Aug. 29, 1950 F. E. BRETZ, JR 2,520,524

BLIND CONSTRUCTION

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Fig. 1.

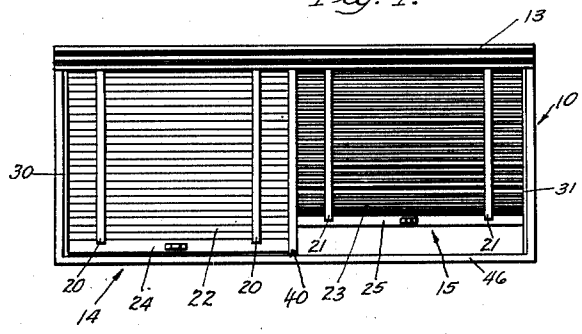


Fig. 2.

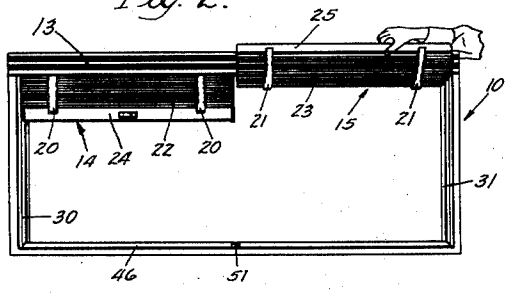
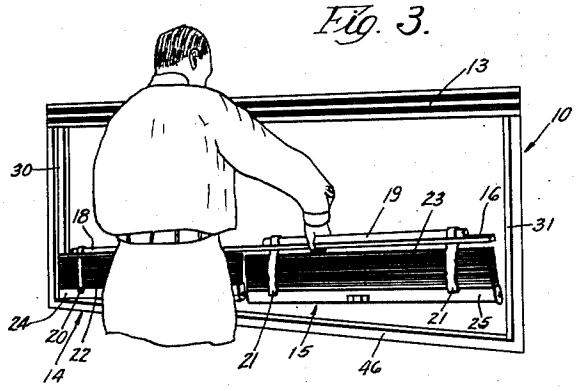


Fig. 3.



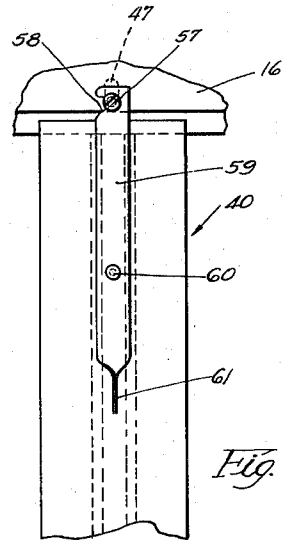
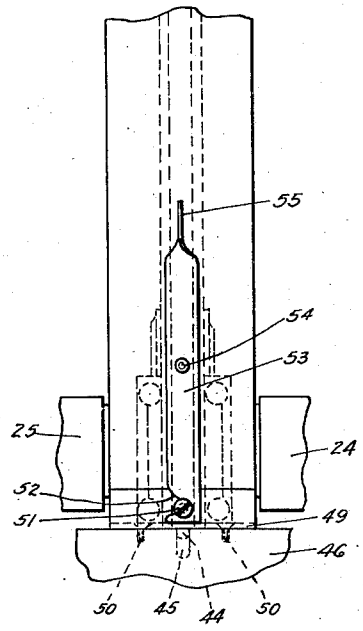


Fig. 4.



