

June 24, 1941.

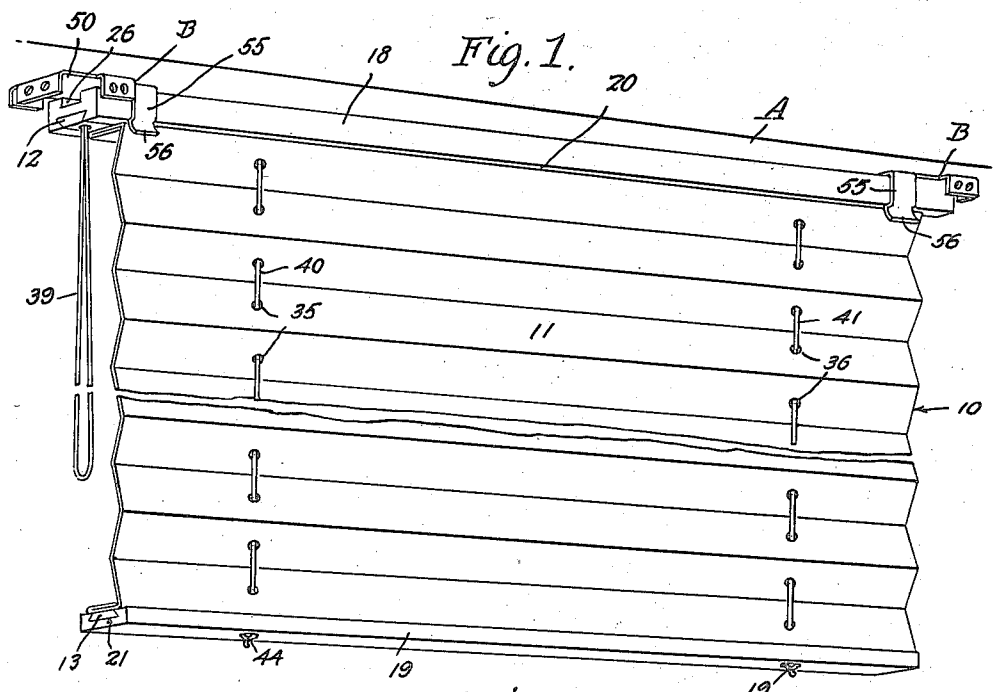
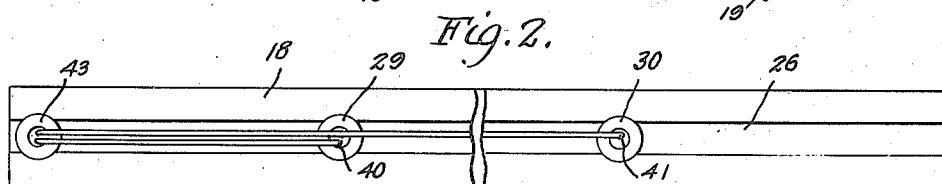
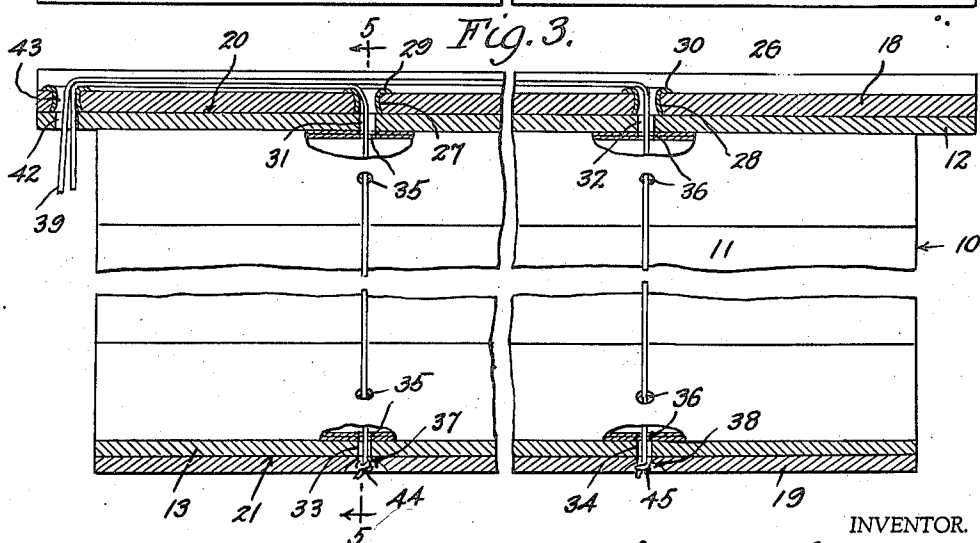
A. STONE

