March 29, 1932. A. P. BALL 1,851,233

SCREEN CONSTRUCTION FOR AUTOMOBILES

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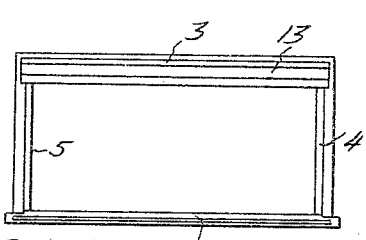


Fig. 2.

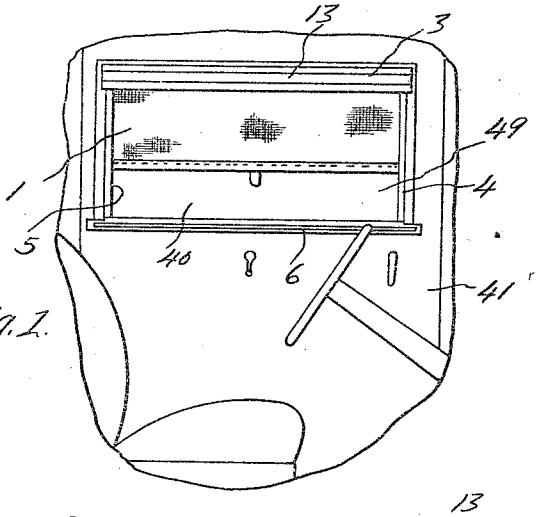
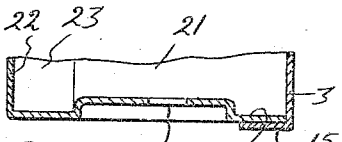


Fig. 1.



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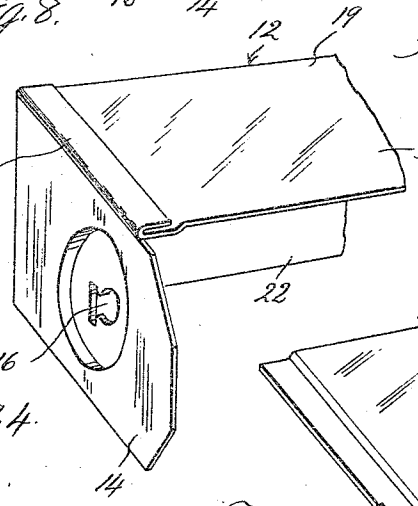

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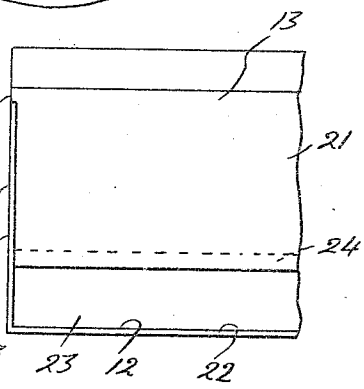

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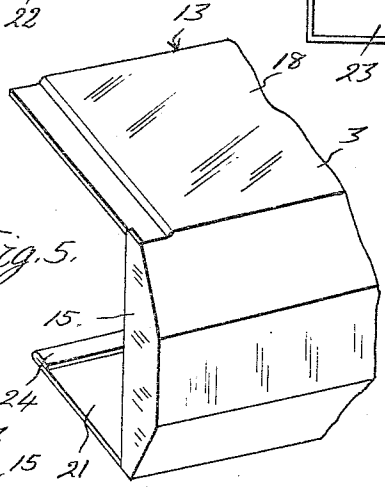

Fig. 5.

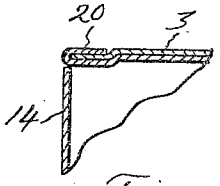

Fig. 7.

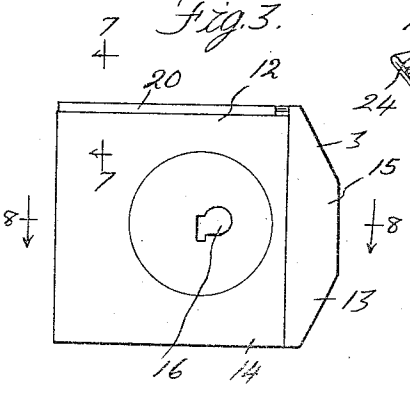

Fig. 3.

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Fig. 14.

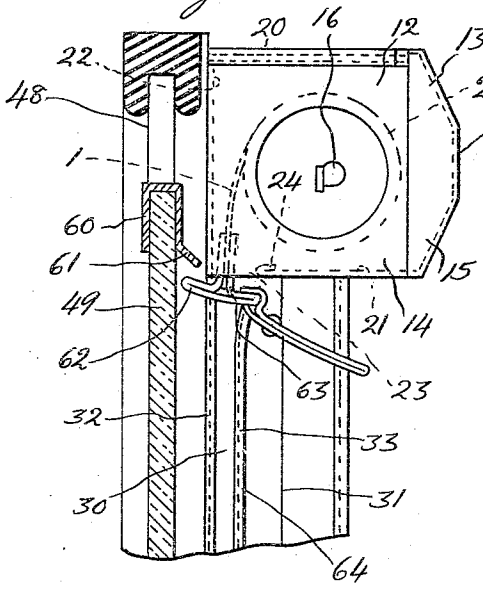


Fig. 9.

