Jan. 2, 1962 R. MIGNEAULT ETAL 3,015,134

WINDOW PANEL DIVIDER

Filed Feb. 23, 1960

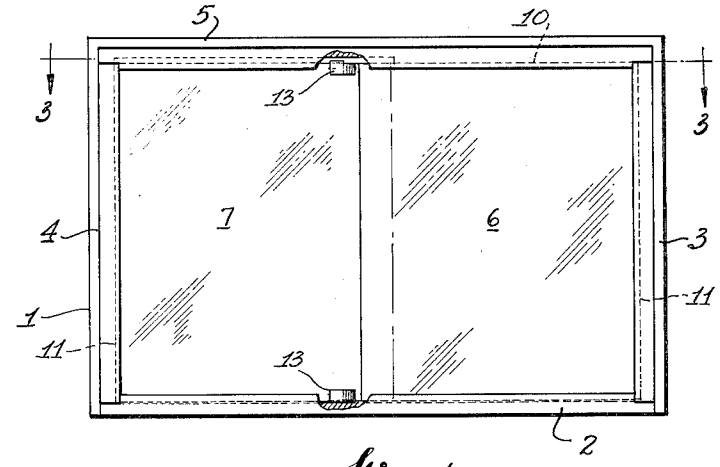


Fig. 1.

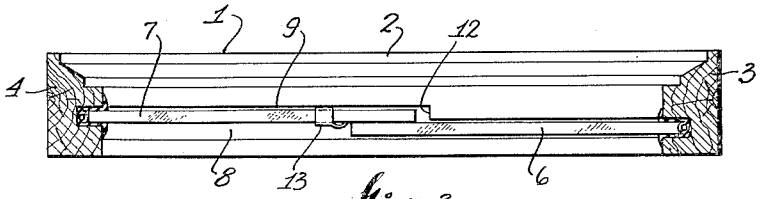


Fig. 3.

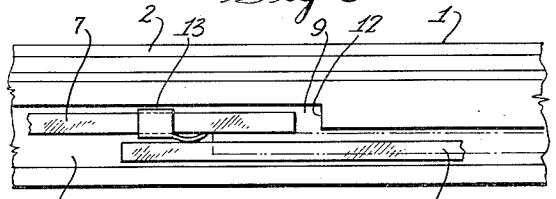


Fig. 4.

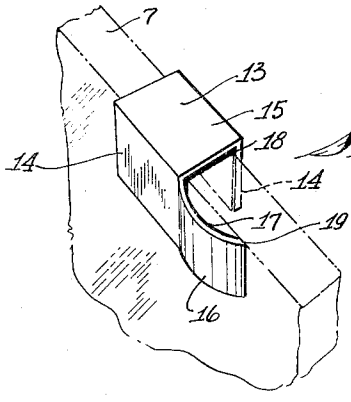


Fig. 2.

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3,015,134

Patented Jan. 2, 1962

3,015,134

WINDOW PANEL DIVIDER

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Filed Feb. 23, 1960, Ser. No. 10,131
2 Claims. (Cl. 20—52)

This invention relates to panel dividers for window structures particularly those of the sashless type.

In windows of this type, at least one pair of glass panels are provided in each window assembly. One of such panels is usually freely slidable into more or less fully overlapping relation with the other panel to provide for open condition of the window. In order to avoid frictional contact between the panels during the sliding movement of the one panel relatively to the other, it is frequent practice to provide means for separating or spacing the panels during such sliding movement. This means is not only sometimes difficult and costly to incorporate in the window structure, but it is often ineffective to reduce to a sufficient degree the force required to impart sliding movement to the panel and to avoid the scratching of the panels by the relative movement thereof.

It is an object of this invention to provide a simple, positive, and inexpensive means for separating the glass panels of a sashless window structure during movement of one panel relatively to the adjoining one.

