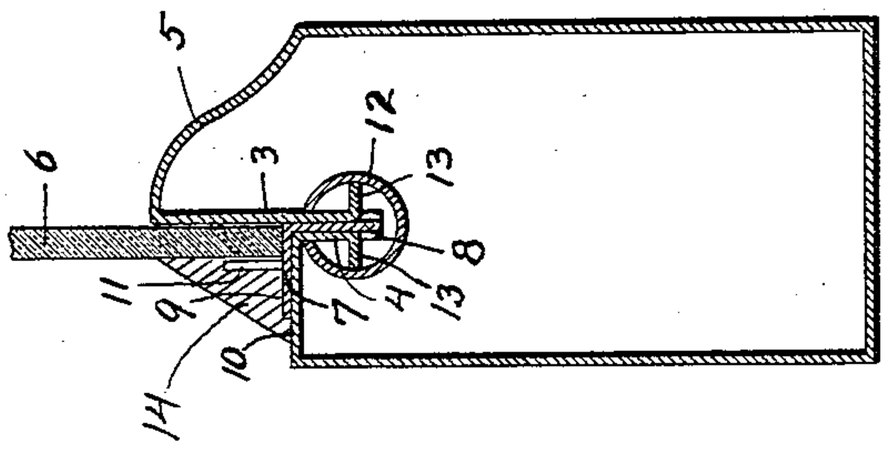


Fig. 4

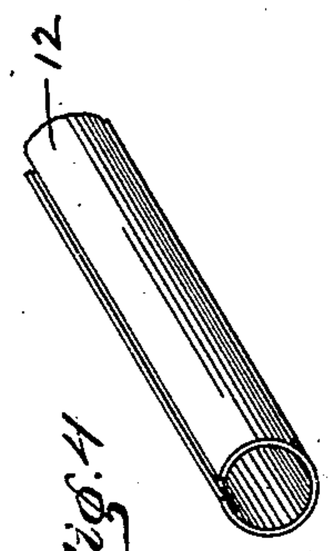
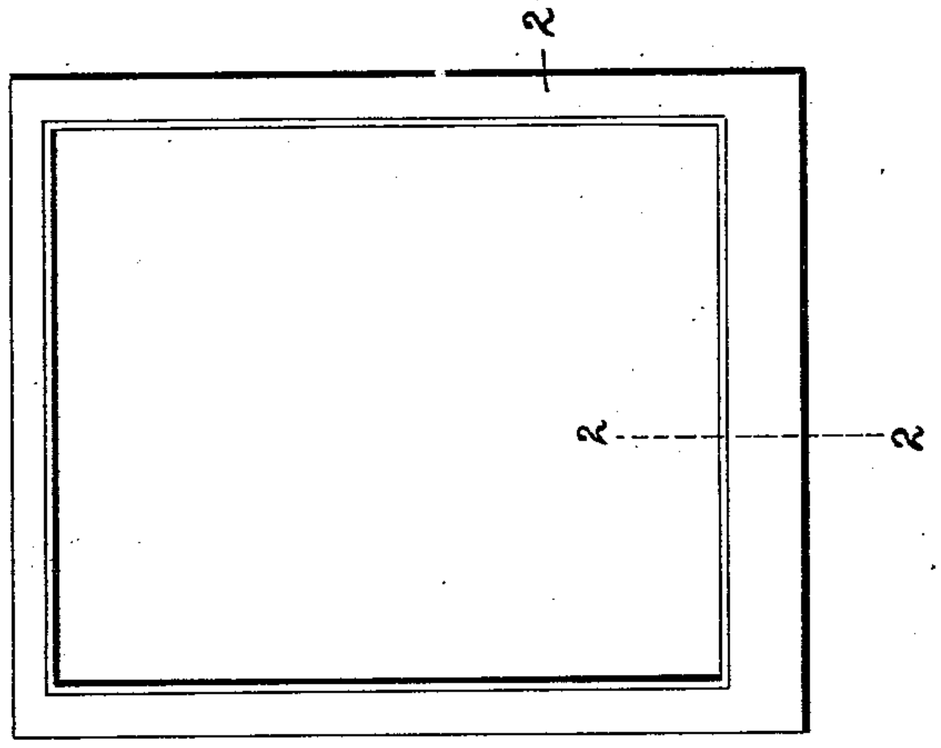


Fig. 1



Witnesses
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No. 750,999. Patented February 2, 1904.

UNITED STATES PATENT OFFICE.

ENOCH OHNSTRAND, OF JAMESTOWN, NEW YORK, ASSIGNOR TO ART METAL CONSTRUCTION COMPANY, OF JAMESTOWN, NEW YORK, A CORPORATION OF NEW YORK.

WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 750,999, dated February 2, 1904.

Application filed February 20, 1903. Serial No. 144,224. (No model.)

