

W. J. KLEMM.

WINDOW SASH.

APPLICATION FILED OCT. 29, 1910.

1,000,094.

Patented Aug. 8, 1911.

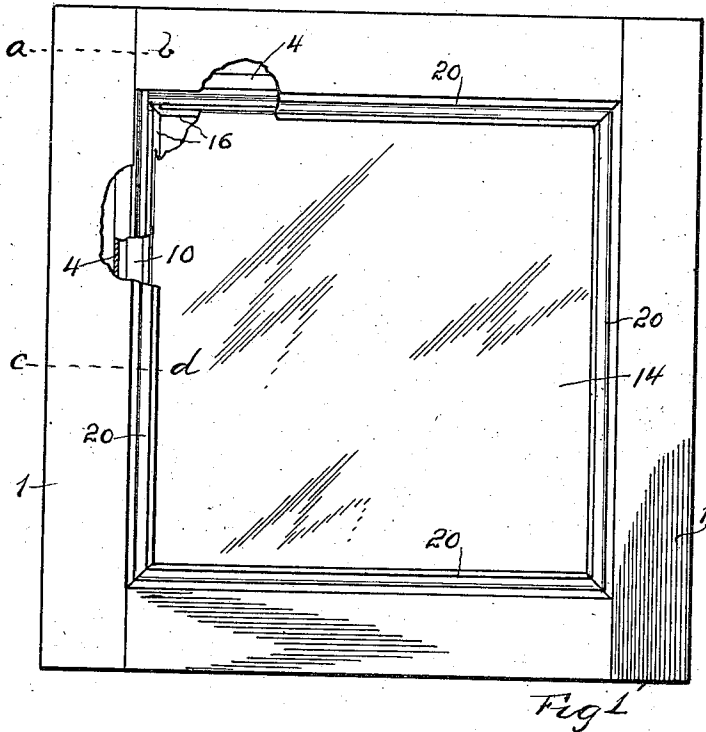
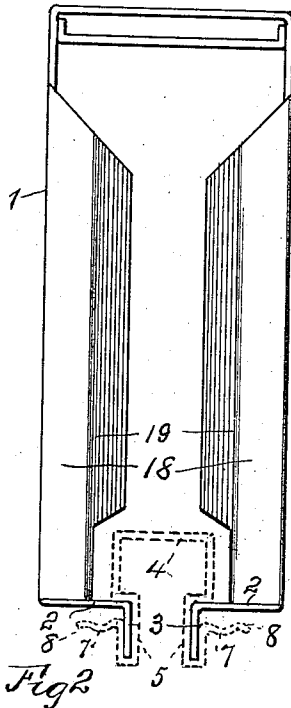


Fig 3

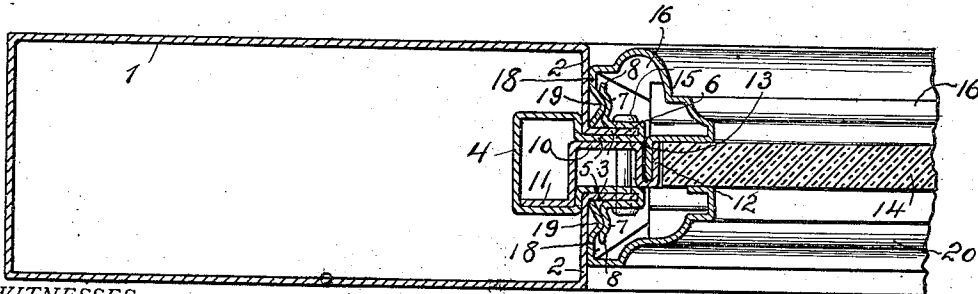
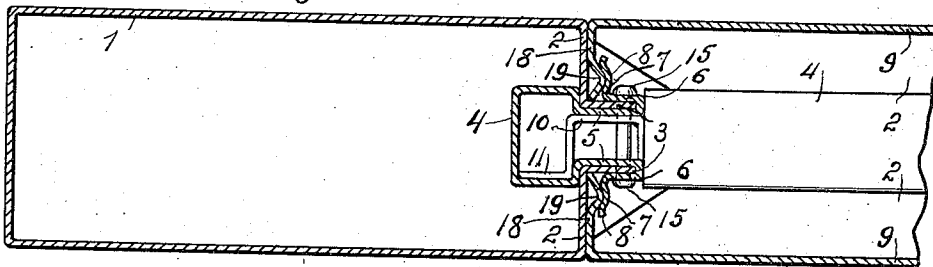


