May 22, 1934. F. J. PLYM 1,959,643

WINDOW CONSTRUCTION

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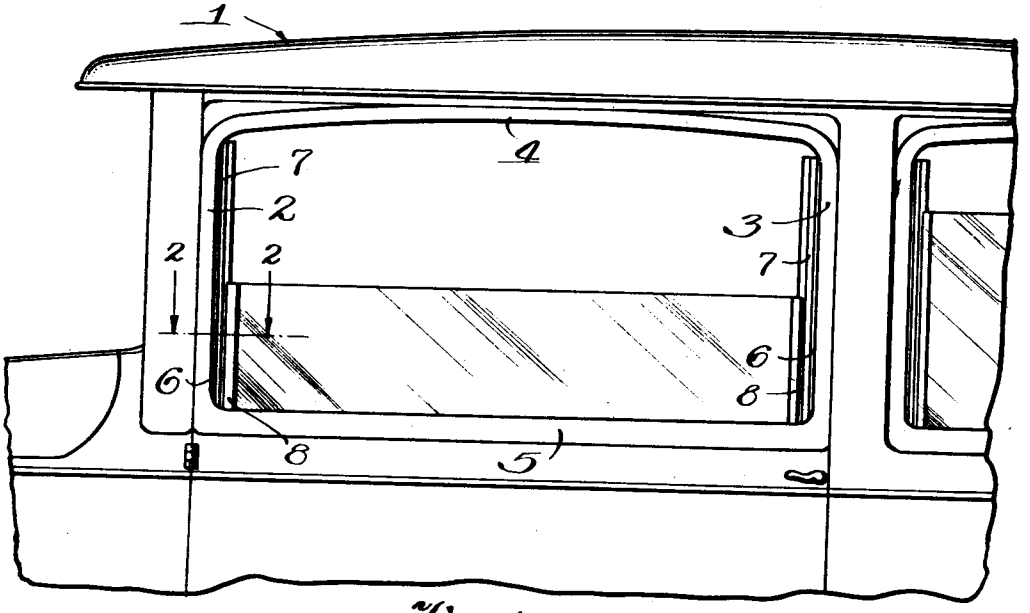

Fig. 1

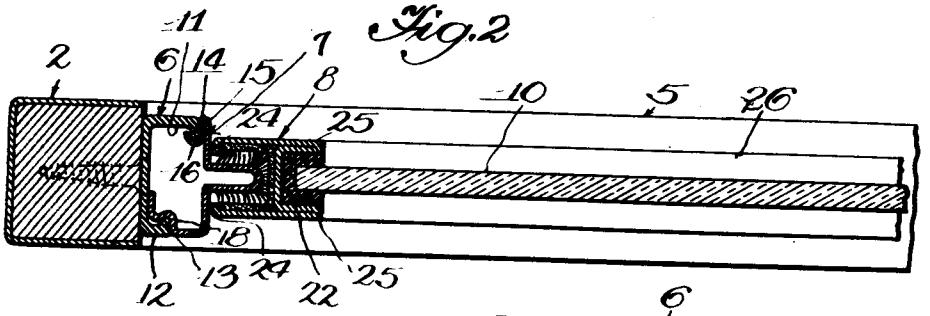

Fig. 2

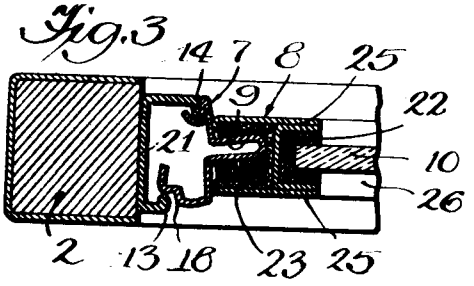

Fig. 3

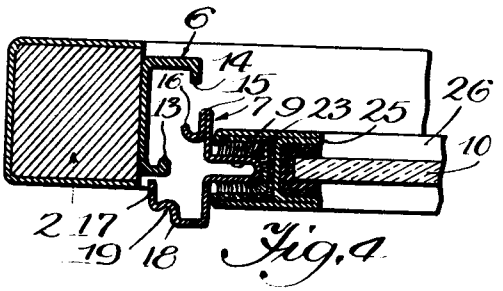

Fig. 4

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WINDOW CONSTRUCTION

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12 Claims. (Cl. 189—73)

The present invention relates to window constructions and more particularly to a novel frame and sash construction adapted for use in busses, automobiles, and other constructions in which a slidable sash member is provided or desired.

Among the objects of the present invention is to provide a novel frame construction having a removable member formed with a projecting portion adapted to be received within the side rail of the window sash.

A further object is the provision of a novel detachable or demountable frame structure adapted to be readily assembled or disassembled without the use of any special tool and with a minimum of effort. The invention comprehends a frame structure having a rigidly mounted member and a resilient member forming a side or stile adapted to be quickly snapped onto or off of said rigid member. This resilient member is sprung into or out of position and is disclosed as carrying a sash member and upon which the latter is slidable.

