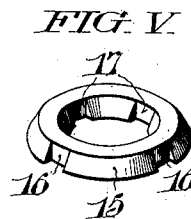
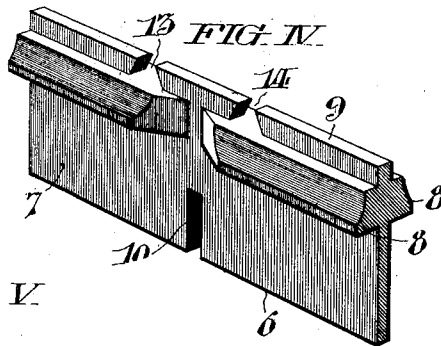
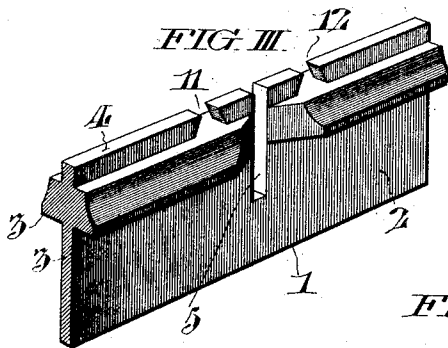
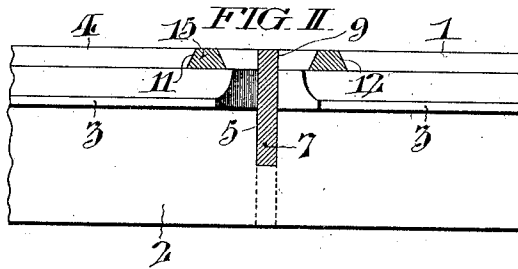
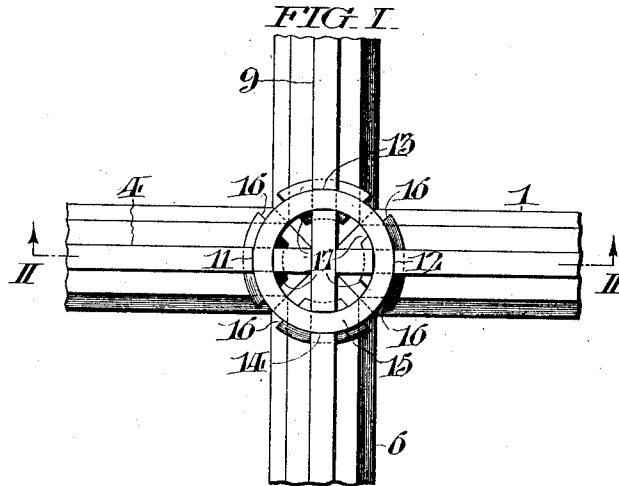


T. F. OECHSLE & A. KUMPF.
METAL SASH.
APPLICATION FILED DEC. 10, 1913.

1,113,678.

Patented Oct. 13, 1914.



Witnesses
John C. Burgess.
James A. Bell.

Inventors
Theodore F. Oechsle,
and
August Kumpf,
By Harry Paul.
Attorneys.

UNITED STATES PATENT OFFICE.

THEODORE F. OECHSLE AND AUGUST KUMPF, OF PHILADELPHIA, PENNSYLVANIA.

METAL SASH.

1,113,678.

Specification of Letters Patent.

Patented Oct. 13, 1914.

Application filed December 10, 1913. Serial No. 805,709.

To all whom it may concern:

Be it known that we, THEODORE F. OECHSLE and AUGUST KUMPF, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Metal Sashes, whereof the following is a specification, reference being had to the accompanying drawings.

Our invention relates more particularly to sashes which are adapted for supporting glass.

An object of our invention is to provide a metal sash wherein the cross bars or muntins are each formed integral throughout their length and with recesses whereby said bars may cross each other at an angle with their outer faces substantially flush with each other, together with means which interlock with each section of the cross bar adjacent their closing point for firmly holding said bars together.

In the drawings which show by way of illustration one embodiment of the invention, Figure I, is a plan view showing a portion of a metal sash embodying our improvements. Fig. II, is a sectional view on the line II, II, of Fig. I. Fig. III, is a detail perspective view of one of the cross bars or muntins shown in Fig. I. Fig. IV, is a perspective view of the cross bar or muntin which is adapted to interlock with the cross bar shown in Fig. III. Fig. V, is a perspective view showing the locking member for holding the cross bars in assembled position.

