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D. J. MURNANE, JR

SASH FOR HOLDING GLASS

Filed April 28, 1924

FIG. 3.

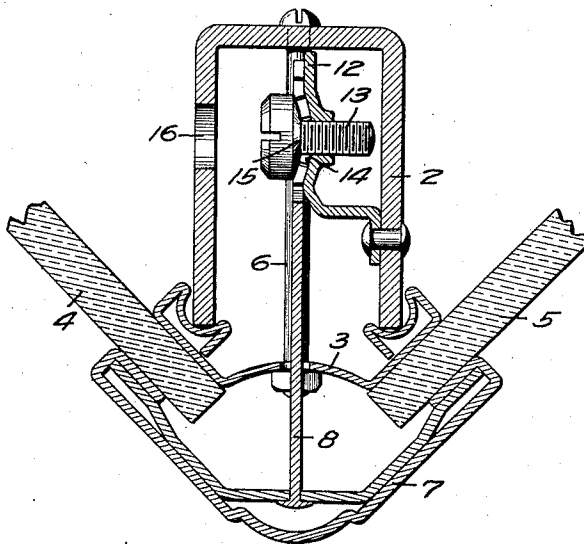
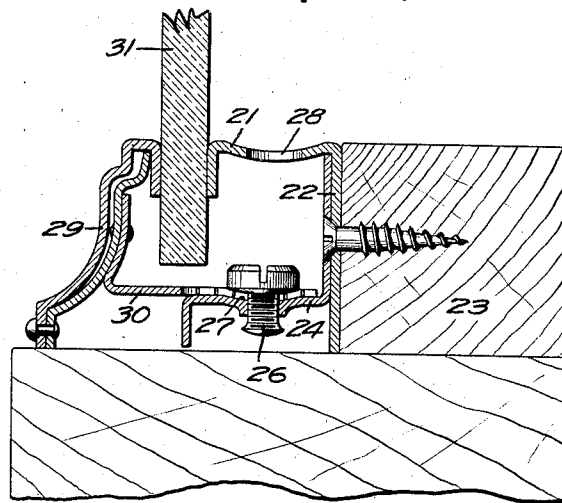


FIG. 1.

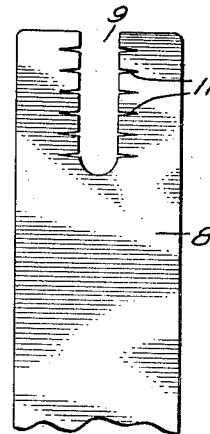


FIG. 2.

INVENTOR
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BY *White, Proctor & Evans*
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UNITED STATES PATENT OFFICE.

DANIEL J. MURNANE, JR., OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO NON-PRESSURE GLAZING COMPANY, OF SAN FRANCISCO, CALIFORNIA, A CORPORATION OF CALIFORNIA.

SASH FOR HOLDING GLASS.

Application filed April 28, 1924. Serial No. 709,354.

To all whom it may concern:

Be it known that I, DANIEL J. MURNANE, Jr., a citizen of the United States of America, and a resident of the city and county of San Francisco, State of California, have invented a new and useful Sash for Holding Glass, of which the following is the specification.

My invention relates to metallic sashes for holding the glass of windows and show cases, and particularly to sashes for holding large and heavy sheets of plate glass. One of the objects of the invention is the provision of a sash which exerts no clamping action upon the glass. Another object of the invention is the provision of a sash in which the parts are adjustably secured together so that glass of different thicknesses may be mounted therein.

Other objects of the invention together with the foregoing will be set forth in the following description of the preferred embodiment of means for practising the invention and which is illustrated in the drawings accompanying and forming part of the specification. It is to be understood that I do not limit myself to the showing made by the said description and drawings, as I may adopt variations of the preferred form within the scope of my invention as set forth in the claims.

Referring to the drawing, Figure 1 is a horizontal sectional view through a sash embodying my invention, and adapted to hold two sheets of glass at right angles. Figure 2 is a plan view of the conformable end of the tie-bar forming part of my sash. Figure 3 is a vertical sectional view of another form of sash.

In general descriptive terms the sash of my invention comprises a stationary member adapted to engage one side of the glass, and an adjustable member adapted to engage the other side of the glass. A tie-bar is secured at one end to one of these members and the other end is of such character as to be conformable to a socket arranged in a bracket secured to the other member. A screw having a suitably formed head provides means for deforming the conformable end of the tie-bar into the socket, so that the parts are securely interlocked. From an inspection of Figures 1 and 3 of the drawings, it will be perfectly obvious without special illustration

that my invention may also be incorporated in a division bar or other sash.

More particularly and referring first to Figures 1 and 2 my device comprises a channel bar 2, preferably of metal and suitably held at its ends by devices of a well known character which need not be described here. Forming an edging strip or molding for both edges of the channel 2 is a metal plate 3, against which the two sheets of glass 4 and 5 are adapted to lie. This plate is secured to the channel by suitable bolts 6, disposed at intervals along the channel. Ordinarily the channel 2 and molding 3 constitute the stationary portion of the sash. An adjustable member of the sash comprises the molding or plate 7 which is adapted to engage the sheets of glass 4 and 5 on the sides opposite those engaged by the molding 3.

Means are provided for rigidly securing the adjustable member of the sash to the stationary member. Rigidly secured at one end to the adjustable sash member is a tie-bar 8, extending inwardly through suitable apertures formed in the molding 3 into the channel 2. As many tie-bars as desired may be used and I prefer to space them about every 8 inches longitudinally of the sash.

