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FLEXIBLE SIDE WALL HOLDER

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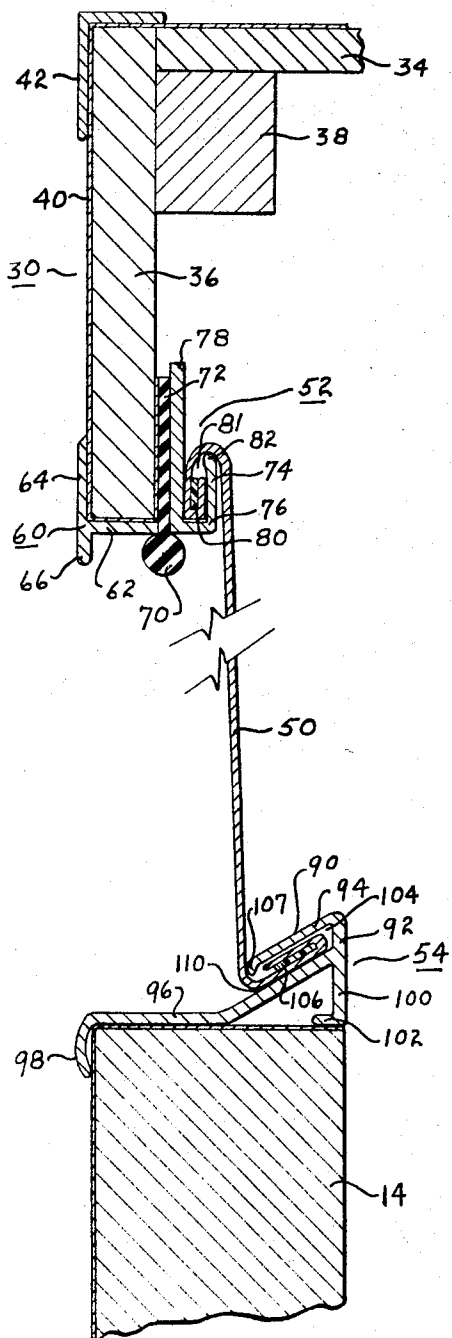
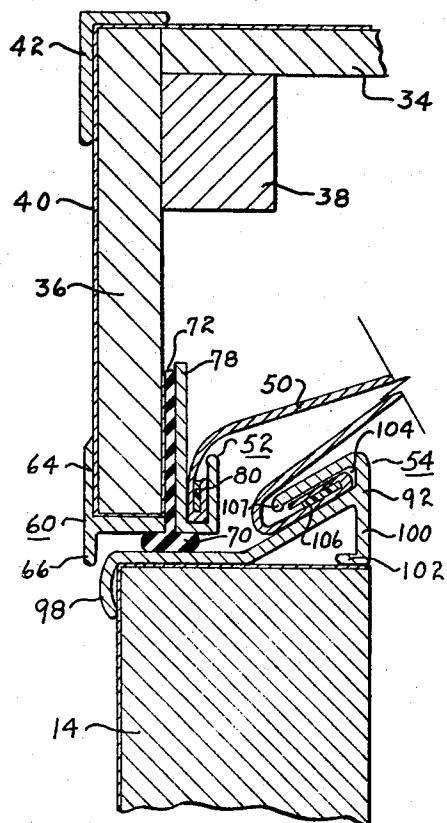


FIG. 2

FIG. 3



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## FLEXIBLE SIDE WALL HOLDER

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### ABSTRACT OF THE DISCLOSURE

A side wall structure for vehicles such as trailers, campers and the like having an extensible top movable vertically with respect to the body of the trailer, in which a flexible cloth or plastic material is secured to the lower edge of the top and the upper edge of the body. The flexible material folds inwardly when the top is lowered onto the body, and the lower securing means includes an outwardly facing channel which is enclosed by the top when the top is in its lowered position.

In recent years the folding trailer, usually referred to as camper, has become popular and is extensively used for vacationing families and hunting and fishing trips. This type of vehicle consists generally of a body having relatively low side walls with a substantially flat top which rests on top of the side walls of the body when the trailer is folded and which is supported by a plurality of posts sufficiently high above the body to permit an adult to stand erect therein when the trailer is unfolded. When the unit is in its unfolded position, the space between the upper edge of the body side walls and the lower edge of the top is usually enclosed by canvas or other flexible waterproof material permanently secured to the respective edges. The canvas or other flexible material enclosing the space is normally secured to the respective edges by stapling or tacking the material directly to the side and top structure, with or without a sealing or finishing strip along the edges of the material to conceal the staples or tacks and the raw edge of the material. These staples and tacks, with or without the sealing strips, form places or small pockets which retain moisture and collect dirt, and hence cause the material to rot and tear easily so that the material must be replaced. Further, the operation of initially attaching the material to the body and top edges with the staples and tacks and thereafter replacing the rotted and torn material is often a tedious and time consuming job and frequently difficult to perform away from the manufacturing plant or repair shop. It is therefore one of the principal objects of the present invention to provide a securing and sealing structure for the flexible side walls of trailers, campers and similar foldable structures, which permits the flexible side wall material to be easily and conveniently secured to the respective edges of the vehicle structure and which is so constructed and designed that water and dirt will not collect in places which may cause the material to rot and tear.