2,247,260

SHADE STRUCTURE FOR WINDOWS AND THE LIKE

Filed Aug. 28, 1940

3 Sheets-Sheet 1



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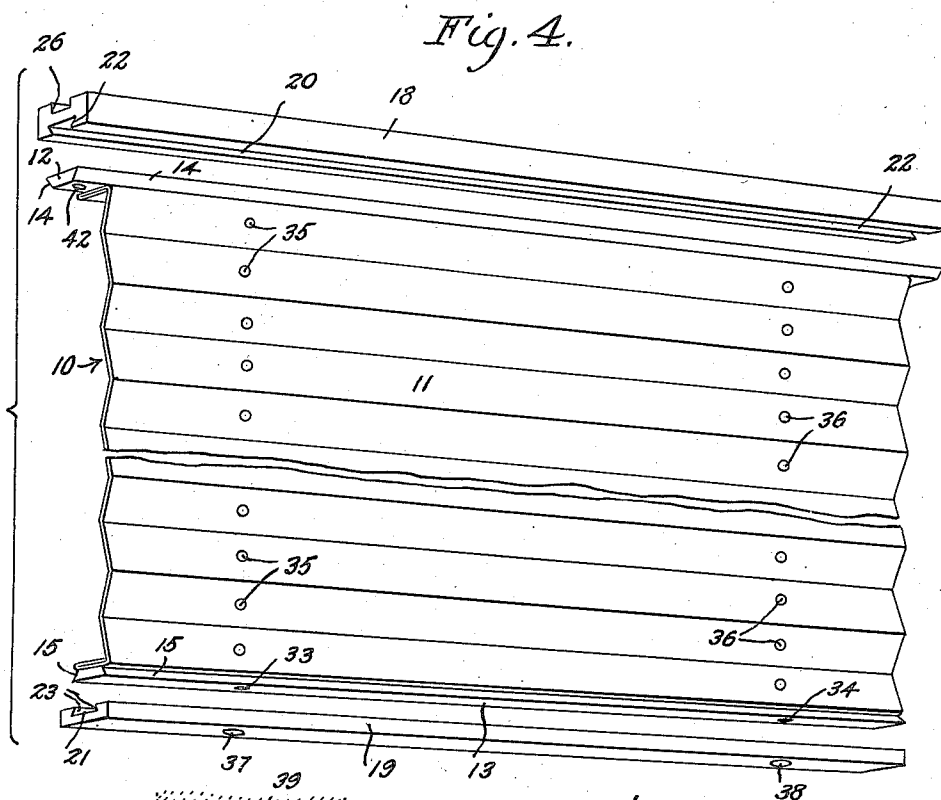
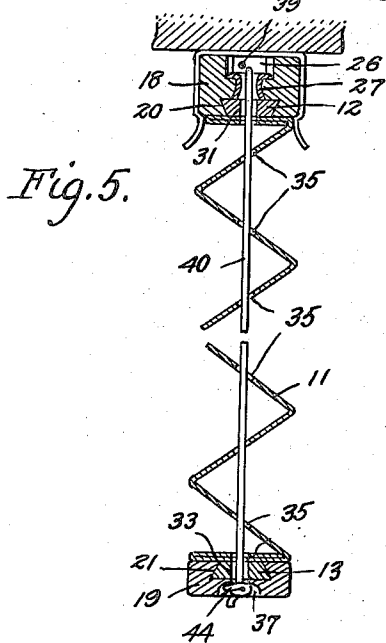
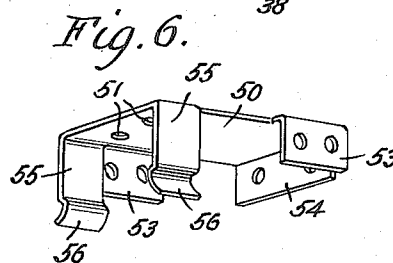
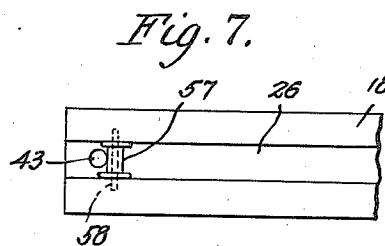
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SHADE STRUCTURE FOR WINDOWS AND THE LIKE