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BLIND CONSTRUCTION

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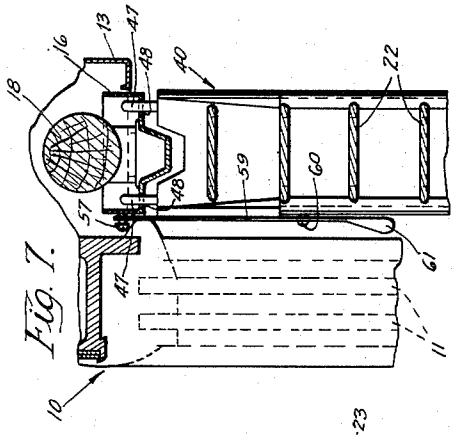
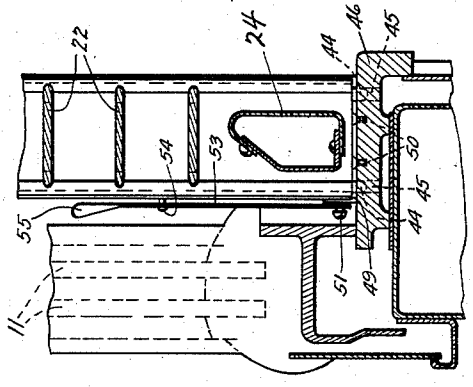


Fig. 7.



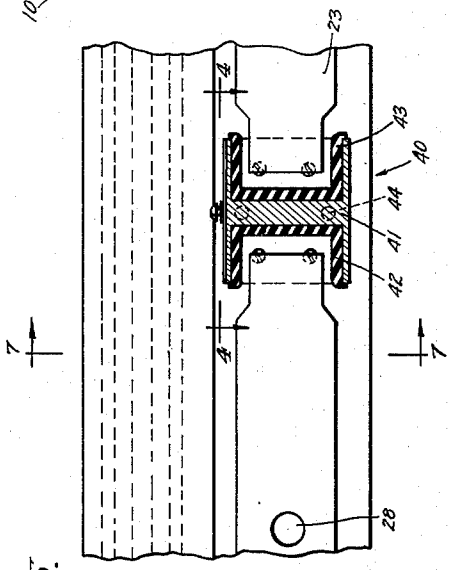
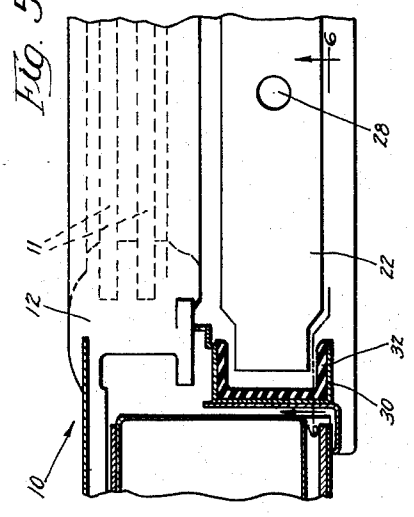


Fig. 5.



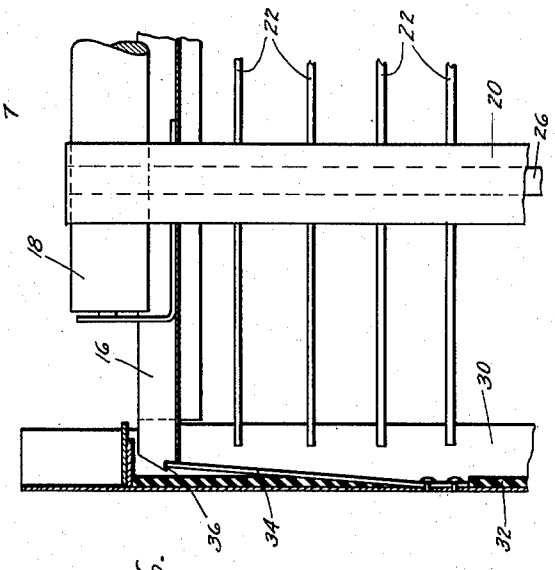


Fig. 6.

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2,520,524

UNITED STATES PATENT OFFICE

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BLIND CONSTRUCTION

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Application September 13, 1946, Serial No. 696,873

5 Claims. (Cl. 160—107)

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My invention relates, generally, to blind or window shutter construction and it has particular relation to such a construction for use on railway passenger cars and the like.