Another object of the invention is to provide a holder for the flexible side walls of a camper or similar foldable vehicle, which forms an effective seal between the body and top when the vehicle is in its folded position and which forms an effective joint between the edges of the material and the respective edges of the top and body when the vehicle is in its unfolded position, such that water will

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readily drain from the lower edge of the material and dirt will not tend to collect along the holder or edges of the material.

Still another object of the invention is to provide a flexible side wall structure for vehicles of the aforementioned type, which can readily be installed and quickly be repaired and replaced if necessary, and which presents a pleasing and attractive appearance both in the folded and unfolded positions of the vehicle.

A further object is to provide a securing means or structure for the flexible side walls of the foldable vehicle, the parts of which can easily be fabricated with standard equipment and which can readily be permanently mounted in place on the vehicle body and top and thereafter operated repeatedly without tearing or otherwise damaging the flexible material secured thereto and held thereby.

The foregoing objects are achieved in a trailer or camper having a top movable upwardly and downwardly relative to the body of the vehicle, in which the upper and lower edges of the flexible wall structures are secured to the top and bottom, respectively, and the securing means are enclosed by the top when the top is in its lowered position. The lower securing means includes an outwardly and downwardly facing channel in which the lower edge of the flexible material is secured.

Additional objects and advantages of the invention will become apparent from the following description and accompanying drawings, wherein:

FIGURE 1 is a side elevational view of a camper having the present flexible side wall structure mounted therein;

FIGURE 2 is an enlarged vertical cross sectional view of the present flexible side wall structure, taken on line 2—2 of FIGURE 1, and showing the camper in its unfolded position; and

FIGURE 3 is an enlarged vertical cross sectional view similar to that shown in FIGURE 2, except that it shows the camper in its folded position.

Referring more specifically to the drawings and to FIGURE 1 in particular, numeral 10 designates generally a camper or trailer having the present side wall structure incorporated therein, the camper consisting of a body 12 having two side walls 14 and front and rear end walls 16 and 18, respectively, joined to the two side walls 14. The body 12 is mounted on and secured to a frame 20 having a tow-bar 22 for attaching to a towing vehicle, and an undecarriage 24 consisting of two wheels and an axle for supporting the frame. A door 26 is provided in one of the two sides 14 and is hinged to swing outwardly when the door is opened. A top 30 moves from a position resting on the upper edge of the side and end walls of body 12 when the camper is in its folded position and is raised to and suspended in the position shown in FIGURE 1, by posts 32 at the four corners of body 12. Various types of posts or supporting structures may be used to hold the top rigidly in its elevated position. The top consists of a flat center panel 34 and downwardly extending flanges or side walls 36 joined rigidly to top panel 34 by a reinforcing strip 38 at the internal side of side wall 36. Sheet metal 40 or waterproof material, such as plastic, covers the entire upper surface of panel 34 and side walls 36. The upper corners of the top are protected by an angle strip 42 extending downwardly over the side walls and inwardly to the top panel. Further details of

the vehicle structure are not necessary for a full understanding of the present flexible side wall structure which can be incorporated in various types of campers or trailers or other vehicles in addition to campers, and can be used in conjunction with other types of folding structures.

The present flexible wall structure consists essentially of three basic elements, the flexible material of canvas, plastic or other suitable flexible, waterproof material 50, an upper securing means 52 and lower securing means 54, the two securing means being attached to the upper and lower edges, respectively, of flexible material 50. The flexible material may be completely impervious or it may contain a screen-like or netting material 56 in the center portion thereof.

