June 8, 1937. J. H. MACKAY 2,083,030

AUTOMOBILE HEADLINING

Filed April 24, 1936

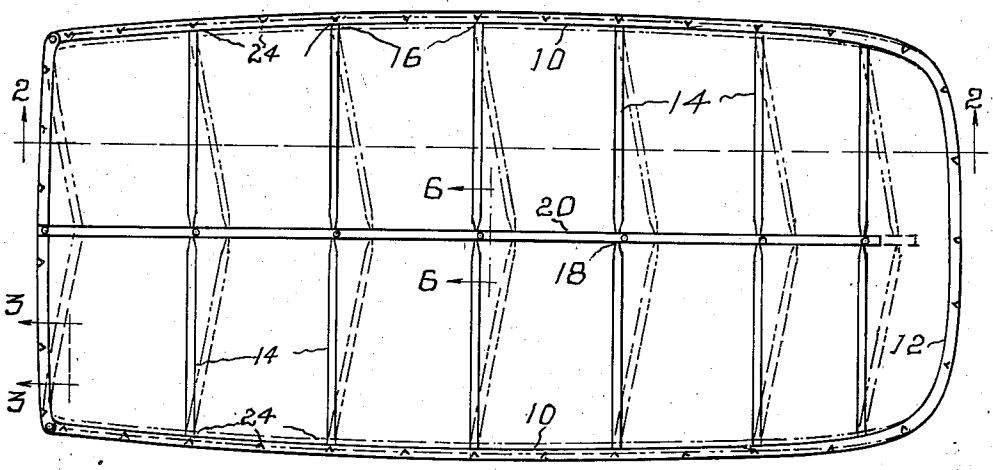


Fig. 1

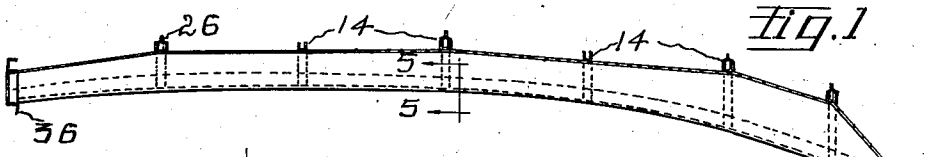


Fig. 2

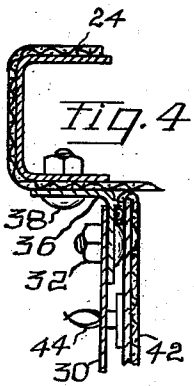


Fig. 4

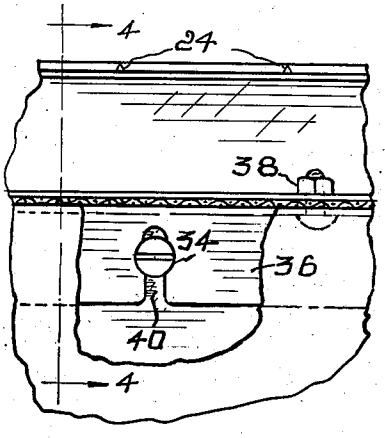


Fig. 3

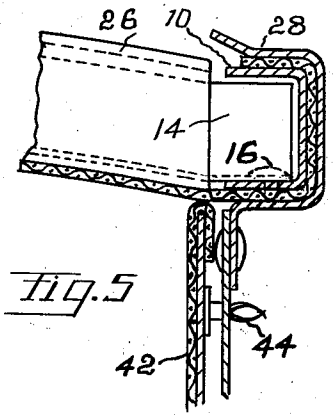


Fig. 5

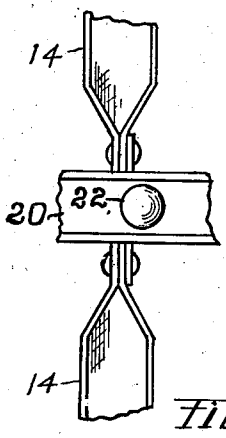


Fig. 7

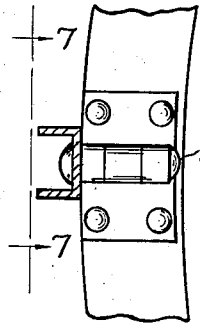


Fig. 6

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AUTOMOBILE HEADLINING

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16 Claims. (Cl. 296—137)

This invention relates to an improved headlining structure for a vehicle body.

An object is to provide a headlining construction which may be quickly and economically fabricated and installed within the interior of the body.

Heretofore it has been the practice to tack or nail the headlining in place within the body securing the lining by listings to the bows which extend across the body underneath the roof. This method of securement involves tedious manual operations which require considerable time and add appreciably to the cost of construction.

An object of my invention is to provide a construction whereby the headlining may be assembled upon a frame at the bench or upon a buck in the shop. The frame with the headlining secured thereto may then be quickly inserted in place within the body. The frame is so constructed that it may be collapsed for insertion within the body and it may be expanded to engage with the supporting framework of the body for attachment thereto to secure the headlining in position.