Another object of the invention is the provision of a novel combination of frame structure comprising a rigidly mounted member and a detachable member, and a sash rail structure adapted to slidably engage said detachable member.

A further object of the invention is the provision of a novel side rail structure for the opposite sides of the sash. This sash rail structure in combination with the frame structure, provides an air and weather-tight closure therebetween.

Further objects are to provide a construction of maximum simplicity, efficiency, economy and ease of assembly, and such further objects, advantages and capabilities as will later more fully appear, and are inherently possessed thereby.

The invention further resides in the combination, construction and arrangements of parts illustrated in the accompanying drawing, and while there is shown therein a preferred embodiment, it is to be understood that the same is susceptable of modification and change and comprehends other details and constructions, without departing from the spirit of the invention.

In the drawing:

Fig. 1 is a fragmentary view in side elevation of a bus or automobile provided with the novel window construction.

Fig. 2 is a fragmentary view in horizontal cross section taken in a plane represented by the line 2—2 of Fig. 1.

Fig. 3 is a view similar to Fig. 2 but disclosing the removable frame member about to be sprung into fixed position.

Fig. 4 is a view similar to Fig. 3 but disclosing the frame and sash disassembled from its normal operative position.

Referring more particularly to the disclosure in the drawing, the embodiment selected to illustrate the invention comprises a window construction adapted for use in busses, automobiles or other constructions in which a slidable sash member is desired. The bus or automobile 1 is disclosed as provided with a plurality of the novel window constructions in which the frame comprises side jambs 2 and 3, head jamb 4, and sill 5. The present novel construction more particularly comprehends a moulding 6 attached to the opposite side jambs of the window, a resilient strip or clip member 7 adapted to seat on the moulding 6, and a sash rail 8 adapted to receive a rib or projection 9 on the member 7 and the pane of glass 10.

The moulding or member 6 is provided with outwardly extending flanges 11 and 12, the latter being provided with a bead or inturned edge 13 and the flange 11 extending beyond the flange 12 and also provided with a bead or inturned edge 14. The strip or clip 7 is formed of resilient or yieldable material such as flexible or spring metal, one of the edges thereof being doubled upon itself as at 15 and formed with an inwardly extending curved portion 16 adapted to form a longitudinally extending pocket for the reception of the bead or inturned edge 14 of the flange 11. The opposite side of the resilient member 7 is provided with an inwardly extending portion 17 which is curved inwardly adjacent its end and then curved outwardly to provide a shoulder 18 and a seat or pocket 19, the inwardly extending portion being adapted to seat against the interior of the web or body 21 of the moulding strip. This pocket is adapted to receive the bead or inturned edge 13.

By reason of the resiliency of this member, the strip or clip 7 may be assembled or disassembled from the moulding 6 in a manner as more clearly shown in Fig. 3 of the drawing in which the pocket formed on the portion 16 seats against the bead or inwardly extending portion 14 on the moulding and the opposite end of the strip or clip 7 is forced over the bead 13. When it is desired to disassemble this clip or strip 7, a screw driver or other similar instrument may be inserted between the bead 13 and shoulder 18 and the members pried apart.

The side rail 8 is disclosed as comprising a sheet or strip of metal formed with oppositely spaced channels, the inner channel receiving a

weathering strip 22 in which the pane of glass 10 is mounted, and the outer channel also receiving a weathering strip 23 of carpet-like material having a nap or pile in which is mounted the rib 9 on the clip member 7. The side rail is shown as of one piece, with its extremities bent inwardly as at 24 to retain the weathering strip 23 and its opposite side bent upon itself as at 25 to form the glass seating channel.

It is to be understood that both sides of the window frame are provided with the moulding 6 and clip or strip 7, while both sides of the sash are provided with a sash rail 8. A rib 9 carries the sash rail so that when the clip member 7 is assembled or disassembled, it carries with it the sash, and due to the resiliency of the member, the assembling or disassembling operation may be readily accomplished. The weathering means 23 offers little or no resistance to the sliding of the rib 9 and to the assembly or disassembly of the frame structure.

Any suitable mechanism may be provided for raising and lowering the sash, the lower end of the glass seating within a channel member 26, it being understood that the sash is sildable upon the rib 9.

The weathering means 23 engages the vertical guide or rib 9, the nap or pile thereof permitting an easy sliding movement of the sash, and during such movement, the pile or nap wipes the exposed guide member or rib free from dust and foreign particles and maintains it in a clean, polished condition. By reason of this weathering, all shocks to the sash member are absorbed, while friction between the moving parts is reduced to a minimum. Furthermore, it has none of the disadvantages of felt or other weather stripping in which the fibres of the material become packed and hard, thereby causing the sash in its movement to stick or jam, or permitting lateral play and rattling with the result that the window cannot be maintained in a weather-tight condition.

