Aug. 2, 1938. J. H. FOX 2,125,372

DOUBLE GLAZING UNIT

Filed June 23, 1936

Fig. 1.

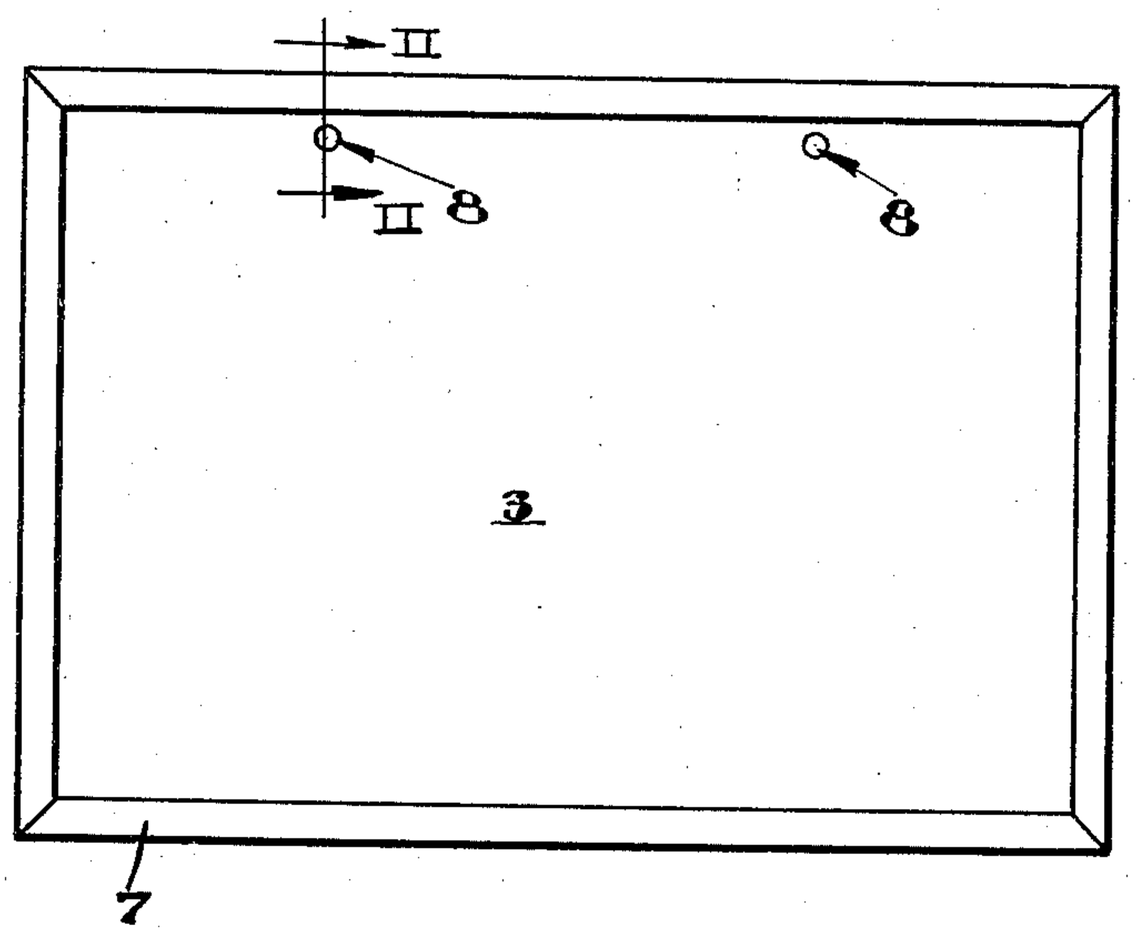
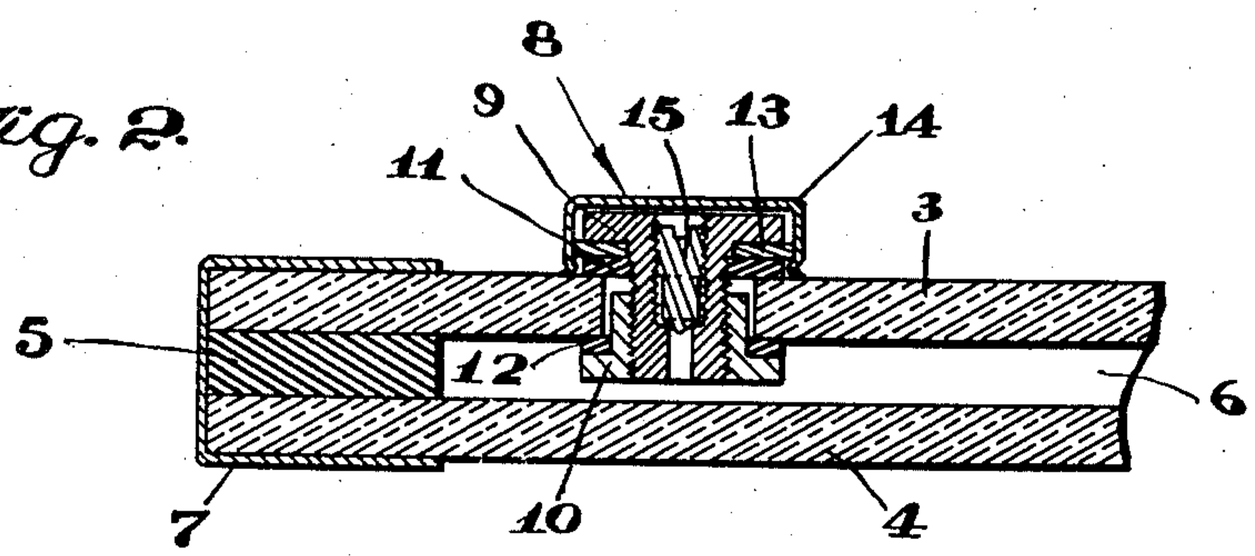


Fig. 2.