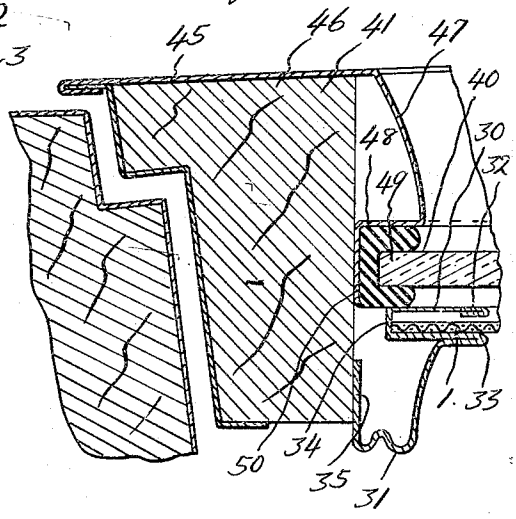


Fig. 11.

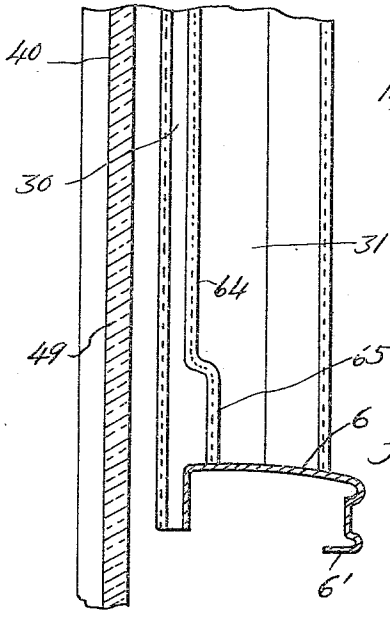
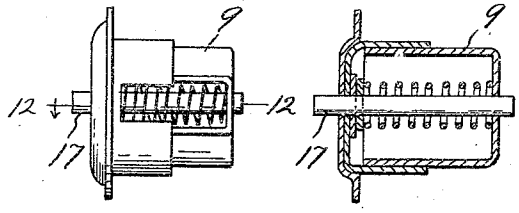


Fig. 12



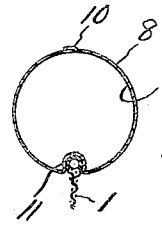


Fig. 10.

Fig. 13.

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Patented Mar. 29, 1932 1,851,233

UNITED STATES PATENT OFFICE

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SCREEN CONSTRUCTION FOR AUTOMOBILES

Application filed September 3, 1929. Serial No. 390,172.

This invention relates generally to screen assemblies, particularly to those designed for use in connection with the windows of vehicle bodies, and consists of certain novel features of construction, combinations and arrangements of parts that will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings:

Figure 1 is a fragmentary side elevation of a vehicle body with a screen assembly embodying my invention applied thereto;

Figure 2 is a detail elevation of the screen assembly per se;

Figure 3 is an end elevation of the housing;

Figure 4 is a perspective view of one section of the housing;

Figure 5 is a perspective view of the other section of the housing;

Figure 6 is a bottom plan view of the housing;

Figure 7 is a fragmentary sectional view through one end of the housing;

Figure 8 is a sectional view taken on the line 8—8 of Figure 3;

Figure 9 is a fragmentary sectional view of the vehicle body and screen assembly;

Figure 10 is a cross sectional view through the roller and showing a portion of the screen applied thereto;

Figure 11 is a fragmentary elevation of one of the roller headers;

Figure 12 is a longitudinal sectional view taken on the line 12—12 of Figure 11.

Figure 13 is a vertical sectinal view through a portion of a window with my screen assembly applied thereto.

Figure 14 is a vertical sectional view through the window, channel strip and header and showing the screen assembly in elevation.

Referring now to the drawings, 1 is a screen of flexible material, 2 is a roller upon which the screen 1 is adapted to be wound, 3 is a housing for the roller, 4 and 5 respectively are guides for the screen when off the roller, and 6 is a garnish molding of a screen assembly embodying my invention. As shown, the roller 2 is entirely of metal and preferably comprises a tube 8 and a pair of headers 9. Preferably the tube 8 has a longitudinally extending seam 10 and has a longitudinally extending groove 11 in which one end or edge of the screen 1 is anchored, while the headers 9 are secured within the tube 8 at opposite ends thereof and in action simulate the usual window curtain headers for supporting and actuating the roller in the housing.