Although the window construction is shown as mounted upon a bus or automobile structure, it is to be understood that this structure is well adapted for use wherever a weather-tight window construction is desired in which the sash is slidable.

Having thus disclosed the invention, I claim:

1. In a window construction for busses and the like provided with a slidable sash, a frame therefor comprising a rigid member mounted on the opposite side jambs, and a resilient strip adapted to be attached to each of said members and forming the stiles for sliding movement of said sash, said strip being provided with projections adapted to be sprung into tensional seating engagement with said rigid member and to be readily removed or detached therefrom with the sash in position.

2. In a window construction for busses and the like provided with a slidable sash, a frame therefor comprising a rigid member mounted on the opposite side jambs and having spaced sides formed with inwardly extending projections, and a strip adapted to be attached to each of said rigid members and forming the stiles for sliding movement of said sash, said strip being provided with extensions spaced from and exterior of said sash to receive said projections and be retained thereby, said extensions being yieldable whereby they may be sprung into seating engagement with said projections and readily removed or detached therefrom with the sash in position.

3. In a window construction for busses and the like provided with a slidable sash, a frame therefor comprising a rigid member mounted on a side jamb and formed with inwardly extending projections, and a strip adapted to be attached to said rigid member and slidably carrying said sash, said strip being provided with resilient extensions adapted to yieldably engage said projections when said strip and sash are sprung into position as a unit, and permitting ready detachment and removal of the strip and sash as a unit.

4. In a window construction for busses and the like provided with a slidable sash, a frame therefor comprising a rigid member mounted on a side jamb and formed with an inwardly extending flange, and a resilient strip adapted to be connected to said member and slidably carrying said sash, said strip being provided with an extension adapted to ride over and engage said flange when the strip carrying the sash is sprung into position, and permitting ready detachment and withdrawal of the strip and sash upon the prying apart of said extension and flange.

5. In a window construction, a sectional frame therefor having a section fixed to a side jamb and a removable section provided with a longitudinally extending rib, and a sash mounted in said frame and slidable on said rib, said sash being provided with a longitudinally extending channel and a carpet-like weather strip in said channel and provided with a nap contacting said rib, said sash and rib being removable as a unit upon a canting of the rib within said channel and weather strip.

6. In a window construction, a sectional frame therefor comprising a part adapted to be mounted on a side jamb and a part readily removable therefrom and provided with a projection, and a sash mounted in said frame and slidable on said projection, said sash having a channel for receiving said projection and a weathering means mounted in said channel and provided with a pile extending substantially perpendicular to and contacting said projection for providing a weather-tight seal while permitting easy sliding movement of said sash in the frame.

7. In a window construction, a sectional frame therefor comprising a part adapted to be mounted on a side jamb and a part provided with a guide member, and a sash mounted in said frame and slidable on said member, said sash having a channel for receiving said member and a carpet-like weathering strip having an inwardly extending nap contacting the guide member and forming a wiping contact therewith whereby to maintain said guide member free from dust and foreign particles and permit the ready and easy sliding movement of the sash in the frame.

8. In a window construction, a frame therefor comprising a part adapted to be mounted on a side jamb and a second part removably mounted on said first part and provided with a longitudinally extending rib, and a sash mounted in said frame and slidable on said rib, said sash being provided with a longitudinally extending channel adapted to receive said rib and having its side walls spaced from the sides of said rib whereby to permit canting of the removable part of said frame when assembling or removing the sash and removable part as a unit, and a readily compressible weather-strip in said channel adapted to contact the rib and form a weather-tight seal between the sash and frame and permit canting of the rib as the removable part and sash are assembled or removed.

9. In a window construction, a frame comprising a member adapted to be mounted on a side jamb and provided with outwardly extending flanges having their ends turned inwardly, and a member provided with rearwardly extending yielding portions and an outwardly extending rib, said yielding portions being formed with a pocket for receiving and tensionally retaining the ends of said first mentioned member, and a slidable sash provided with a channel adapted to receive said rib and form a weather-tight, sliding engagement therewith.

10. In a window construction, a frame comprising a member adapted to be mountd on a side jamb and provided with spaced flanges of unequal length, inwardly extending projections on the ends of said flanges, and a second member provided with rearwardly extending portions of unequal length, one of said portions being provided with a pocket for receiving one of said projections and upon which the second member is pivoted, and the other of said portions being provided with a pocket for receiving the other projection, said latter portion being resilient whereby it may be sprung into tensional seating engagement with the first mentioned member, and a sash slidable on said second member.

11. In a window construction, a sectional frame therefor comprising a part adapted to be mounted on a side jamb of the window opening and a part provided with a guide member, and a sash mounted in said frame and slidable on said guide member, said part provided with the guide member and sash being laterally removable from the frame as a unit.

12. In a window construction, a sectional frame therefor comprising a section mounted on the side jamb of the window opening and a section removable therefrom and carrying a longitudinally extending rib, and a sash slidable on said rib, said last mentioned section and sash being lateraly insertable and removable from the frame as a unit.

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