July 12, 1932. N. P. LARSEN 1,867,272

CANOPY SUPPORT

Filed Dec. 28, 1929

Fig. 1.

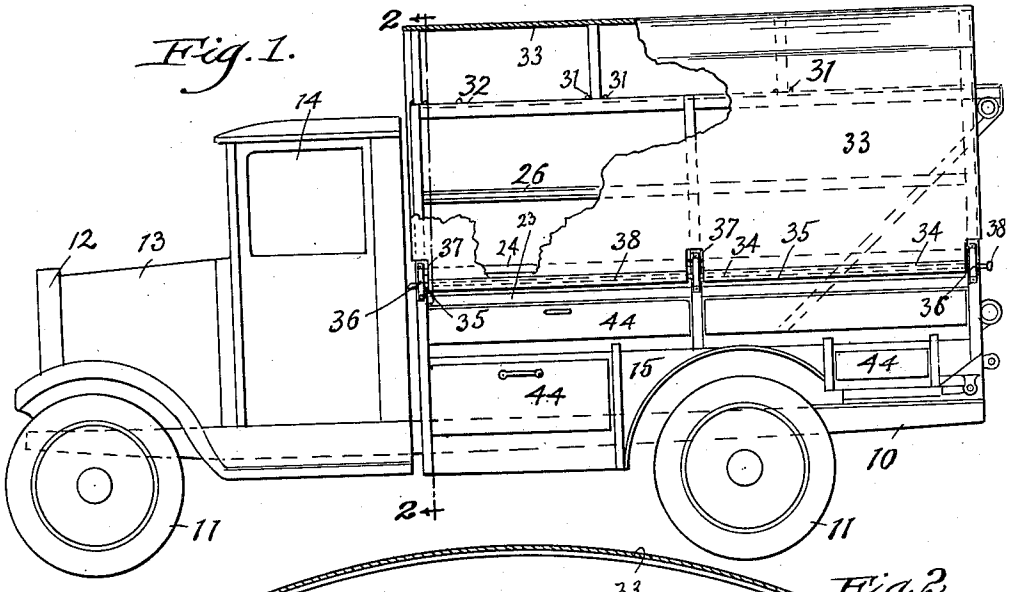


Fig. 2.

