

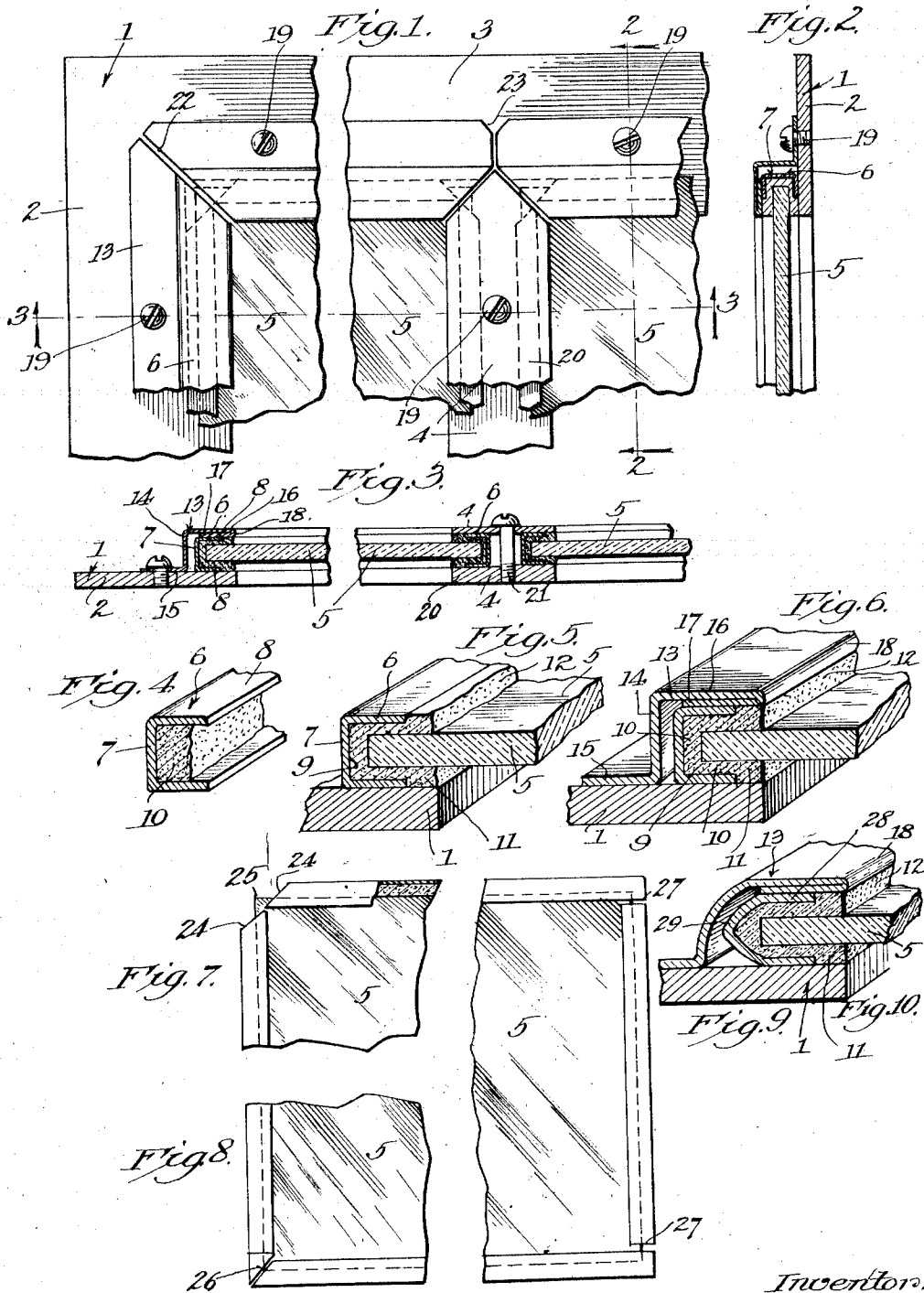
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METHOD OF GLAZING AND GLAZING STRIP

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UNITED STATES PATENT OFFICE.

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METHOD OF GLAZING AND GLAZING STRIP.

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My invention is a method of glazing and glazing strip, particularly adapted for use with metal sash and enabling sash to be readily glazed in a factory or workshop instead of on the job.