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3 Sheets-Sheet 2



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SHADE STRUCTURE FOR WINDOWS AND THE LIKE

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3 Sheets-Sheet 3

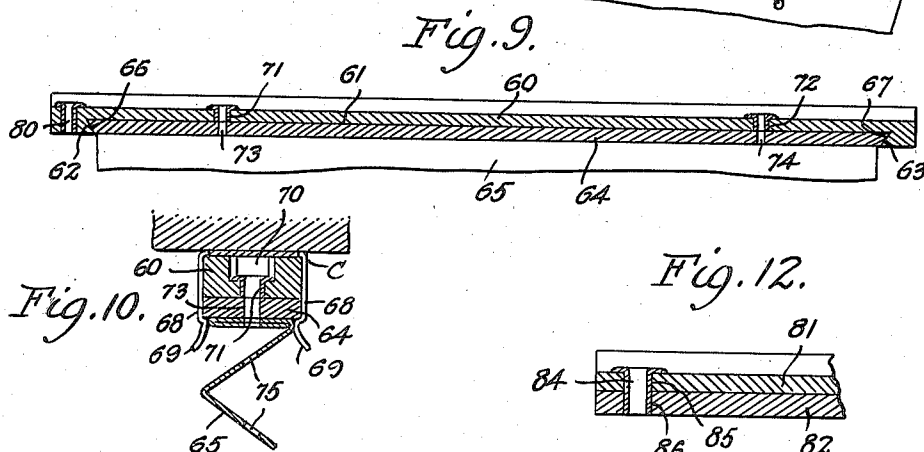
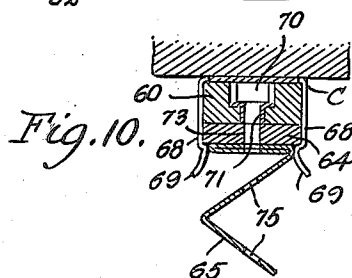
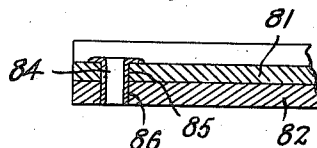
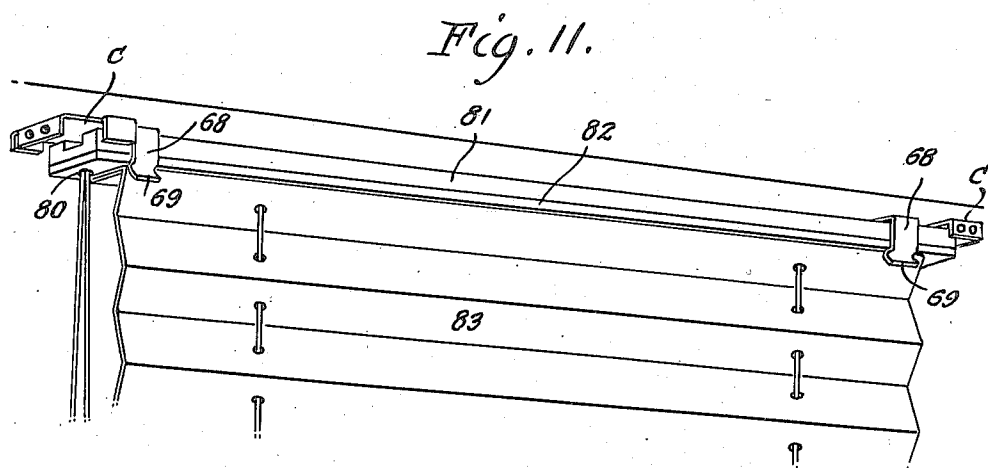


Fig. 12.