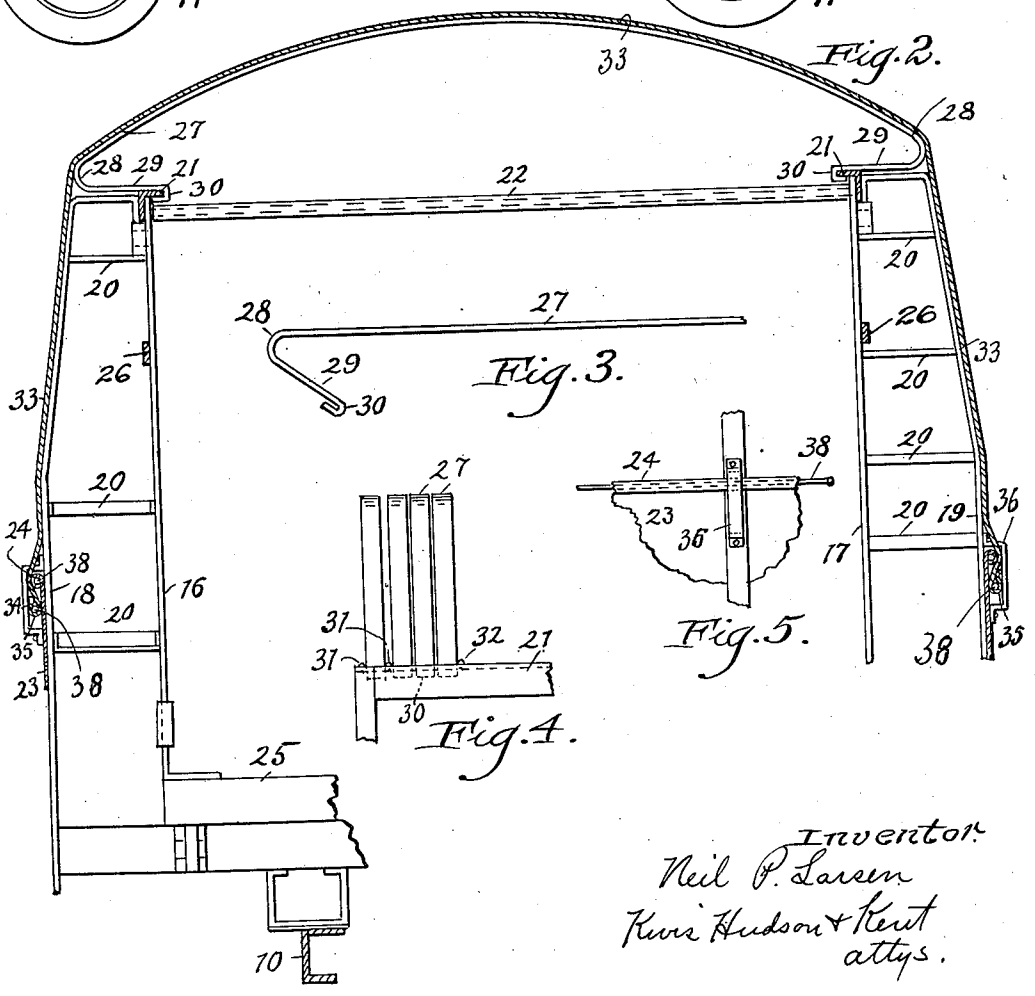


Fig. 3.

Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE

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CANOPY SUPPORT

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This invention relates to canopy supports, and more particularly to devices of this character for supporting a flexible covering such as may be provided to protect the otherwise open body of a motor vehicle or the like.

It is an object of the invention to provide a device of this character which will be well adapted for the purposes set forth, and which may be readily removed when weather protection is not desired.

Another object of the invention is to provide means for housing movable parts of the canopy supporting structure in compact relation when the canopy is removed.

Other objects and features of novelty will be apparent as the following description proceeds, as taken in conjunction with the accompanying drawing, in which

Figure 1 is an elevation of a motor vehicle showing the canopy support according to the present invention as applied thereto.

Fig. 2 is an enlarged vertical section along the line 2—2 of Fig. 1.

Fig. 3 is a partial detail elevation of one of the bars for the canopy support.

Fig. 4 is a detail elevation showing a part of the supporting frame and means for retaining the bars compactly stored when the tarpaulin is removed.

Fig. 5 is a detail of the housing for carrying the rod which may be used to secure the tarpaulin in position.

Referring more particularly to the drawing for a detailed description of one embodiment of the invention, the motor truck shown in Fig. 1 comprises the usual vehicle frame 10, wheels 11, radiator 12, hood 13, cab or driver's compartment 14 and body, indicated generally at 15.

The body 15 is of the open construction known as a stake body type. The embodiment shown is provided with internal upright bars 16 and 17, and corresponding outer upright bars 18 and 19, with transverse bars 20 interposed therebetween and secured thereto, forming racks which may receive pipes, poles and the like. The upper ends of the uprights are joined to a supporting frame consisting of side angles 21 and end bars 22. The upper ends of the bars 18 and 19 are bent inwardly and then downwardly, and secured to the depending flanges of the angles 21.

The outside of the lower portion of the body 15 is enclosed by sheet metal 23. Access openings are cut in the metal 23 to receive doors or lockers 44 for the reception of tools, supplies and the like. On each side the upper edge of the sheet metal 23 is rolled into a tube or bead 24, the purpose of which will be hereinafter described.

Intermediate the bars 21 and the bottom or floor 25 of the vehicle body, are horizontal stringers 26 for holding the bars 16 and 17 in spaced relation and for strengthening the frame structure.

It will be obvious that the stake body just described is almost entirely open to the weather, and it is desired to provide weather protection for the same. Accordingly, means are provided for supporting a tarpaulin thereover and securing the edges of the tarpaulin in position.

A plurality of metal bars 27 are formed into the contour shown in Fig. 3 with a smoothly curved outer bend 28, a flat portion 29 and a sharp inner hook 30. Intermediate the bends 28, the band 27 is normally flat or straight, but these elements are constructed of resilient material so that this intermediate portion may be bent or bowed upwardy, as shown in Fig. 2, and disposed transversely of the frame comprising the bars 21 and 22. This operation will permit the flat portions 29 to overlie the top of the side elements 16—18 and 17—19 and the hook 30 may engage the inwardly directed flange of the respective angles 21. Thus the elements 27 will be securely held in place by the resiliency of the intermediate portion.

In order to insure that the bands 27 will remain in place when mounted as described, the horizontal flanges of the bars 21 are punched or struck upward at points at each side of the desired positions of the elements 27, forming bumps or projections 31. A similar projection 32, as shown in Fig. 4, is provided near one end of each flange, so that when the tarpaulin is not desired the several bands may be moved to the front end of

the bars 21 in closely spaced relation and so held by the projection 32.