The inner free end of each tie-bar is shown in plan in Figure 2. The end is formed with a slot 9, the edges of the bar bordering the slot being serrated by means of short slits or notches 11 closely spaced in the edges. These serrated edges render the end of the tie-bar conformable. When the sash is assembled this end of each of the tie-bars is adapted to overlies a bracket 12, riveted or otherwise rigidly secured on the inside of the channel 2. Threaded into each bracket is a screw 13, that portion surrounding the screw being conically depressed to form a socket 14. The underside 15 of the head of the screw is of conical form complementary to the socket. The screw is adapted to extend through the slot 9 of the tie-bar, and when tightened down, the serrated edges of the bar are deformed by the conical head so that they seat in the socket, and tie-bar and bracket are then rigidly interlocked.

It will be obvious from this construction that the adjustable member of the sash may be rigidly secured to the stationary member without the least clamping action being exerted on the glass; and because of the wide

range of adjustability given by the slotted end of the tie-bar, glass of varying thicknesses may be held, it being merely required to seat the glass against the inner molding, and press the outer molding against the glass.

One of the greatest causes of broken plate glass lie in stresses exerted on the glass by the sash members. With such stress exerted by the mounting of the glass, wind pressure and vibration which otherwise would do no harm is frequently destructive. It will be observed that my sash members are interlocked with perfect security and with no tendency to draw out of position so as to exert unrecognized pressure upon the glass.

It will be noted that the fastening devices of my sash are included within the moldings and channel. Therefore, in order to provide access to the screw 13 of each bracket, small apertures 16 are formed at suitable intervals in the side wall of the channel to permit the insertion of a tool for turning the screw.

Means are also provided for preventing the loss of the screw 13 prior to the assembling of the sash, and I accomplish this by making the screw 13 of such a length that its head engages the inner wall of the channel before its shank disengages the bracket in which it is threaded. The screw is threaded into the bracket before the bracket is mounted in the channel, and after the assembling of the bracket in the channel, the screw cannot be turned out of the bracket.

The tie-bars are readily released by loosening the screws 13, and even though a different thickness of glass is then placed in the sash, the conformable nature of the tie-bar ends, permits them to be locked securely in the adjusted position by the tightening down of the screws.

In Figure 3, I have shown my invention embodied in a sash member adapted for the lower horizontal edge of a sheet of glass. In this case the stationary or inside member comprises the molding 21, preferably integral with the plate 22, which is suitably secured to the sill 23. Mounted on the plate is a bracket 24 corresponding to the bracket 12 of Figure 1, and similarly provided with a screw 26 and socket 27. Preferably the end of the screw is upset somewhat after being threaded into the bracket so that it cannot be accidentally disengaged and lost, and a hole 28 is formed in the molding above the screw head to permit the insertion of a screw driver.

The adjustable or outer member of the sash comprises the molding 29 to which the tie-bar 30 is rigidly attached. The free end of the tie-bar overlies the bracket and is formed as already explained, and illustrated in Figure 2.

The glass 31 is suitably supported on

setting blocks and pushed firmly against the inner molding. The outer molding is now pressed into position with the tie-bars engaging the screws, which are then tightened down to seat the ends of the tie-bars in the bracket sockets.

I claim:

1. A sash for holding glass comprising a stationary member adapted to engage one side of the glass, an adjustable member adapted to engage the other side of the glass, a conformable bar secured to one of said members, a bracket having a socket secured to the other member, and means for seating the conformable bar in said socket.

2. A sash for holding glass comprising a stationary member adapted to engage one side of the glass, an adjustable member adapted to engage the other side of the glass, a tie-bar secured at one end to the adjustable member and having a conformable free end; a bracket having a socket secured to the stationary member, and means for seating the conformable portion of the tie-bar in said socket.

3. A sash for holding glass comprising a stationary member adapted to engage one side of the glass, an adjustable member adapted to engage the other side of the glass, a conformable bar secured to one of said members, a bracket having a conical socket secured to the other member, and a screw having a conical head for seating the conformable bar in said socket.

4. A sash for holding glass comprising a stationary member adapted to engage one side of the glass, an adjustable member adapted to engage the other side of the glass, a bar secured to one of said members and having a serrated edge, a bracket having a socket secured to the other member, and means for seating the serrated edge of said bar in said socket.

5. A sash for holding glass comprising a stationary member adapted to engage one side of the glass, an adjustable member adapted to engage the other side of the glass, a slotted bar secured to one of said members and having the edges of the bar bordering the slot serrated, a bracket having a socket secured to the other member, and means for seating the serrated edges of the bar in said socket.

6. A sash for holding glass comprising a stationary member adapted to engage one side of the glass, an adjustable member adapted to engage the other side of the glass, a bar secured to one of said members and having a slotted conformable end, a bracket having a socket secured to the other member, and means in said slot for seating the conformable end of the bar in said socket.

7. A sash for holding glass comprising a stationary member adapted to engage one

side of the glass, an adjustable member adapted to engage the other side of the glass, a tie-bar secured at one end to one of said members and having its other end slotted
5 and with the edges of the bar bordering the slot serrated, a bracket having a conical socket secured to the other member, and a screw in said bracket adapted to engage
10 said slotted end and having a conical head for seating the serrated edges in said socket.

8. In combination with a channel sash member, a complementary sash member, a tie-bar secured to said complementary member,
15 a bracket secured inside of said channel

member, and a screw in said bracket for clamping said tie-bar thereto, and of such length as to engage the wall of the channel before disengagement from the bracket.

9. In combination with a stationary sash 20 member, a complementary adjustable sash member, a tie-bar secured to one of said members, a bracket secured to the other of said members, a screw in said bracket for clamping said tie-bar thereto, and means for 25 preventing the disengagement of said screw from said bracket.

In testimony whereof, I have hereunto set my hand.

DANIEL J. MURNANE, JR.