A meritorious feature of my invention is that the headlining can be assembled upon and secured to its supporting frame at the bench and that thereafter the headlining and frame can be quickly installed as a unit and secured to the supporting framework of the body within a minimum amount of time. The hand work that is required is practically all taken care of at the bench. The installation of the headlining unit within the body can be quickly accomplished. The body framework is so formed as to readily receive the headlining unit and to securely hold the same in place.

The above advantages and meritorious features together with others will more fully appear from the following description, appended claims, and accompanying drawing, wherein:

Figure 1 is a plan of my improved headlining frame,

Fig. 2 is a cross sectional view taken on 2—2 of Fig. 1 showing the headlining secured to the frame,

Fig. 3 is a view taken on line 3—3 of Fig. 1,

Fig. 4 is a cross sectional view taken on line 4—4 of Fig. 3,

Fig. 5 is a cross sectional view taken on line 5—5 of Fig. 2,

Fig. 6 is a view taken on line 6—6 of Fig. 1, and

Fig. 7 is a view taken on line 7—7 of Fig. 6.

My improved headlining frame comprises a generally U-shaped rail wherein the side rail portions are indicated as 10 and the rear end rail portion as 12. These side rails are held in spaced apart relationship by bows 14. The bows are pivoted to the side rails as at 16 and to an intermediate longitudinally extending rail or bar 20 as at 18. The end rail portion is shown as continuous with the side rail portions. In cross section this rail is in the form of a channel as appears in Fig. 5. The bows are likewise in channel form as appears in Figs. 2 and 7. The intermediate bar 20 may likewise be of channel form as shown in Figs. 1 and 7.

This bar carries pivot pins 22 to which the bows 14 are hinged as shown in Fig. 6. The bow channels open upwardly and the side rail channels open inwardly and the pivot connection 16 of the bows with the side rail channels is more particularly shown in Fig. 5. The front end of the frame is provided with a front bow 14 or end rail portions pivoted to the side rails and to the middle bar 20 as hereinabove described.

This frame serves as a supporting frame for the headlining which is assembled thereon prior to the installation of the frame and headlining upon the body. The headlining may be assembled upon this frame by the trimmer at the bench or upon the buck in the shop and the lining may be brought completely around the side rails and stitched together thereover or the side rails may be provided with teeth or lugs 24 punched therefrom as shown in Fig. 3, which lugs extend through the headlining so as to hold the same in place. The lining is secured to the bows at intervals by listings 26 which are in the form of fabric sleeves or loops fastened over the bows and stitched to the headlining so that the lining extends completely across underneath the frame in a manner similar to an inverted umbrella top.

With the headlining thus secured to the frame the frame may be collapsed by moving the middle bar 20 toward the rear sufficiently to move the side rails toward each other so as to permit this structure to be inserted within the interior of an automobile body. The framework of the body, which supports the interior side trim panels, is provided at the top with a ledge or channel element 28 which extends along both sides of the body and along both ends. This is shown in Fig. 5 as to one side. It will be understood that such a recess is arranged at the front and rear though at the front it does not have to be in the form of a channel section as will be hereinafter made plain.

In the collapsed state the headlining unit is elevated so that the side rails are disposed to be

expanded into the recesses 28 and the unit is then expanded by moving the intermediate bar forwardly to straighten out the bows bringing the side rails 10 into the recesses 28 upon opposite sides of the body and along the rear of the body and projecting the forward bow or front end rail portion forwardly of the windshield header 30. The windshield header panel support 30 is provided with studs or bolts 32 extending forwardly thereof and each having a head 34. The front bow 14 carries depending flange elements 36 secured thereto by bolts 38 or the like. These depending flange elements are provided with cut outs or notches 40. These notches are adapted to be moved down over the shanks of bolts 32 rearwardly of the heads thereof so that the front bow is held in the outspread relation. Through the middle bar 20 the other bows are likewise held outspread so that the entire headlining unit is held in place within the body.

The windshield header would be provided with a trim panel 42 covering the flange element 36 and bolts 32. This trim panel is held in place by fasteners 44. The side walls of the body would also be trimmed with conventional panel elements 42 held in place by fasteners 44 in a manner which is well understood.

It will be seen that this particular headlining may be assembled as a unit at the bench on the frame and the frame carrying the lining may then be collapsed so as to permit the installation of the headlining as a unit within the interior of the body. The side rails of the frame are expanded to seat over the supporting ledges or channels of the body framework and the front and rear ends of the frame are somewhat similarly supported and the frame is secured in place in a manner which permits of rapid assembly or dis-assembly if necessary for repair.

What I claim is:

1. A vehicle body having a headlining support provided with a recess extending along each side of the body, a headlining frame provided with side rails spaced apart by hinged bows swingable to permit relative movement of the side rails toward each other or spreading apart thereof, a headlining carried by said frame, said rails adapted to seat within said recesses in the support when the rails are spread apart.