Our invention relates more particularly to a metal sash wherein each cross bar is integral throughout its length and is provided with a recess so disposed that said bars may cross each other at an angle with their outer and inner faces substantially flush. Each section of the cross bars, adjacent the point of crossing, is formed with a recess in the outwardly projecting rib of the cross bars. These recesses are so shaped that a ring or other locking device may engage each of the recesses and thereby hold the bars in assembled position.

Referring more in detail to the drawings, our improved metal sash consists of a cross bar or muntin 1, which is formed with a central web 2, and laterally projecting flanges 3, 3. Above the laterally projecting flanges is a central rib 4, which projects outwardly from the flanges. The web 2 of the

cross bar is provided with a recess 5, which opens at the outer or upper face of the bar. A cross bar 6, is also formed with a central web 7, and with flanges 8, 8. A rib 9, projects outwardly or upwardly from the flanges 8, 8. This cross bar 6, is formed with a recess 10, which is normal to the edges of the cross bar. The flanges 3, 3, and the flanges 8, 8, are cut at an angle so that one cross bar may be placed on the other. The recesses 5, and 10, are so proportioned that the cross bars may be placed as above noted, and when so placed, the outer or upper faces of the cross bars will be substantially flush with each other.

We have shown the bars assembled in Fig. I, of the drawings. We are aware that cross bars have been shaped and constructed as above stated, so that said cross bars may cross each other at right angles and have their inner and outer edges substantially flush and we do not, therefore, claim such structure as our invention.

Our invention relates more particularly to the means for holding metal cross bars of the above description in assembled position. The cross bar 2, is provided with two recesses 11, and 12, which are disposed at equal distances from the recess 5, which is the crossing point of the two bars. These recesses 11, and 12, are dove-tailed in shape. The cross bar 6, is also provided with two similar recesses 13, and 14, which are likewise disposed at equal distances from the recess 10, or the crossing point of the bars.

The bars when assembled are held in position by a locking ring 15. This locking ring is shaped so as to correspond in cross section to the dove-tailed recesses 11, 12, 13 and 14. Said locking ring is formed with grooves 16, in its outer periphery and grooves 17, in its inner periphery which are disposed opposite the grooves 16. The grooves 16, and 17, form parallel walls which are disposed relative to each other so that when said grooves are brought into register with the recesses 11, 12, 13 and 14, the locking ring may be inserted in all of said recesses. After the locking ring is inserted in said recesses, it is given a partial turn so as to bring the body portion of the ring into locking engagement with the dove-tailed recesses. After the ring has been turned, the metal forming the ribs 4, and 9, may be closed or "knocked over" on to the ring to prevent its turning so as to release the cross bars. This locking

ring forms a means which is common to each section of the cross bars and which has a locking engagement therewith at points adjacent the crossing point of the bars. 5 This locking ring not only holds the cross bars in assembled position but also braces said cross bars.

It is obvious that minor changes in the details of construction and arrangement of 10 parts may be made without departing from the spirit of our invention as set forth in the appended claims.

Having thus described our invention, we claim:

15 1. A metal sash including cross bars each of which is integral throughout its length, said cross bars having recesses formed therein whereby said bars may cross each other with their outer faces substantially 20 flush, each section of the cross bars adjacent the crossing point having a recess therein, and means common to all of said last named recesses for locking said cross bars in assembled position.

25 2. A metal sash including cross bars each of which is integral throughout its length, said cross bars having recesses formed therein whereby said bars may cross each other with their outer faces substantially flush,

each section of the cross bars adjacent the 30 crossing point having a dove-tailed recess formed therein, and a locking ring common to all of said dove-tailed recesses for holding said cross bars in assembled position.

3. A metal sash including cross bars each 35 of which is integral throughout its length, said cross bars having recesses formed therein whereby said bars may cross each other with their outer faces substantially flush, 40 each section of the cross bars adjacent the crossing point having a dove-tailed recess formed therein, and a locking ring common to all of said dove-tailed recesses for holding said cross bars in assembled position, 45 said locking ring being shaped in cross section to conform to said dove-tailed recesses and having grooves formed therein for permitting said locking ring to be placed in said dove-tailed recesses.

In testimony whereof, we have hereunto 50 signed our names at Philadelphia, Pennsylvania, this eighth day of December, 1913.

THEODORE F. OECHSLE.
AUGUST KUMPF.

Witnesses:

JAMES H. BELL,
E. L. FULLERTON.