In the construction of the newer railway passenger cars it is becoming the practice to provide windows of a length sufficient to span two seats. In some designs the windows are of sufficient length to span several seats. It is desirable to provide blinds for window shutters for such windows in order to close or partly close the same so as to reduce or prevent light from entering the car. For example, Venetian blinds of the type disclosed in the copending application of August W. Donop, Serial No. 632,185, filed December 1, 1945, may be used.

Now when a single blind or window shutter is provided for such a window and it is common to two or more passengers seated alongside of the same, human nature being what it is, it is unlikely that the position of the blind or window shutter will be satisfactory to all of the persons concerned. Thus, one passenger may wish to shut out the light and to sleep, while another passenger may wish to enjoy the passing landscape. It is not possible in a single blind or window shutter to accommodate the desires of both individuals. Accordingly, among the objects of my invention are: to provide two or more individually operable window shutters for a single window that extends past two or more seats in a railway car or the like so as to permit individual adjustment thereof by the seat occupants as desired; to provide guiding means between the shutters; to lock said guiding means in operative position by readily releasable latch means; and to mount the shutters on a common support with which they are removable after removal of said guiding means between the shutters.

Other objects of my invention will, in part, be obvious and in part appear hereinafter.

My invention is disclosed in the embodiment thereof shown in the accompanying drawings and it comprises the features of construction, combination elements and arrangement of parts which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the appended claims.

For a more complete understanding of the nature and scope of my invention, reference may be had to the following detailed description, taken together with the accompanying drawings, in which:

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Figure 1 is a view, in the front elevation, illustrating how two individually operable blinds or window shutters can be mounted in conjunction with a single window;

Figure 2 illustrates how either of the blinds or shutters can be raised for cleaning of the window after removal of the intermediate guiding member or center post;

Figure 3 illustrates how both of the blinds or window shutters can be removed from or replaced in the window frame;

Figure 4 is a view, in side elevation, looking along the line 4—4 of Figure 5;

Figure 5 is a cross-sectional view of one end in the channel and the intermediate channel or guide member in a window construction and showing the positions of the slats of the Venetian blind construction in relation to the window panes;

Figure 6 is a detail sectional view, taken along the line 6—6 of Figure 5 and showing how the head bar, that is common to both blinds and window shutters, is latched in position; and

Figure 7 is a detail sectional view, taken along the line 7—7 of Figure 5 and illustrating in more detail how the center post is retained and releasably latched in operative position.

Referring now particularly to the drawings, it will be observed that the reference character 10 designates, generally, a window frame of a railway car or the like in which window panes 11, Figures 5 and 7, of glass are suitably mounted as by means of rubber 12. The window frame 10 is illustrated in the drawings as being of sufficient length to span a window which is common to two seats. However, it will be understood that the present invention can be embodied in a construction in which the window is common to more than two seats. The window frame 10 includes fascia 13 at the top which conceals certain of the mechanism described hereafter and thereby provides a better appearance for the window construction.

In order to permit individual adjustment of the window shutter or blind two such devices, as indicated, generally, at 14 and 15, Figure 1, are provided. The particular window blinds or shutters 14 and 15 disclosed herein are of the Venetian blind type such as shown in the copending application of Donop, referred to hereinbefore. However, it will be understood that other types of blinds or window shutters can be employed without departing from the scope of the present invention.

It will be apparent that the two window shut-

ters 14 and 15 permit individual adjustment by the seat occupants adjacent to same and overcome the disadvantages incident to the use of a single window shutter for the entire window frame 10. However, the provision of two window shutters 14 and 15 requires that they be individually guided, particularly along the line where they are juxtaposed. This is accomplished, as will be described hereinafter, by the provision of a centerpost. This centerpost must be readily and easily removed by unskilled help, such as window washers, in order to permit exposure of the entire inside of the inner window pane 11 to permit washing thereof. In addition the centerpost must be removable in order to permit the ready removal of the two window shutters 14 and 15.

