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METHOD OF CONSTRUCTING FROSTPROOF WINDOW SASHES

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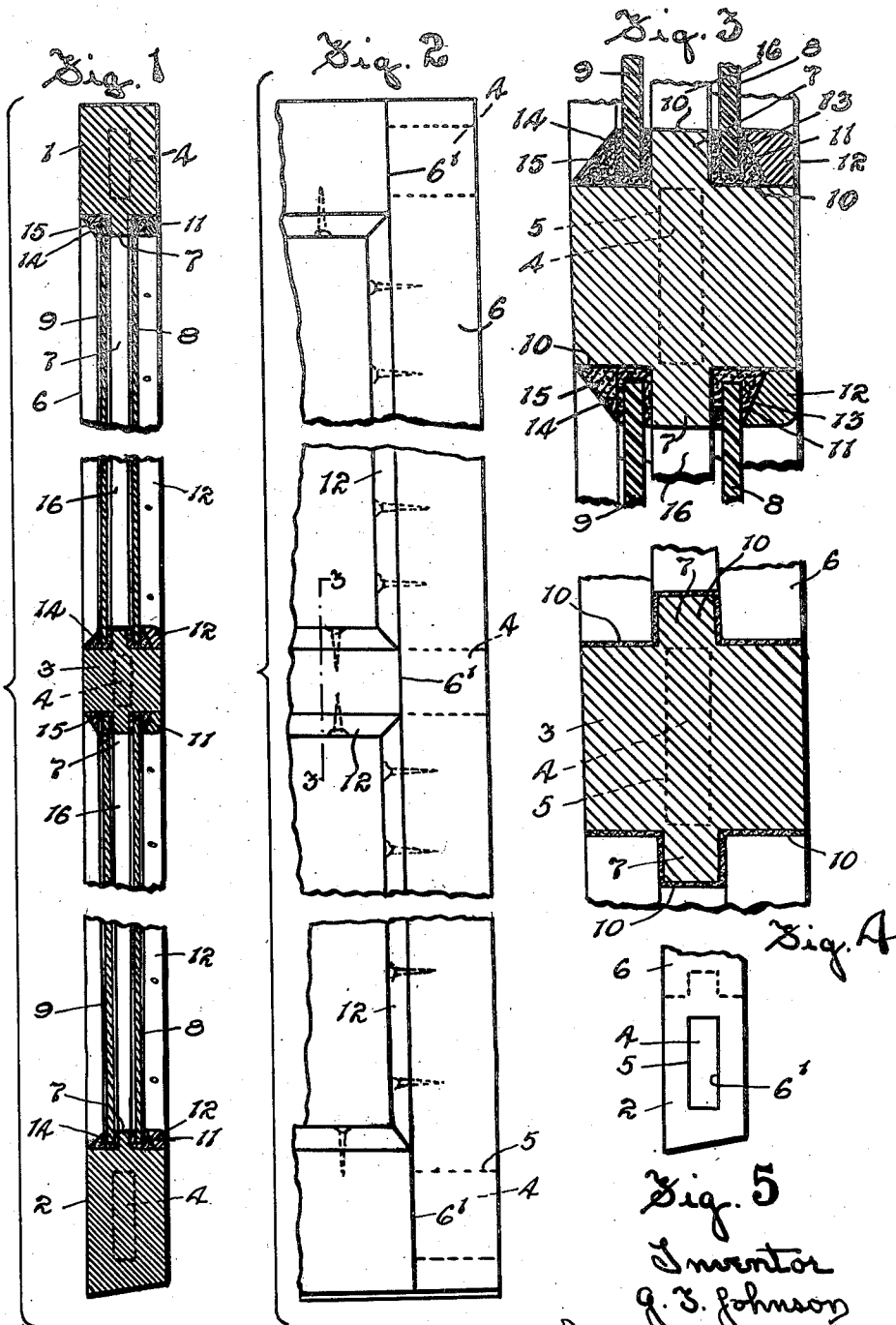


Fig. 5
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UNITED STATES PATENT OFFICE

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METHOD OF CONSTRUCTING FROSTPROOF
WINDOW SASHESGunder T. Johnson, Starbuck, Manitoba,
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1 Claim. (Cl. 20—40.5)

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The invention relates to a method of constructing frost proof windows, and the general object of such method of construction is to provide a finished sash which will remain frost proof for an indefinite period when in use, and will not fog or cloud under varying temperature conditions, and in carrying out the said invention, I construct the sash in the manner hereinafter described, reference being had to the accompanying drawing, in which

Fig. 1 is a vertical sectional view centrally through a sash constructed in accordance with my invention, certain parts being broken away.