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UNITED STATES PATENT OFFICE

2,247,260

SHADE STRUCTURE FOR WINDOWS AND
THE LIKE

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Application August 28, 1940, Serial No. 354,470

9 Claims. (Cl. 156—16)

This invention relates to shades of the accordion pleated type for windows, porches and the like, and has particular reference to a shade of said character composed of interfitting units which may be readily disassembled for replacement of worn, damaged or soiled parts and reassembled and secured in position.

The invention has in view an inexpensive shade of the aforesaid character which simulates and is adapted to take the place of the more expensive Venetian blinds and which includes a replaceable accordion pleated body unit constructed of inexpensive flexible material having rigid attaching strips at the upper and lower ends thereof and which are removably associated with rigid top and bottom units by means of which the body unit is supported and expanded and with which the draw cord is associated.

The invention also embodies bracket members for detachable engagement with the top unit and by means of which the shade is adapted to be attached to a supporting frame.

With the foregoing and other objects in view, reference is now made to the following specification and accompanying drawings in which there are illustrated the preferred forms of the invention.

In the drawings:

Fig. 1 is a perspective view of a shade constructed in accordance with the present invention and illustrating the same in lowered condition.

Fig. 2 is an enlarged top plan view thereof.

Fig. 3 is an enlarged front view with parts broken away and shown in section to disclose the underlying structure.

Fig. 4 is a collective perspective view illustrating the shade units in separated juxtaposition.

Fig. 5 is an enlarged vertical sectional view therethrough taken approximately on the line 5—5 of Fig. 3.

Fig. 6 is an enlarged perspective view of one of the brackets for detachably supporting the shade structure from a window frame.

Fig. 7 is an enlarged fragmentary plan view illustrating a modified form of guide means for the draw cord.

Fig. 8 is a collective perspective view illustrating the top and body units in separated juxtaposition and showing a modified adaptation of the invention.

Fig. 9 is a fragmentary longitudinal sectional view showing the top and body units in assembled relation.

Fig. 10 is an enlarged transverse sectional view

illustrating the top and body units connected in assembled relation by the bracket.

Fig. 11 is a fragmentary perspective view illustrating a further modification of the invention.

Fig. 12 is an enlarged fragmentary vertical sectional view thereof illustrating the means for securing the supporting bar and attaching strip against endwise movement.

Referring to the embodiment of the invention illustrated in Figs. 1 to 6 inclusive of the drawings, the shade includes a body unit 10 composed of a transversely pleated accordion foldable panel 11 preferably fashioned from paper or other inexpensive sheet material, and rigid attaching strips 12 and 13 extending longitudinally of and secured by any desired means to the upper and lower pleats of the panel respectively and which strips have their opposite longitudinal edges beveled to define inwardly converging faces 14—14 and 15—15 respectively.

The shade also includes top and bottom units 18 and 19 consisting of rigid rectangular shaped bars having their confronting faces formed with longitudinally extending dovetail grooves 20 and 21 respectively to thereby provide oppositely disposed shoulders defined by beveled or undercut faces 22—22 and 23—23 respectively, and which faces conform with the converging faces 14 and 15 respectively of the attaching strips 12 and 13 for longitudinally slidable interfitting engagement of the strips in the grooves 20 and 21 respectively to thereby connect the body unit and the end units together.

The top unit 18 is formed with a longitudinally extending rectangular groove 26 in the upper face thereof and with vertical openings 27 and 28 extending downwardly through the web between the grooves 20 and 26 adjacent the opposite ends thereof. The openings 27 and 28 are provided with metal grommets 29 and 30, which openings align respectively with openings 31 and 32, and 33 and 34 in the attaching strips 12 and 13 respectively with the openings 35 and 36 in the pleats in the panel 11 and with the openings 37 and 38 in the bottom unit 19. A draw cord 39 for manually raising the shade into folded condition is doubled to provide leads 40 and 41 which are slidably trained through the opening 42 in the projecting terminal of the attaching strip 12 and the aligned grommeted opening 43 in the top unit 18, and thence longitudinally in the groove 26 and respectively downward through the grommets 29 and 30, and the aligned openings in the attaching strip 12, the pleats of the panel, the

attaching strip 13 and the bottom unit 19 with the ends of the leads knotted as at 44 and 45 beneath the bottom unit to prevent withdrawal of the leads through the said openings.