The upper securing means consists of angle member 60 having a bottom 62 and upstanding flange 64 embracing the lower edge of top 30, and being secured thereto by screws, nails or other suitable securing means. A downwardly extending flange 66 is adapted to overlap the external edge of securing means 54 and form a waterproof connection therewith, and a gasket 70 is secured to the lower edge of wall 36 by an upwardly extending flange 72 which is held in place by channel member 74 having a U-shaped portion 76 and a flange 78 seated against flange 72 and secured thereto and to the internal surface of top side wall 36 by a plurality of screws or other suitable securing means extending through the two flanges 78 and 72 into side wall 36. The upper edge of flexible material 50 is secured to channel member 74 by a strip 80 around which the upper edge of the material is wrapped or to which the material is secured by sewing or by other suitably securing means. The strip 80 is of plastic, rubber or other flexible and compressible material which seats in channel 81 and holds the material firmly against the internal side wall of the channel member. An inwardly extending bead 82 is preferably provided at the upper edge of the channel to assist in retaining the strip and edge of material firmly in the groove. The foregoing structure remains permanently installed on the lower edge of top side wall 36 unless it is necessary to replace the flexible material.

The lower securing means 54 consists of an inverted channel member 90 having a rear wall 92 to which are secured forwardly and downwardly extending flanges 94 and 96 extending across the entire top edge of wall 14 and having a lip 98 for sealing the upper outer edge of the side wall. A downwardly extending flange 100 with an intumed portion 102 is provided for seating firmly on the inner upper edge of wall 14 and supports the inner side of channel member 90. A channel 104 is formed by flanges 94 and 96 and is adapted to receive the lower edge of flexible material 50 which is secured therein by a compressible, flexible strip 106 around which the lower edge of the material is wrapped, or to which the lower edge of the material is secured. After the strip and lower edge of the material are inserted in channel 104, the expansion of compressible member 106 presses the material firmly into the internal wall of channel 104 and holds the material firmly in place in the channel. A bead 107 is preferably provided at the external edge of flange 94 to assist in retaining the lower edge of the material in the channel. Channel member 90 is secured to the upper edge of side wall 14 by screws or any other suitable securing means extending downwardly through flange 96 into side wall 14.

It is seen that the upper and lower securing means may be easily and readily attached to the top and body of the vehicle, and thereafter the upper and lower edges of the flexible material secured to the respective securing means by merely slipping the edges containing strips 80 and 106 into channels 81 and 104 where they remain permanently until they are intentionally removed to replace the material if necessary.

It is seen from FIGURE 3 that when the top is lowered

onto the body, gasket 70 seats on the upper surface of flange 96, forming a water-tight seal therewith, while flange 66 extends downwardly along the side of flange 98 to prevent water from running from the external surface of side wall 36 of the top inwardly between the upper and lower securing means. When the top is lowered, the flexible material folds inwardly over the top and internal side of side wall 14 where it remains fully enclosed and in good condition until the top is again raised. It is also seen from FIGURE 2 that when the top is in its raised position, a downwardly facing line of contact 110 between the lower edge of the material and securing means 54 faces downwardly, thereby providing an effective joint which has little tendency to collect dirt and moisture which might damage the material.

While only one embodiment of the present flexible side wall holder has been described in detail herein, various changes and modifications may be made without departing from the scope of the invention.

I claim:

1. A side wall structure for vehicles having upper and lower wall parts with parallel edges movable relative to one another in a substantially vertical direction, comprising an upper securing means having an inwardly facing channel secured to the lower edge of said upper wall part, a lower securing means having an outwardly facing channel secured to the upper edge of and projecting above said lower wall part, the means defining the channel in said lower securing means being offset inwardly from the lower inside corner of said upper wall part and being behind said corner when said upper wall part is in its lowered position, a panel of flexible material having upper and lower edges, a strip of material along said upper edge seated in said inwardly facing channel and securing said upper edge in said inwardly facing channel, and a strip of material along said lower edge seated in said outwardly facing channel and securing said lower edge of said panel in said outwardly facing channel.

2. The side wall structure as defined in claim 1, in which said upper securing means consists of a member extending longitudinally along the lower inner edge of the upper wall part and having an upwardly extending flange defining a horizontally positioned longitudinal channel for receiving the upper edge of said panel.

3. The side wall structure defined in claim 2, in which said member is secured to the internal side of said wall part.

4. The side wall structure defined in claim 1, in which a sealing gasket is secured to the lower edge of said upper securing means and is adapted to seat on said lower securing means to form a water-tight seal therewith.

5. The side wall structure as defined in claim 1, in which a downwardly extending flange extends along the lower outer edge of said upper wall part for overlapping the outer edge of said lower wall part.

6. The side wall structure defined in claim 1, in which the lower securing means consists of a member having a flange extending over the upper edge of the lower wall part and an outwardly and downwardly extending flange spaced upwardly from said first flange forming an outwardly facing channel for receiving the lower edge of said wall part.

7. The side wall structure defined in claim 6, in which a surface is provided on said first flange for receiving a gasket disposed between said upper and lower securing means.

8. The side wall structure defined in claim 6, in which a lip is provided along the outer edge of said first flange and over which a downwardly extending flange of said upper securing means extends.

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