It will be obvious that the elements 27 will serve to support a tarpaulin stretched over the vehicle body, the bending of the bars forming a pleasing contour for the exterior of the tarpaulin, as well as affording the desired support and permitting greater head room at the center of the body, so that a man on the floor 25 may stand upright. The tarpaulin is indicated at 33, and each lower edge thereof is looped back upon itself and stitched as at 34, forming a hem 35. On each side of the vehicle in the vicinity of the location of the hem 35 are provided a plurality of eyes or hangers 36, which may be constructed of strap iron, and which are secured to the respective uprights 18 and 19. The lower edge of the tarpaulin is cut away or slotted as at 37, to receive the members 36. Thus to secure the tarpaulin in position all that is necessary is to pass a rod 38 through the eyes 36 and the hem 35 of the tarpaulin.

When the tarpaulin is removed the rod 38 will, of course, be removed and may be stored for further use by merely inserting the same in the rolled tube 24 formed at the upper edge of the body of sheet metal 23.

From the foregoing description it will be apparent that a very satisfactory and practical canopy has been provided, and that when the tarpaulin is removed the supporting and securing elements may be housed so as to occupy a minimum space and yet be available for instant use without danger of loss thereof.

While one embodiment of the invention has been illustrated and described in detail for the purposes of adequate disclosure, the scope of the invention is not to be limited to any of the details other than by the prior art, but instead includes such embodiments of the broad idea as fall within the scope of the appended claims.

Having thus described my invention, what I claim is:

1. A canopy support comprising spaced longitudinal frame members, and a resilient transverse member bowed upwardly and sprung between said longitudinal members, the opposite end portions of said transverse member being bowed inwardly and engaging respectively said longitudinal members and overlying the same, whereby stress in said transverse member tends to maintain the end portions thereof in engagement with said longitudinal members.

2. A canopy support comprising spaced longitudinal frame members having flange portions, and a resilient transverse member bowed upwardly, and sprung between said longitudinal members, the opposite end portions, of said transverse member being bent nwardly and engaging respectively the flange portions of said longitudinal members and overlying the same, whereby stress in said transverse member tends to maintain the end portions thereof in engagement with said flange portions of the longitudinal members.

3. A canopy support comprising spaced longitudinal frame members and spaced transverse members bowed upwardly against the resilience thereof and sprung between said longitudinal members, said transverse members having hooked ends respectively engaging said longitudinal members being bent inwardly and whereby stresses in said transverse members maintain said hooked ends in engagement with said longitudinal members.

4. A canopy support comprising spaced longitudinal frame members, resilient transverse members bowed upwardly and sprung between said frame members, the opposite end portions of said transverse members engaging said frame members respectively, and removable therefrom, and positioning means on said frame members for maintaining said transverse members in spaced relation thereon.

5. A canopy support comprising spaced longitudinal frame members, resilient transverse members bowed upwardly and sprung between said frame members, the opposite end portions of said transverse members engaging said frame members respectively, and abutments on said frame members for maintaining said transverse members in longitudinally spaced relation along said longitudinal members.

6. A canopy support comprising spaced longitudinal frame members, resilient transverse members bowed upwardly and sprung between said frame members, the opposite end portions of said transverse members engaging said frame members respectively, and abutments struck up from said longitudinal members adjacent the ends of said transverse members for maintaining said transverse members in spaced relation along said longitudinal members.

7. In a canopy support a frame having a resilient support for a tarpaulin, a tarpaulin spread over said resilient support, securing means on said tarpaulin, members carried by said frame below said tarpaulin support and having aligned apertures, and a rod passing through said securing means and apertures for maintaining said tarpaulin spread over said tarpaulin support.

8. In a canopy support, a frame carrying a resilient support for a tarpaulion, a tarpaulin spread over said tarpaulin support, said tarpaulin having a slotted hem, members carried by said frame below said longitudinal members registering with the slots of said hem and having aligned apertures, and a rod passing through said hem and apertures for maintaining said tarpaulin spread over said tarpaulin support.

9. In a canopy support, a frame having

uprights carrying a resilient support for a tarpaulin, securing means carried by said tarpaulin, brackets carried by said uprights, and a rod passing through said securing means and brackets for maintaining said tarpaulin spread over said tarpaulin support and frame.

In testimony whereof, I hereunto affix my signature.

NEIL P. LARSEN.