2. A vehicle body having a headlining support provided with a recess extending along each side of the body, a headlining frame provided with side rails spaced apart by bows which are collapsible to permit the side rails to be moved toward each other and expansible to permit the side rails to be spread apart, a headlining carried by said frame, said side rails adapted when spread apart to seat within said recesses within the support.

3. A vehicle body having a headlining support provided with a recess extending along each side of the body, a headlining frame provided with side rails spaced apart by bows which are collapsible to permit the side rails to be moved toward each other and expansible to permit the side rails to be spread apart, a headlining carried by said frame, said side rails adapted when spread apart to seat within said recesses within the support, and means acting on the bows to hold them expanded to maintain the side rails seated within said recesses.

4. A vehicle body having a headlining support provided with a recess extending along each side and one end of the body, a headlining frame provided with side rails spaced apart by an end rail and bows, a headlining secured to said frame, said bows being collapsible to permit movement of the side rails toward each other and expansible to permit the side rails to be spread apart, said side rails adapted when spread apart to seat within the recesses along the sides of the body and with the end rail seated within the end recesses.

5. A vehicle body having a headlining support provided with a recess extending along each side and one end of the body, a headlining frame provided with side rails spaced apart by an end rail and bows, a headlining secured to said frame, said bows being collapsible to permit movement of the side rails toward each other and expansible to permit the side rails to be spread apart, said side rails adapted when spread apart to seat within the recesses along the sides of the body and with the end rail seated within the end recess, and means connecting the frame to the opposite end of the body holding the side rails spread apart and within said recesses.

6. A vehicle body having headlining supports extending along opposite sides thereof, a headlining frame provided with side rails spaced apart by bows, said frame being collapsible to permit the side rails to be moved toward each other and expansible to permit the side rails to be spread apart, a headlining secured to said frame, said side rails adapted when spread apart to engage said supports upon opposite sides of the body to position the headlining in place.

7. A vehicle body having a headlining support extending along each side thereof, a headlining frame having side rails spaced apart by bows comprising sections pivoted together at their inner ends and pivoted to the side rails at their outer ends, said sections being relatively swingable to permit movement of the side rails toward each other or spreading apart thereof, a headlining secured to the side rails of said frame, said side rails adapted when spread apart to be secured to the support extending along each side of the body, and means adapted to hold said side rails in such spread apart position.

8. A vehicle body having a headlining support extending along each side thereof, a headlining frame having side rails spaced apart by a backbone comprising an intermediate rail having oppositely disposed ribs each pivoted thereto at one end and pivoted at the opposite end to a side rail, a headlining secured to said frame, said side rails adapted when spread apart to be secured to the support extending along the sides of the body, and means at one end of the body connected through said intermediate rail with the ribs to hold the side rails expanded against their supports.

9. An automobile body having a headlining supporting ledge extending along both sides and both ends, a collapsible and expansible headlining frame carrying a headlining, said headlining adapted to be stretched across the frame when the frame is expanded, said frame adapted when expanded to seat upon said ledge securing the headlining within the body.

10. An automobile body having a headlining supporting ledge extending along both sides and both ends, a headlining frame comprising said side rail portions and end rail portions and bows extending between the side rail portions, a headlining secured to said side rail portions and said bows, said side rail portions and said ends being seated upon the supporting ledge of the sides and ends of the body.

11. An automobile body having a windshield

header and a headlining supporting ledge extending along both sides and along the front end over the windshield header, a headlining frame carrying a headlining, said frame having a part at the front depending below said headlining, said body having means below the ledge at the front end of the body adapted to engage said part when the frame is seated upon said ledge to hold the same in place.

12. A headlining structure comprising a frame having side rails spaced apart by bows, each bow comprising pivotally connected sections pivoted to the side rails to permit movement of the side rails toward each other or to movement of said rails apart, and a headlining secured to the side rails underneath said bows.

13. A headlining structure comprising a frame having side rails spaced apart by bows which are collapsible to permit movement of the side rails toward each other and expansible to permit spreading apart of the side rails, a headlining secured to said side rails and secured to the underside of the bows, and means connecting said bows to expand them in unison to spread said side rails apart.

14. A headlining structure comprising a frame provided with side rails and end rail portions and bows spacing the side rails apart, said bows comprising hinged sections pivoted at their ends to said side rails and means connecting said bows together to swing them in unison about their hinged connections to collapse or expand the same.

15. A vehicle body provided with headlining supports, a headlining frame comprising spaced apart side rails adapted to be spread apart for engagement with the headlining supports, and a headlining secured to the frame adapted to be stretched thereacross upon the spreading apart of said side rails.

16. A headlining structure for a vehicle body comprising, in combination, a pair of spaced apart side members extending substantially parallel to one another, a member extending longitudinally between said side members, a plurality of transversely extending members arranged between said side members and said longitudinally extending member on opposite sides of the latter, means pivotally connecting the opposite ends of said transversely extending members to said longitudinal member and said side members respectively and arranged upon swinging movement thereof to expand and contract the side members relative to the longitudinal member, and headlining material secured to said side members.

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