My invention as to the glazing strip comprises a channel-shaped strip of metal adapted to fit over the edge of a sheet of glass with a small clearance and having a glazing composition in the strip. In using rectangular panes four glazing strips with the compound contained therein are pressed on the four edges of the pane of glass. These are preferably primely pressed into position with the glazing strip resting on the sash and clamping bands are then secured to the sash pressing against the glazing strip. The glazing compound is thus pressed out of the channel in the glazing strip and fills the space between the sash and the glass and the outside surface of the glass and the clamping band, thus filling completely both sides of the glass and making an air and water-tight joint.

For use at mullions or muntins as they are sometimes called a section plate with bolts is used to clamp the glazing strips on the edges of two adjacent sheets of glass. In my method of glazing the pressing of the glazing strips on the edge of the glass and the tight clamping of the strips by the clamping bands and section plates squeeze the glazing compound partially out of the glazing strip and thereby form a binding between the glass and the sash of glazing compound.

With my construction individual panes on metal sash may be repaired without dismantling the sash completely and the elements of construction with their manner of use facilitates the glazing of sash in a workshop in preference to glazing on the job and save materially a quantity of glazing compound and time for glazing sash. The construction may readily be adapted to glazing wooden sash.

My invention will be readily understood from the following description and drawings in which;

Figure 1 is an elevation showing a section of sash glazed by my method, utilizing the glazing strip.

Fig. 2 is a vertical section on the line 2—2 of Fig. 1.

Fig. 3 is a horizontal section on the line 3—3 of Fig. 1 in the direction of the arrows.

Fig. 4 is a perspective view of the glazing strip with a glazing compound therein.

Fig. 5 is a perspective of a further step in the operation of glazing by forcing the glazing strip on the edge of a sheet of glass.

Fig. 6 is a perspective detail showing a completed glazed section with the glazing strip, glazing compound and glass held to the sash by clamping bands.

Fig. 7 is a detail showing one type of meeting edge of the glazing strips at the corner of a pane.

Fig. 8 is a detail illustrating a bevel type of meeting edge of glazing strip at the corner of a pane.

Fig. 9 is a further detail of butt jointed types of meeting edge of the glazing strip at the corner of a pane.

Fig. 10 is a detail section of a slightly modified form of glazing strip in which the strip is formed of a somewhat curved or pointed web to allow the flanges to be squeezed close together.

In the drawings, the sash is designated generally by the numeral 1 in which the side bars may be designated by the numeral 2. A top or bottom rail by the numeral 3 and muntins 4. The glass panes 5 are usually cut rectangular shaped of definite sizes and my glazing strips 6 with the other elements of construction are made of proper size to fit standard construction windows.

The glazing strip 6 consists of a channel-shaped strip of metal having a web 7 and flanges 8 adapted to form a snug fit over the edge of the sheet of glass leaving a slight space for the filling compound as shown by the numeral 9 in Figs. 5 and 6. This glazing compound is packed into the glazing strip as indicated by the numeral 10 in Fig. 4 before the strip is applied to the glass.

In the operation of glazing, the sash is preferably placed on a flat surface and the glazing strips are pressed on the edges of the panes so that the glazing compound exudes from the glazing strip forming a soft mass 11 in contact with the sash. In this operation some of the glazing compound will

be pressed out on the surface of the glass forming an upper soft mass 12. The clamping bands 13 are then secured in place pressing the soft mass 12 firmly against the bands and the mass 11 into close contact with the sash.

These clamping bands may be made of any suitable shape and character but I have found a Z-shaped section is satisfactory. I form this section having a web 14, with a flange 15 to be secured to the sash and an outer flange 16 formed with a fold 17 bent inwardly to give a neat and clear edge 18. These clamping bands are properly proportioned so that when bolted to the sash as by bolts 19, they firmly engage the outer flange of the glazing strip and thus press the strip tightly against the sash. It is preferable to use a slight excess of glazing compound so that when the clamping band is firmly pressed into position as shown in Fig. 6, some of the compound will be pressed beyond the edge 18 of the band and beyond the edge of the sash, the excess being removed with a glazier's knife.

For use at the muntins I utilize section plates 20 which are of proper width to cover the glazing strips on adjacent panes of glass and allow sufficient glazing compound to be pressed out of the strips to engage the sash and the lower surface of the section plates. The section plates are secured to the muntins by bolts 21 or the like and thus firmly clamp the edges of two panes to the sash forming a close joint therewith by the glazing compounds.