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DOUBLE GLAZING UNIT

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3 Claims. (Cl. 20—56.5)

The invention relates to double glazing units which consist of a pair of glass sheets in parallel with spacing and sealing means between the sheets at their edges. It is customary to supply the insulating space between the sheets with dehydrated air or other gas, such as nitrogen, in order to prevent condensation on the inner faces of the sheets due to temperature changes. The maintenance of the gas in dry condition presents one of the main problems in connection with double glazed units, since leakage of moisture-laden air through and past the spacing members, in the course of time, is practically inevitable, so that provision is made in many installations for the connection of dehydrating apparatus to the insulating space to permit a renewal of the dry gas when the glass begins to cloud. Heretofore, the connections for accomplishing this result have been made by the use of tubes extending through the spacers. This requires either a special sash construction through which the tubes lead, or the removal of the unit from the sash to gain access to the ends of the tubes, and both methods are open to objection from the standpoint of cost. The present invention is designed to overcome this objection and provide a unit which leaves the spacers intact and permits dehydration without removing the unit from the sash and without the necessity of perforating the sash and installing conduits therethrough. Briefly stated, the desired result is secured by perforating one of the glass sheets and installing in such perforations outlet plugs provided with closures which may be removed when it is desired to connect the tubing of a dehydrating apparatus to the space between the sheets. These plugs can be made relatively small and capped, so that they do not detract noticeably from the appearance of the unit. One embodiment of the invention is shown in the accompanying drawing, wherein:

Figure 1 is a front elevation of the unit, and Fig. 2 is an enlarged section through the unit on the line II—II of Fig. 1.

Referring to the drawing, 3 and 4 are the glass sheets; 5 is the spacer which may be of rubber or any other suitable material sealing the edges of the insulating space 6 between the sheets; and 7 is a U-shaped metal frame, which in some cases may be omitted.

The glass sheet 3 is perforated at two points, preferably near the upper edge of the sheet and by the use of a sand blast, and the plugs 8 are fitted in the perforations, as indicated in Fig. 2. The plug in each case consists of the flanged sleeves 9 and 10 threaded together with packing washers 11 and 12 of rubber, or the like, beneath the flanges. A metal washer 13 is preferably used between the packing washer 11 and the flange of the sleeve 9. This washer 13 is of such diameter that its edge projects out past the periphery of the flange of the sleeve 9, as shown, the purpose being to provide a ledge for holding the cap 14 releasably in position. The edge of the cap is turned in slightly, as shown, so that when the cap is pressed into position, its edge will snap beneath the edge of the washer 13, thus holding the cap securely, but releasably in position.

The sleeve 9 is threaded internally with a conical seat at the end of the threaded portion against which the end of the closure screw 15 engages sealing the passage.

When it is necessary to supply the space 6 with a dry gas, the caps 14 and screws 15 are removed, and the ends of the tubes of the apparatus for supplying dry gas are threaded into the sleeves. After the necessary circulation of dry gas through the insulating space has been completed and the tubes removed, the screw 15 and cap 14 are replaced. The plug is necessarily applied to the sheet 3 before the unit is assembled, some clearance being provided between the sleeve 10 and the wall of the perforation to avoid any danger of cracking the glass either in applying the device or due to temperature changes.

What I claim is:

1. A fitting for a glass sheet having a perforation therethrough comprising, a metal connection plug having a threaded passage therethrough fitting said perforation in sealing relation with the glass sheet, a removable closure member threaded into said passage, and a cap fitting over the outer end of said connection and having releasable snap engagement therewith.

2. A fitting for a glass sheet having a perforation therethrough comprising, a metal connection plug having a passage therethrough fitting said perforation in sealing relation with the glass sheet and comprising a pair of flanged sleeves threaded together in said perforation with the flange on one sleeve lying in opposition to the outer face of the glass sheet and the flange on the other sleeve lying in opposition to the inner face of the glass sheet, a removable closure member threaded into said passage, and a sheet metal cap fitting removably over the flange of the sleeve lying on the outer side of the glass sheet.

3. A fitting for a glass sheet having a perforation therethrough comprising, a metal connection

plug having a passage therethrough fitting said perforation in sealing relation with the glass sheet and comprising a pair of flanged sleeves threaded together in said perforation with the flange on one sleeve lying in opposition to the outer face of the glass sheet and the flange on the other sleeve lying in opposition to the inner face of the glass sheet, a removable closure member threaded into said passage, a metal washer clamped between the flange of the sleeve lying on the outer side of the glass sheet projecting out past the edge of the flange and spaced away from the glass, and a cap fitting over the outer end of the sleeve and having a snap engagement with the washer.

JOHN H. FOX.