The shade may be supported from a window frame or other frame structure A in any desired manner, but as herein illustrated the same is preferably detachably supported therefrom by means of brackets B each of which includes a base 50 which, as illustrated, is provided with openings 51 for receiving screws or equivalent fastenings elements 52 which extend there-through and are anchored into the frame A. The base 50 is also provided with apertured depending side lugs 53 and an apertured end lug 54 for optionally attaching the bracket to the sides of the frame or the ends thereof and is formed with depending oppositely disposed spring fingers 55 having inwardly offset terminals 56 for embracingly clamping the top unit 18.

In the modified form of guide means for the draw cord illustrated in Fig. 7 which is employed in lieu of the grommets illustrated in the previous form, a guide roller 57 is provided which is mounted on a transverse pin 58 spanning the groove 26 and located adjacent the draw cord openings in the top unit 18.

When it is necessary to replace any of the units, particularly the body unit, the draw cord knots 44 and 45 are either untied or cut off and the cord is withdrawn so as to permit of the sliding disengagement of the units 10, 18 and 19. After the new unit has been replaced by interfitting sliding engagement, the draw cord is then retrained through the openings and knots 44 and 45 are retied to thus secure the units in assembled relation, it being obvious that the leads of the draw cord extending through the aligned openings of the several units serve to prevent longitudinal sliding and separating movement.

In the form of the invention illustrated in Figs. 8 to 10 inclusive of the drawings, the top unit or supporting bar 60 has its bottom face formed with a wide transverse groove 61 to provide oppositely disposed transversely extending shoulders defined by beveled or undercut faces 62 and 63 adjacent the opposite ends of the bar respectively, while the attaching strip 64 of the body unit 65 has its opposite ends beveled to define downwardly converging faces 66 and 67 which conform respectively with the undercut faces 62 and 63 for transverse slidable interfitting engagement of the attaching strip 64 in the groove 61 to thereby connect the body unit to the supporting bar 60.

The supporting bar 60 is detachably suspended from a frame structure such as a window frame or the like by means of brackets C similar to the brackets B in the previously described form of the invention, but in this form the depending spring fingers 68 embracingly engage the supporting bar 60 and attaching strip 64 at the opposite sides thereof with the offset terminals 69 of the brackets extending inwardly beneath the attaching strip to thereby clamp the attaching strip to the supporting bar and the top unit and body unit to the supporting frame. The supporting bar 60 is similarly provided with a longitudinally extending rectangular groove 70 in the upper face thereof and with grommeted vertical openings 71 and 72 which respectively align with openings 73 and 74 and 75 and 76 in the attaching strip and pleats of the panel

for slidably receiving therein the leads of a draw cord (not shown), which draw cord is trained in the groove 70 with its free end extending downwardly through a vertical opening 80 at one end of the bar 60, as in the previous form of the invention.

In the form of the invention illustrated in Figs. 11 and 12 of the drawings, the top unit or supporting bar 81 and the attaching strip 82 of the body unit 83 are detachably connected by means of similar brackets C, the depending spring fingers 68 of which embracingly engage the opposite sides of said bar and strip with the offset terminal 69 extending inwardly beneath the strip 82 to thereby clamp the said strip against the underside of the supporting bar 81. The strip 82 is preferably secured against endwise movement by means of a headed tubular stud 84 extending downwardly through aligned openings 85 and 86 in the bar 81 and the strip 82, and through which stud protrudes the free end of the draw cord 86 for manually raising the body unit 83 as in the previous forms of the invention.

What is claimed is:

1. In a shade, a body unit including a transversely pleated accordion foldable panel and rigid attaching strips extending longitudinally of and secured to the upper and lower ends of the panel, rigid top and bottom units each having a longitudinally extending recessed portion providing oppositely disposed shoulders on each of said units, said upper and lower attaching strips each having longitudinally extending portions complementary to said shoulders for slidable interfitting engagement with said top and bottom units respectively, and said body unit and said top and bottom units having aligned openings therein adjacent the side edges thereof, and a draw cord having leads extending through said openings and functioning to secure the units against separation.