The window shutters 14 and 15 are commonly mounted on a head bar 16, Figures 3 and 7, which extend across the same and is substantially of the same length as the window frame 10. As set forth in the co-pending application of Donop, the head bar 16 carries a roller for tilting and for closing and opening the shutters. Since two window shutters 14 and 15 are provided in accordance with the present invention, two rollers 18 and 19 are individually mounted on head bar 16. Ladder tapes 20 and 21, Figure 3, support slats 22 and 23 making up the shutters 14 and 15. The tapes 20 and 21 extend over the rollers 18 and 19 in frictional engagement therewith. At their lower ends the ladder tapes 20 and 21 are secured to toe rails or bottom bars 24 and 25 of each of the window shutters 14 and 15. Lift tapes, one of which is indicated at 26 in Figure 6, are connected to the toe rails or bottom bars 24 and 25 and are arranged to be wrapped or wound around the respective rollers 18 and 19 for lifting the slats 22 and 23 or permitting the same to be extended. The lift tapes 26 may extend through apertures, such as apertures 28 in the slat 22, as illustrated in Figure 5. The lift tapes 26 may also pass vertically between rear edge of the slats and the inside edge of the rear section of the ladder tape as disclosed more fully in my co-pending application Serial No. 700,064, filed September 28, 1946.

The outer ends of the slats 22 and 23 and of the toe rails or bottom bars 24 and 25 are guided in suitable guide members or channels 30 and 31 which are secured permanently to the window frame 10. As is shown more clearly in Figures 5 and 6 of the drawings the channel 30 is provided with a lining 32 of rubber or the like for cooperating with a releasable holding mechanism at the adjacent end of the toe rail or bottom bar 24 for holding the window shutter 14 in any position therealong. It will be understood that the guide member or channel 31 is similarly constructed.

With a view to removably mounting the head bar 16 in window frame 10, a spring finger 34 is secured, as illustrated more clearly in Figure 6, to the bottom of the guide member or channel 30. The upper end of the spring finger 34 interfits with a shoulder 36 on the adjacent end of the head bar 16 and holds the same in place. It will be understood that the guide member or channel 31 is provided with a similar spring finger and that it cooperates with a similar shoulder at the other end of the head bar 16. This construction permits the head bar 16, carrying the two window shutters 14 and 15, to be snapped into place on being raised sufficiently high within the frame 10. By depressing the spring fingers, such as the finger 34, so as to clear the shoulder 36, the head bar 16 can be released and can be removed from the window frame 10 together with the window shutters 14 and 15.

Now the juxtaposed ends of the slats 22 and 23 making up the window shutters 14 and 15 must be guided as well as the juxtaposed ends of the toe rails or bottom bars 24 and 25. For this purpose an intermediate guide member or center post, shown generally at 40, Figure 1, is provided. As indicated hereinbefore, it is necessary that the center post 40 be removable in order to facilitate washing of the inner pane of the two panes 11 and also to permit removal of the head bar 16 and the window shutters 14 and 15 mounted thereon.

As illustrated more clearly in Figure 5 of the drawings, the center post 40 comprises a rolled or extruded H-section 41 that is preferably formed of aluminum. The opposite channels of the section 41 are lined, as indicated at 42 and 43, with rubber or the like for the reason set forth hereinbefore.

In order to hold the center post 40 in place, it is provided with a pair of pins 44, Figures 4 and 7, at its lower end which are arranged to interfit with apertures 45, in window sill 46. Similarly at its upper end the center post 40 is provided with pins 47 which are arranged to interfit with apertures 48 in the under side of head bar 16. The pins 44 and 47 are of such length, and sufficient clearance is provided between the upper end of the center post 40 and the under side of the head bar 16, so as to permit the center post 40 to be lifted vertically and then swung at its lower end away from the window sill 46 a sufficient amount to permit it to be lowered away from the head bar 16 and the pins 47 to be withdrawn therefrom. If it is desired to avoid the clearance between the upper end of the center post 40 and the head bar 16 to provide an improved appearance, provision can be made for a close fit and reliance placed on springing the head bar 16 upwardly sufficiently far to provide the necessary clearance for removal. When the center post 40 is replaced, this sequence of operations is reversed.