To all whom it may concern:

Be it known that I, ENOCH OHNSTRAND, a resident of Jamestown, in the county of Chautauqua and State of New York, have invented a new and useful Improvement in Window-Sashes; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to metallic window-sashes, its object being to provide a window-sash made of plates of sheet metal so joined as to form a rigid connection without the use of rivets or like fastening means, while at the same time provision is made for the reception of the glass, so as to provide a firm and secure support for the same.

To these ends my invention comprises, generally stated, a window-sash formed of a hollow plate or sheet-metal body, the free ends of the metal being turned inwardly, one of said ends forming a support for the glass and having interposed a metallic angle-piece provided with tongues adapted to engage the glass around its edges and a clamping device adapted to securely unite the inwardly-projecting free ends of the metal.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a view of a window-sash made in accordance with my invention. Fig. 2 is an enlarged cross-section of a portion of the sash, and Fig. 3 is a modified form of same. Fig. 4 is a perspective view of clamping device.

Like numerals indicate like parts in each of the figures.

In an application filed by me of even date herewith, Serial No. 144,216, I have illustrated and described a joint for use in the construction of metallic furniture, and in the present application I make use of such joint in connection with my improved window-sash.

In the drawings the numeral 2 designates a metallic sash embodying my invention, the sides and ends of the sash being formed of plate or sheet metal of suitable thickness, the metal of each end or side piece being bent to the form indicated in Fig. 2 from one piece of metal, the free ends of the metal being bent inwardly to form the flanges 3 and 4. To provide for the molding on the inside of the sash, the molding or beveled portion 5 may be formed integral with the body of the sash, said molding extending up so that the inwardly-projecting flange 3 forms a support or backing for the window-pane 6.

Interposed between the inwardly-projecting flanges 3 and 4 is the angle-piece 7, one flange, 8, of said angle-piece extending down between the flanges 3 and 4 and the other angle, 9, resting upon the horizontal flange 10 of the sash. The flange 9 of the angle has the tongues 11 formed thereon adapted to be bent up in position to engage with the pane 6 in the manner of glaziers' points.

The flanges 3 and 4 have formed thereon the tongues 13, which are adapted to be bent out at substantially right angles to said flanges, and when the angle 7 has been inserted between the flanges 3 and 4 the tubular section 12, entering the open end of the side or end piece, is slipped over the flanges 3 and 4, so as to bind them securely together. This tubular section is formed of a metal tube slitted from end to end, the spring of the metal tending to force the edges together, so that when said metal tube is slipped over the flanges 3 and 4 the spring of the metal will act to bind the flanges 3 and 4 with the interposed angle 7. The tongues 13 on the flanges 3 and 4 prevent the withdrawal of the tubular section 12, so that the displacement of the tubular section in that manner is prevented. The sides and ends of the sash may then be secured together in any suitable manner.

By the above construction I obtain a window-sash in which the sides and ends are each formed of a continuous piece of metal, the free edges of which are connected without the use of rivets or other like fastening devices which tend to mar the appearance of the finished sash and which are liable to become loose and permit the parts to rattle when exposed to high winds. By my invention the connecting device is out of sight, so that the appearance of the finished sash is greatly en-

hanced, especially when it is finished in imitation of mahogany or other hardwood finish. The pane is provided with a firm support, owing to the backing it receives from the molding 5, while at the same time by the use of the angle 7, with its tongues 11, a very simple and efficient device is provided, which takes the place of the glaziers' points and provides holding means for the putty 14.

In Fig. 3 I have illustrated a modified form of my invention in which the sides and ends of the sash instead of being formed of a continuous piece of metal are formed of two pieces of metal, the free ends of the metal of each section being turned inwardly to form the flanges 15 16 in addition to the flanges 3 and 4, as above set forth. These flanges 15 16 are turned back on themselves to form outwardly-projecting flanges 17, which form the stops for the tubular section 12 when in position, all as set forth and claimed in said application, Serial No. 144,216.

What I claim is—

1. A metallic window-sash, the sides and ends formed of sheet metal having inwardly-projecting flanges, one of said flanges forming a support for the window-pane, and a slitted tubular section engaging said inwardly-extending flanges.

2. A metallic window-sash, the sides and ends formed of sheet metal having inwardly-projecting flanges, a molding formed integral therewith and forming a support for the window-pane, and a slitted tubular section engaging said inwardly-extending flanges.

3. A metallic window-sash, the sides and ends being formed of sheet metal having inwardly-extending flanges, an angle having one flange inserted between said inwardly-extending flanges, means for securing said angle between said flanges, and the other flange of said angle having tongues formed thereon to engage the pane.

4. A metallic window-sash, the sides and ends being formed of sheet metal having inwardly-projecting flanges, an angle having one flange inserted between said flanges, a slitted tubular section engaging said inwardly-extending flanges, the other flange of said angle having tongues formed thereon adapted to engage the pane.

In testimony whereof I, the said ENOCH OHNSTRAND, have hereunto set my hand.

ENOCH OHNSTRAND.

Witnesses:
A. GILBERT,
R. M. BAUER.