2. In a shade, a body unit including a transversely pleated accordion foldable panel and rigid attaching strips extending longitudinally of and secured to the upper and lower ends of the panel, rigid top and bottom units, said top unit and upper strip and said bottom unit and lower strip being respectively formed with detachable means of connection engageable and disengageable by relative longitudinal sliding movement, and said units having cord receiving openings adapted to align when the units are in mating engagement, and a draw cord having leads extending through said openings and serving to prevent relative longitudinal separating movement of the units.

3. In a shade, a body unit including a transversely pleated accordion foldable panel and rigid attaching strips extending longitudinally of and secured to the upper and lower ends of the panel respectively, rigid top and bottom units having their confronting faces formed with longitudinally extending dovetail grooves, said upper and lower attaching strips having beveled side edges conforming to the side faces of said dovetail grooves and adapted for slidable interfitting engagement with the grooves of said top and bottom units respectively, and said panel strip and units having aligned openings adjacent the side edges thereof, and a draw cord extending through said openings and functioning to secure the units against separation.

4. In a shade, a body unit including a transversely pleated accordion foldable panel and a rigid attaching strip extending longitudinally of

and secured to the upper end of the panel, a rigid supporting bar having a longitudinally extending recessed portion providing oppositely disposed shoulders, said attaching strip having longitudinally extending portions complementary to said shoulders for slidable interfitting engagement with the recessed portion of said supporting bar, and said panel and attaching strip and supporting bar having aligned openings, and a draw cord extending through said openings and functioning to secure the units against separation.

5. In a shade, a body unit including a transversely pleated accordion foldable panel and a rigid attaching strip extending longitudinally of and secured to the upper end of the panel, a rigid supporting bar having a longitudinally extending recessed portion providing oppositely disposed shoulders, said attaching strip having longitudinally extending portions complementary to said shoulders for slidable interfitting engagement with the recessed portion of said supporting bar, and said panel and attaching strip and supporting bar having aligned openings adjacent the side edges thereof, a draw cord having leads extending through said openings for manually raising the panel to a folded condition and functioning to secure the panel and said attaching strip and supporting bar against separation, and bracket members having spring fingers provided with inwardly offset terminals adapted for detachable engagement beneath the supporting bar for attaching the shade to a supporting frame.

6. In a shade, a body unit including a transversely pleated accordion foldable panel and rigid attaching strips extending longitudinally of and secured to the upper and lower ends of the panel, and a rigid supporting bar adapted to be affixed to a supporting structure, said attaching strip and supporting bar having interengaging coupling means for detachably connecting the body unit to the supporting bar with the attaching strip and supporting bar extending longitudinally of each other.

7. In a shade, a body unit including a transversely pleated accordion foldable panel and rigid attaching strips extending longitudinally of and

secured to the upper and lower ends of the panel, a rigid supporting bar adapted to be affixed to a supporting structure, said attaching strip and supporting bar having interengaging coupling means for detachably connecting the body unit to the supporting bar with the attaching strip and supporting bar extending longitudinally of each other, and said panel and attaching strip and supporting bar having openings adapted to align when in mating engagement, and a draw cord extending through said openings for manually raising the panel to a folded condition.

8. In a shade, a body unit including a transversely pleated accordion foldable panel and a rigid attaching strip extending longitudinally of and secured to the upper end of the panel, a rigid supporting bar having a recessed portion providing oppositely disposed shoulders, said attaching strip having portions complementary to said shoulders for slidable interfitting engagement with the recessed portion of said supporting bar for detachably connecting the body unit to the supporting bar with the attaching strip and supporting bar extending longitudinally of each other and said panel and attaching strip and supporting bar having openings adapted to align when in mating relation, and a draw cord extending through said openings for manually raising the panel to a folded condition and functioning to secure the body unit and supporting bar against separation.

9. In a shade, a body unit including a transversely pleated accordion foldable panel and rigid attaching strips extending longitudinally of and secured to the upper and lower ends of the panel, a rigid supporting bar and bracket members adapted to be affixed to a supporting structure and having oppositely disposed spring fingers provided with inwardly offset terminals adapted to embracingly engage the opposite sides of the supporting bar and upper attaching strip with the offset terminals engaging beneath the attaching strip for releasably coupling the body unit to the supporting bar.

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