The invention will be described with reference to the accompanying drawing, in which:

FIGURE 1 is a side elevation of a sashless window structure embodying the present invention,

FIGURE 2 is a perspective view of a divider member,

FIGURE 3 is a view looking down at the frame and panels, and

FIGURE 4 is a partial plan view of the divider member in association with a pair of glass panels.

In the drawing, the window assembly illustrated comprises a frame 1 having sill 2, jambs 3 and 4, and headpiece 5. A pair of sashless glass panels 6 and 7 are shown as mounted in the frame. The sill 2 has a groove 8 for reception of the lower edge portion of panel 6, such groove 8 having a rearwardly offset portion 9 for reception of the lower edge portion of panel 7. Headpiece 5 has corresponding groove 10 with offset portion for reception of the top edge portions of the channels. Each jamb has a groove 11 for reception of the side edge portion of a panel.

It will be apparent that, in the normally closed position of the panels, their meeting marginal portions will overlap as clearly shown in FIGURES 1 and 3.

Panel 7 has limited sliding movement as defined by the shoulder 12 of the offset portion 9 of groove 8. Panel 6 is adapted to slide in grooves 8 and 10 into variable overlapping relation with panel 7 to open the window.

The divider member of the present invention is indicated at 13. It is a unitary member formed of rigid material such as metal, plastic composition or the like. It comprises an open-ended channel having legs 14 and a connecting web 15, one of said legs having a portion or tongue 16 extending longitudinally beyond the web 15. Portion 16 is bowed outwardly from the plane of the adjoining leg and is thus of generally arcuate shape to present a convex surface 17 lying laterally outwardly of the plane of the leg 14.

A member 13 is applied to the lower edge portion of panel 7 and a second member is applied to the upper edge portion of panel 7 in opposed relation to the first member. Each member has its legs 14 and web 15 in abutting relation to the panel surfaces and is fixed thereto by means of an intervening layer 18 of a suitable adhesive. Each member 13 is located in spaced relation to the inner side edge of panel 7 and with its tongue 16 lying on the inner face of panel 7 and extending towards panel 6 with its end in close proximity to the adjacent inner edge of panel 6 when in closed position, as clearly shown in FIGURE 1. Preferably the end edge 19 of the tongue is bevelled to fit snugly against the surface of panel 7 and to merge its surface 17 into the surface of panel 7 in an unobstructed manner.

It will be observed that, in use when opening sliding movement is imparted to panel 6, its inner edge will engage the convex surfaces 17 of the members 13 which will positively space apart the panels 6 and 7, particularly in view of the fact that the separating action takes place at both the top and bottom portions of the panels. Thus, no frictional contact of the two panels occurs following such initial separation during subsequent sliding movement of panel 6.

It will be apparent that the divider member 13 may be manufactured in a very inexpensive manner. It may be of relatively small size and need not exceed one to two inches in length. It may be very quickly mounted on the glass panel without the necessity of drilling a hole in the glass such as is frequently required in mounting a fitting on a glass panel. As a consequence, the possibility of injury to the glass panel is substantially eliminated and the installation of the divider may be carried out by unskilled labor.

We claim:

1. In a sashless window assembly having a headpiece, a sill, grooves in said headpiece and sill, first and second glass panels each having top and bottom edge portions extending into said grooves and having overlapping side portions in the closed position thereof, said first panel being slidable with respect to said second panel, a panel divider comprising a unitary channel member fixed to each of the top and bottom edge portions of said second panel, each said channel member having a pair of opposed flat legs and a connecting web, each said leg having a free side edge defining a side opening for reception of said second panel, each end of said channel member being open and defined by contiguous end edges of said legs and web, and a tongue integral with said channel member and extending from one of said end edges of one of said legs, said tongue being outwardly bowed to provide a convex outer surface thereon, said convex outer surface lying outwardly of the plane of the adjacent side surface of said second panel for engagement by said first panel.

2. A panel divider as defined in claim 1, each said tongue having an end edge engaging the adjoining side surface of said other glass panel and lying in close proximity to the inner edge of said one panel in the closed position thereof.

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