Fig. 2 is an interior view of the parts appearing in Fig. 1.

Fig. 3 is an enlarged, detailed vertical sectional view at 3—3 in Fig. 1.

Fig. 4 is an enlarged detailed vertical sectional view through the central rail, and indicating the applied coatings.

Fig. 5 is an end view of the lower corner of the sash, and showing the manner in which the mortice and tenon joints are glued together.

In the drawing like characters of reference indicate corresponding parts in the several figures.

In carrying out my improved method of constructing a frost proof window sash I proceed in the following manner. The upper and lower rails 1 and 2 of the sash and the central rail 3, if such there be, are all provided with tenons 4 at their ends, which are received within mortices 5 provided in the stiles 6 to form the frame. Care must be taken to effectively glue, as indicated at 6' and with waterproof glue, the contacting faces of the rails and stiles and also the tenons in the mortices and seasoned lumber should be used to form the frame. This gluing ensures against penetration of moisture at the corners and dry lumber avoids warping, cracks and such like developing. The rails and stiles are also formed to provide matching beads or moulding 7 centrally on the inner side of the frame, which beads serve to space the glass panes 8 and 9 subsequently introduced.

When the frame has been so formed and put together, the inner surface thereof is given a coat of linseed oil, followed with two coats of paint, such being best indicated by the heavy line 10 in Figs. 3 and 4. This treatment effectively fills the wood pores and prevents moisture from penetrating through the wood and into the air space between the glasses when the latter are installed and it also prevents the oil or similar material in the adhesive material

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or putty later used, from penetrating into the frame and thereby deteriorating the adhesive in course of time.

One of the glass panes, say the inner one 8, is then put in place, and its edge is embedded, all around, in a putty base 11, having properties such that it is waterproof and does not dry out. This material is first put in between the glass and the mouldings and between the glass and the rails and finally a quantity is placed at the outer side of the glass, this prior to putting the finishing wooden strips 12 in place and nailing them to the rails and stiles. The finishing strips are undercut at the inner side, as shown at 13, and this forms with the glass and frame a triangular space receiving the material (putty) last referred to, and gives a neat interior finish.

Having progressed this far, it is now necessary that the rest of the work be done under special humidity conditions, and I have found that a special work-room where the temperature is maintained around 86° F. and the humidity gauge reading is around 15% is most satisfactory. With such a room condition maintained there will be no detrimental moisture in the air space reserved between the glasses of my subsequently completed sash.

To complete the sash, the outer glass pane 9 (or panes) are put in place in the special work room, and this is accomplished by embedding the edges of the pane (or panes), all around, in a putty base 14 of the same type as that 11 and in the same manner, and then applying a final putty strip 15 for exposure to the weather, this latter putty being that most commonly used and called glazier's putty.

When the sash has been so completed it will be found that it is frost proof and will not cloud through freezing. Penetration of air or moisture into the air space 16 between the panes of glass is positively prevented by my method of construction, and such method of construction also insures that the air in the sealed air space has a very low moisture content, so low that it will not cause any clouding or fogging of the glass under any temperature condition.

While I have described certain part of the work being carried on in a work-room, under specific conditions, it will of course be understood that the whole work can be done in the special work-room if desired.

What I claim as my invention is:

The method of effectively preventing condensation between two panes of glass separated by a continuous bead passing around the in-

terior of a substantially rectangular, wooden, sash frame formed from frame members morticed at the corners, which consists in treating the mortices joints with waterproof glue, and the inner surface of the frame first with linseed oil and then with a coat of paint, then glazing the first pane in position against one side of the bead and finally glazing the second pane in position against the other side of the bead in a workroom where the relative humidity of the air is maintained not greater than 15 percent at a temperature of approximately 86 degrees Fahrenheit.

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