Fig 4

WITNESSES:

R. Hamilton
C. B. Heuse

INVENTOR.
William J. Klemm
BY
Warren D. House
His ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM J. KLEMM, OF KANSAS CITY, MISSOURI.

WINDOW-SASH.

1,000,094.

Specification of Letters Patent.

Patented Aug. 8, 1911.

Application filed October 29, 1910. Serial No. 529,725.

To all whom it may concern:

Be it known that I, WILLIAM J. KLEMM, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Window-Sashes, of which the following is a specification.

My invention relates to improvements in window sashes.

The object of my invention is to provide a window sash adapted to be composed of sheet metal and which shall be simple and strong in construction and will possess durability and efficiency.

The novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawings illustrative of the preferred form of my invention, Figure 1 is an elevation, partly broken away, of my improved window sash. Fig. 2 is an enlarged end elevation of one of the rails. Fig. 3 is a section on the dotted line *a-b* of Fig. 1. Fig. 4 is a section on the dotted line *c-d* of Fig. 1.

Similar reference characters denote similar parts.

1 denotes the two stiles of the sash, both stiles being alike so that a description of one will answer for both. Each stile is provided with two longitudinal transversely disposed portions 2 which extend toward each other at the pane side of the stile and are respectively provided with longitudinal laterally extending parallel flanges 3.

In each stile is located a clamping member 4, preferably composed, as are the stiles, of sheet metal and preferably having the form of a rectangular tube having one side resting against the inner sides of the portions 2. Said side of the clamping member is provided with two parallel longitudinal portions 5 located between the flanges 3 and having respectively return bend portions 6 which receive the flanges 3 and are respectively provided with longitudinal flanges 7 having corrugations 8.

The top and bottom rails 9 are, like the stiles 1, provided with transverse portions 2 having parallel flanges 3 which are respectively located in return bend portions 6 of horizontal portions 5 of two horizontal clamping members 4 corresponding in structure to the clamping members 4 in the stiles

1. The return bend portions 6 of the horizontal clamping members 4 are also provided with flanges 7 having corrugations 8.

In each stile 1 and rail 9 is mounted a pane supporting member 10 preferably of sheet metal, and having a longitudinal portion of U shape located between the parallel portions 5 of the adjacent clamping member 4. One arm of the U shaped portion of the member 10 is provided with a lateral flange 11 fitted in the adjacent member 4, as shown in Figs. 3 and 4. The other arm of the member 10 is provided with a return bend portion 12 which forms a longitudinal groove 13. The return bend portion 12 serves as a support for the adjacent edge of the pane, which is denoted by 14, as shown in Fig. 4. Securing devices, such as rivets, 15 extend through holes provided in the member 10, the portions 5 and 6 and the flanges 3.

16 denote four pane supporting devices such as moldings, preferably formed of sheet metal and having their ends in mitered relation to each other, as shown in Fig. 1. Two of these moldings are disposed vertically respectively adjacent to the stiles 1, and the other two are located parallel with and adjacent to the rails 9 respectively. The moldings 16 serve as seats for one side of the pane 14 and are respectively provided with flanges 17 which are respectively located in the grooves 13. The moldings 16 are also provided with longitudinal flanges 18 having corrugations 19 for respectively engaging the corrugations 8 of the adjacent flanges 7.