I find it satisfactory to form a bevel joint 22 at the corners of the clamping bands slightly spaced apart and to form a Y-shaped joint 23 at the junction of the clamping strips and section plates. A variety of corner ends for the glazing strips may be utilized. In one type I cut the strips backwardly on an angle as indicated by 24 in Fig. 7 leaving a corner 25 of the glass without covering. In another form I cut the meeting edges of the glazing strips on a bevel 26 so that they meet with a type of mitre joint as shown in Fig. 8. A butt joint 27 is illustrated in Fig. 9. It will be understood that whatever type of joint is used for the corners of the glazing strips a slight space should be left to allow the edge of the glass to be pressed close to the web of the glazing strip.

In some constructions it is advisable to compress the webs of the glazing strip. In such cases I may utilize a curved strip as illustrated in Fig. 10 in which the webs 28 are spaced by a curved section 29 so that the glazing compound can be pressed out and the webs may be pressed close to the pane of glass.

The details of the particular type of glaz-

ing strip, the manner of using a glazing composition therein and of forcing this composition out of the glazing strip by the manner of pressing or clamping the strip to a frame may be considerably changed to suit special circumstances without departing from the spirit of my invention. Also other types of clamping bars and section plates may be used and although I have illustrated my invention as applied to a flat surface sash it may be used with different shapes and with fancy glasses or panes.

Having described my invention, what I claim is:

1. The method of glazing, comprising partially filling channel-shaped glazing strips with a soft glazing composition, pressing said strips slightly on the peripheral edges of a pane of glass, positioning the pane with the strips on a sash to be glazed, firmly pressing the strips towards the glass to force the glazing composition from the base of the strips around the sides of the glass and clamping the strips and hence the glass to the sash.

2. The method of glazing, comprising placing a glazing composition in channel-shaped glazing strips, embedding a pane of glass partially in the composition by pressing the peripheral edges slightly therein, further pressing the glazing strips on the glass to force the glazing composition along the sides of the glass to completely fill the glazing strip and allowing some of the glazing composition to be pressed beyond the strip, securing a clamping bar to the sash to press the outer portion of the glazing strip and the glazing composition exuded therefrom against the glass and against the sash.

3. A glazed sash, comprising in combination a sash, a pane of glass having glazing strips in the form of channels with a glazing composition therein secured to the edges of the pane with the glazing composition covering the edges and a portion of both sides of the glass completely spacing the glass from the channel and means to secure the channel to the sash.

4. A glazed sash, comprising in combination a sash, a pane of glass having a plurality of glazing strips in the form of channels having webs and outstanding flanges, with a glazing composition therein secured to the peripheral edges of the pane, a securing plate positioned against one of the flanges of the channel and means to press the other flange tightly against the sash whereby the glazing composition secures the pane spaced from the web and from both flanges and with the glazing composition contacting with the sash both faces of the glass and the securing plate.

5. A glazed sash as claimed in claim 4,

in which the securing plate has a web portion, an outer flange engaging the outer flange of the channel and an inner flange positioned against the sash with means to secure said inner flange to the sash.

6. A glazed sash as claimed in claim 4, in which the securing plate comprises an angularly bent strip of metal having an upstanding web slightly deeper than the web of the channel, an upper flange formed with a reverse inward fold of the metal and an inner flange in contact with the sash with means to secure the inner flange to the sash.

7. A glass sash comprising in combination a sash, a series of panes of glass each having glazing strips substantially channel-shaped with a glazing composition therein secured to the peripheral edges of each pane, clamping bands of angular shape having flanges secured to the sash, upstanding webs and outer flanges engaging the glazing strips and flat section plates engaging the edges of the strips on two adjacent panes and

means to secure said section plates to muntins of the sash.

8. The method of glazing, comprising inserting a glazing strip of small channel-shape with a soft glazing composition therein on the edge of a pane of glass, clamping the strip to a sash whereby the strip is deformed in shape and the glazing composition forced partly along the sides of the pane.

9. In combination a glazing strip formed of a somewhat channel-shaped strip of material, a glazing composition therein, a pane of glass with an edge positioned in the strip and in contact with the glazing composition and means to secure the strip to a sash deforming the same to thereby press the composition into contact with a portion of the sides and edge of the glass and with the sides of the strip.

In testimony whereof I have signed my name to this specification.

SAMUEL B. ZIMMER.