In the present instance the housing 3 is also formed of sheet metal and comprises two sections, 12 and 13. As shown, the section 12 is substantially L-shape in cross section and has the end pieces 14, while the other section 13 is channel shaped and is also provided at its opposite ends with integral webs 15. The end pieces 14 carry the roller and for this purpose are provided with aligned openings 16 that receive the laterally projecting pins 17 of the headers. When assembled the upper side wall 18 of the section 13 overlies the upper wall 19 of the section 12 and is held in place by open return-bent flanges 20 at opposite ends of said wall 19. Preferably the end pieces 14 extend just inside the webs 15 and the bottom wall 21 of the section 13 is narrower than the top wall 18 and terminates short of the upright wall 22 of the section 12, thereby providing an opening or slot 23 for the screen 1. Preferably this wall 21 is provided at its free edge with an open return-bent flange 24 that stiffens and reinforces the construction and that also constitutes a bearing for the screen as it passes through the opening 23 to and from the roller.

The guides 4 and 5 are similar in construction and extend between the housing 3 and molding 6. Preferably each guide comprises a screen receiving channel 30, and a laterally extending finish strip 31. The channel 30 is relatively narrow and is provided at its free edges with close return-bent portions 32 and 33, while the finish strip 31 projects laterally from the return-bent portion 33 at a point substantially midway between the base 34 and free edges of the channel and is provided with an open return-bent portion 35.

The molding 6 constitutes a window sill

and comprises an inverted channel member having an inturned marginal flange 6'.

As shown, the housing 3, molding 6, and guides 4 and 5 form a frame that as a unit may be mounted wherever desired. In the present instance it is used opposite a window opening 40 in a door 41 of a vehicle body, and has been substituted for the usual molding heretofore used upon the inner side of the door as trimming around the edges of the window opening. Preferably the housing 3 is at the upper edge of the opening 40; the guides 4 and 5 are at the sides of the opening 40; and the molding 6 is at the lower edge of the opening.

As shown, the outside panel 45 of the door overlies the upright frame members 46 and has the usual inturned flanges 47 at the edges of the opening 40. The channel runways 48 for the sliding glass panel 49 are secured in rabbets 50 of the inturned flanges 47. The screen channels 30 are against the glass runway channels 48, and the flanges 35 are secured to the inner sides of the upright frame members 46.

With the present construction, a channel strip 60 is secured upon the upper edge of the sliding window 49 and is provided with a downwardly and outwardly inclined flange 61 that is engageable with a lateral flange 62 of a tab 63 at the free end of the screen 1 for moving the screen downwardly with the window 49 as the latter is lowered by its regulator mechanism (not shown). Preferably the inner walls 64 of the screen channels 30 are offset inwardly, as illustrated at 65, to permit the tab 63 to be pulled laterally inwardly so that the flange 62 of the tab may be disengaged from the lateral flange 61 of the strip 60 on the window. The screen 1 will then be free to move upwardly in the channels 30 and be wound upon the roller. Thus the screen may be moved automatically to operative position as the window 49 is opened. Moreover, it may be easily and quickly released and raised whenever desired, for instance when the driver wishes to extend his arm through the window opening 40 to give the traffic signal.

While it is believed that from the foregoing description the nature and advantages of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown and described and that such changes may be resorted to when desired as fall within the scope of what is claimed.

What I claim as my invention is:

1. In a screen assembly, a housing comprising two sections secured together, one section being substantially L-shape in cross section and having end pieces, and the other section being substantially channel shaped and having a wall thereof overlapping and secured to a wall of the first section and having another wall in spaced relation to a wall of the first section and providing a screen opening.

2. In an assembly of the class described, a housing for a screen roller comprising two sections, one being substantially L-shape in cross section and having end pieces, provided with means for carrying a roller, the other section being substantially channel-shape and provided at its opposite ends with inturned webs, one side wall of the channel section overlying one wall of the L section, and the end pieces overlapping the webs.

3. In an assembly of the class described, a housing for a screen roller comprising two sections, one being substantially L-shape in cross section and having end pieces provided with means for carrying a roller, the other section being substantially channel-shape and provided at its opposite ends with inturned webs, one side wall of the channel section overlying one wall of the L section, and the end pieces overlapping the webs, the other side wall of the channel section terminating short of the upright wall of the L section and providing a slot for a screen.

4. In an assembly of the class described, a housing for a screen roller, comprising two sections, one being substantially L-shape in cross section and having end pieces, and the other section being substantially channel-shape, one side wall of the channel overlapping and being secured to one side wall of the L section, the other side wall of the channel extending toward but terminating short of the other side wall of the L section, and the base of the channel having portions at opposite ends secured to the end pieces of the L section.

In testimony whereof I affix my signature.

ALBERT P. BALL.