Upon the opposite side of the pane 14 are located four other moldings 20 bearing against and serving as securing members for retaining in place the pane 14. The moldings 20 are provided respectively with longitudinal flanges 18 having corrugations 19 for respectively engaging the corrugations 8 of the adjacent flanges 7. The flanges 7 are preferably sufficiently resilient to permit the flanges 18 of the moldings 16 and 20 being forced between them and the adjacent stiles and rails, and after being so forced to assume the position shown in Figs. 3 and 4, in which positions the corrugations 8 will engage the corrugations 19 of the flanges 18.

The rails at their ends are provided with vertical flanges 18 having corrugations 19 which engage the corrugations 8 of the

flanges 7 in the same manner as these corrugations are engaged by the corrugations 19 of the moldings 16 and 20.

In assembling the parts the vertical clamping members 4 are slipped endwise into the stiles 1 with the flanges 3 disposed in engagement with the return bend portions 12. The members 10 are then slipped into position in the clamping members 4. In like manner the members 4 and 10 are mounted in the rails 9. The rails are then slipped into position between the stiles 1 after which the rivets 15 are secured in position thereby holding the parts assembled together. The moldings 16 are then forced into position. The pane 14 is then seated against the moldings 16 after which the moldings 20 are forced into position against the pane 14.

By reason of the flanges 17 of the moldings 16 being located in the grooves 13 of the members 10, the joint between the pane 14 and the member 10 will be sealed, thereby preventing admission of dirt or moisture past the pane 14.

I do not limit my invention to the structure described and illustrated, as various modifications of my invention, within the scope of the appended claims, may be made without departing from its spirit.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is—

1. In a window sash, a stile or rail having at one side two longitudinal transversely disposed portions having laterally extending parallel flanges, a longitudinal clamping member having two laterally extending parallel portions disposed between said flanges and which are provided with return bend portions between which are respectively clamped said flanges, a pane supporting member disposed between said parallel portions and adapted to support the adjacent edge of a pane and provided with a longitudinal groove, and a pane securing member secured to said stile or rail and forming a seat to support one side of the pane and provided with a flange extending transversely to the pane and located in said groove.

2. In a window sash, a stile or rail having at one side two longitudinal transversely disposed portions having laterally extending parallel flanges, a longitudinal clamping member having two laterally extending parallel portions disposed between said flanges and having return bend portions between which said flanges are respectively clamped, a pane supporting member disposed between said parallel portions for supporting the adjacent edge of a pane and provided with a longitudinal groove, and two pane secur-

ing members secured to said stile or rail and adapted to form seats for opposite sides of the pane respectively, one of said pane securing members having a flange extending transversely to the pane and disposed in said groove.

3. In a window sash, a stile or rail having two parallel flanges, a pane supporting member located between said flanges for supporting the edge of a pane and having a longitudinal groove, a longitudinal clamping member having two parallel portions between which said supporting member is located the clamping member having its parallel portions provided with return bends between which are respectively clamped said flanges, said return bends being provided respectively with longitudinal corrugated flanges, and two pane securing members having corrugated flanges respectively disposed between the stile or rail and said corrugated flanges of the clamping member and respectively engaging said corrugated flanges of said clamping member, the said securing members respectively serving as seats for opposite sides of the pane, one of the securing members having a longitudinal flange disposed transversely to the pane and located in said groove.

4. In a window sash, a stile or rail of tubular form and having two lateral parallel flanges, a longitudinal clamping member located in said stile or rail and resting against the inner side thereof and provided with two parallel portions disposed between said flanges and provided respectively with return bend portions respectively clamping between them said flanges, said return bend portions having respectively longitudinal corrugated flanges disposed adjacent to the stile or rail, a pane supporting member disposed between said parallel portions for supporting the edge of a pane and having a longitudinal groove, and two pane securing members serving as seats respectively for opposite sides of the pane and respectively provided with longitudinal flanges disposed respectively between the flanges of the clamping member and the stile or rail and having corrugations respectively engaging the corrugations of the clamping member flanges, one of said securing members having a longitudinal flange disposed transversely to the pane and disposed in said groove.

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

WILLIAM J. KLEMM.

Witnesses:

E. B. HOUSE,
FLORENCE M. VENDIG.