W. KREITZER.

Window-Sash.

No. 161,342. Patented March 30, 1875.

Fig. 1.

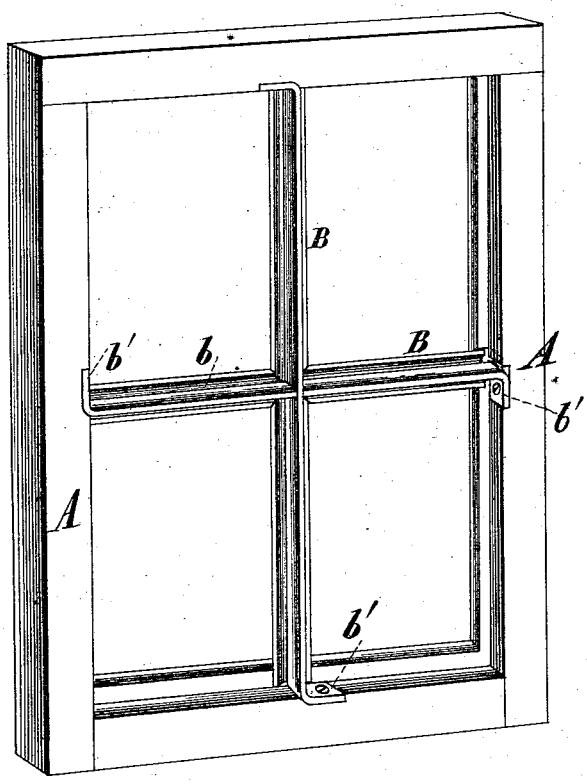
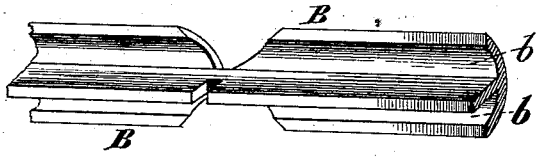


Fig. 2.



Witnesses.
A. Ruppert.
Chas. Hasbrouck

W. Kreitzer
Inventor.
D. P. Holloway & Co
Attys

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

WILLIAM KREITZER, OF MENDOTA, ILLINOIS.

IMPROVEMENT IN WINDOW-SASHES.

Specification forming part of Letters Patent No. **161,342**, dated March 30, 1875; application filed February 20, 1875.

To all whom it may concern:

Be it known that I, WILLIAM KREITZER, of Mendota, in the county of La Salle and State of Illinois, have invented an Improvement in Window-Sashes, of which the following is a specification:

My invention consists, first, in making iron mullions of window-sashes of T form rolled out of a single bar, and the head of the T being made concave upon the side facing the pane of glass, forming a gutter or channel for the reception of putty; secondly, in providing the iron mullions thus made with rectangularly-projecting ears at the ends by which to properly secure them to the wooden frame of the sash.

In the annexed drawings, Figure 1 is a perspective view of my improved window-sash. Fig. 2 is a section of a perspective view of a portion of one of the iron mullions.

The same letters of reference are used in all the figures for the designation of identical parts.

The frame A of the sash is made of wood in the usual manner. The several mullions B, only two—one horizontal and the other vertical—being shown, are of wrought-iron or other ductile metal, and in cross-section, and resemble a T in form. They are rolled out of solid bars of metal, in a suitable mill, with rolls so made as to give to the interior surface *b* a concaved outline, as best seen in Fig. 2.

When panes of glass are inserted in the sash a quantity of putty will be used to fill up the space between the glass and the concaved surface of the head of the mullions, forming a cushion as it were, and obviating the danger of fracture of large panes of glass in warping under the influence of the changes of temperature. At the points where the vertical and horizontal mullions intersect they are gained and mitered for properly jointing them, as shown in Fig 1.

At each end the stem of the mullions, being made somewhat longer than the head, is bent at right angles, forming ears *b'*, which, entering recesses cut in the wooden frame A, and suitably bolted thereto, make a very firm and substantial connection between the metallic mullions and the wooden frame of the sash.

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

1. A solid metallic mullion for window-sashes of T form, and having concaved surfaces *b b*, substantially as and for the purpose specified.

2. The solid metallic mullion B *b b*, constructed with ears *b'* at the ends, substantially as specified.

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

WILLIAM KREITZER.

Witnesses:

JOSEPH O. CROOKER,

CHARLES A. CROOKER.