It is desirable to provide locking means for the center post 40 which will insure that it will be held firmly in place in the window frame 10. At the same time the locking means must be of such a nature that it can be readily operated by unskilled help. Another desirable feature is that the locking means be concealed from view insofar as the interior of the car is concerned.

For this purpose an L-shaped sill plate 49, Figure 7, may be provided underneath the center post 40 and secured to the window sill 46 by suitable screws 50. The upstanding leg of the sill plate 49 may carry a pin 51 with which a notch 52, Figure 4, at the lower end of a latch lever 53 may cooperate. The lever 53 may be pivoted by a pin 54 which extends from the center post 40 toward the window panes 11. The upper end of the lever 53 is flattened, as indicated at 55, to facilitate gripping the same between the thumb and forefinger. Since the latch lever 53 is located on the side of the center post 40 toward the window panes 11, it cannot be seen from the interior of the car.

The upper end of the center post 40 also may be latched, if this is desired. For this purpose a pin 57 may be provided on the head bar 16 for cooperation with a notch 58, Figure 4, at the

upper end of a latch lever 59. The lever 59 may be pivoted on a pin 60 which extends from the side of the center post 40 adjacent the window panes 11. The lower end of the lever 59 may be flattened, as indicated at 61, like the lever 53, to permit its being gripped as before.

When it is desired to remove the window shutters 14 and 15 from the window frame 10, they are first closed to the extent indicated in Figure 2. Then the latch levers 53 and 59 are unlatched and the center post 40 is removed, as previously described. The leaf springs, such as the spring 34, in the channels or guide members 30 and 31 are depressed and the head bar 16 is released and may be removed as indicated in Figure 3. By reversing this sequence of operations the window shutters 14 and 15 can be replaced in the window frame 10.

Since certain changes can be made in the foregoing construction and different embodiments of the invention can be made without departing from the spirit and scope thereof, it is intended that all matter shown in the accompanying drawings and described hereinbefore shall be interpreted as illustrative and not in a limiting sense.

I claim as my invention:

1. For combination with a single continuous window of a railway car or the like long enough to span at least two seats, a pair of individually operable window shutters for said window to permit the occupants of said seats to adjust said shutters as desired, a support member common to and removable with said pair of shutters for mounting on the frame of said window, a guide member individual to the outer end of each of said shutters and adapted to be mounted permanently on said frame, and an intermediate guide member for the adjacent ends of said shutters, said intermediate guide member being readily removable to facilitate washing said window and removal of said support member and therewith said shutters.

2. The invention, as set forth in claim 1, wherein manually releasable locking means is provided for locking the intermediate guide member in operative position.

3. The invention, as set forth in claim 1, wherein pins are provided in the ends of the intermediate guide member for insertion in apertures in the window frame and support member for holding said intermediate guide member in operative position in said frame.

4. The invention, as set forth in claim 1, wherein pins are provided in the ends of the intermediate guide member for insertion in apertures in the window frame and support member for holding said intermediate guide member in operative position in said frame, and manually releasable locking means is provided for locking said intermediate guide member in said operative position.

5. The invention, as set forth in claim 1, wherein pins are provided in the ends of the intermediate guide member for insertion in apertures in the window frame and support member for holding said intermediate guide member in operative position in said frame, and a manually operable latch is provided at each end of said intermediate guide member on the window side thereof for cooperating with a pin on an adjacent part of said frame at one end and a pin on the support member at the other end for releasably locking said intermediate guide member in said operative position.

FRANK E. BRETZ, JR.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
410,440	Paulding	Sept. 3, 1889
1,908,165	Moler	May 9, 1933
2,287,372	Blodgett	June 23, 1942