Dec. 29, 1953 A. KAVALAR 2,664,309

CONVERTIBLE TOP BOOT CONSTRUCTION

Filed Oct. 24, 1952

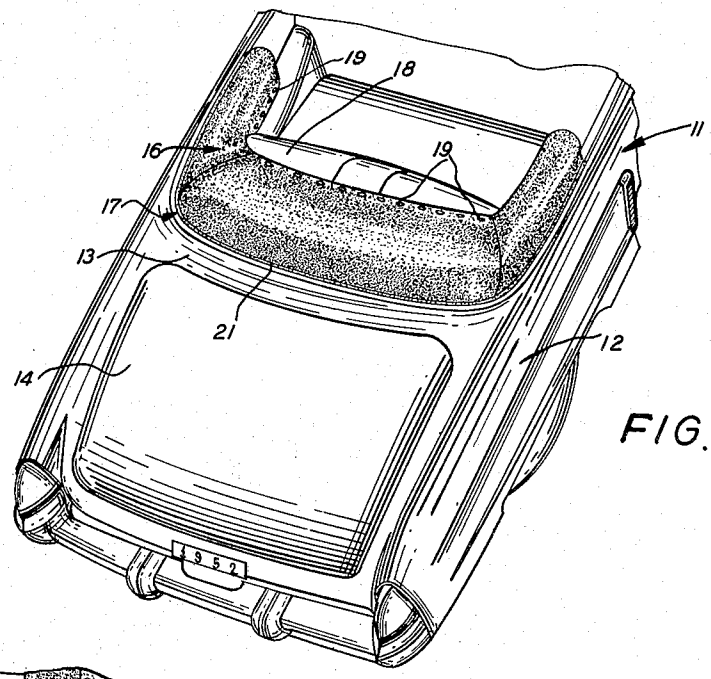


FIG. 1

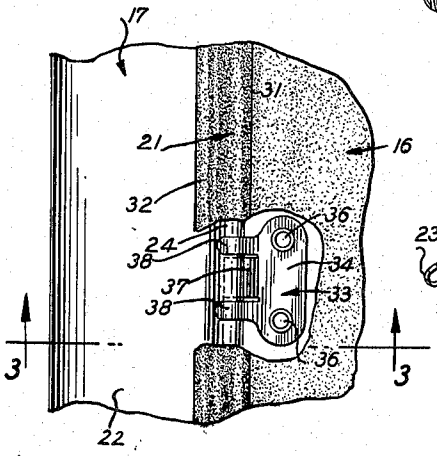


FIG. 2

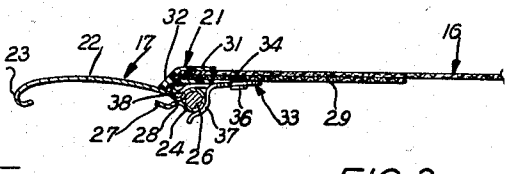


FIG. 3

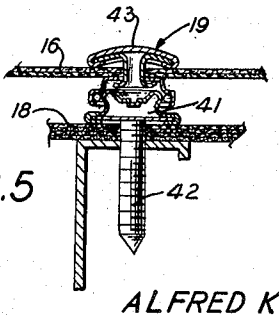


FIG. 5

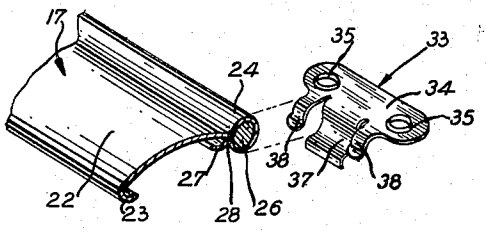


FIG. 4

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Patented Dec. 29, 1953

2,664,309

UNITED STATES PATENT OFFICE

2,664,309

CONVERTIBLE TOP BOOT CONSTRUCTION

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Application October 24, 1952, Serial No. 316,703

4 Claims. (Cl. 296—136)

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This invention relates generally to a convertible top boot construction and particularly to means for detachably securing the boot to the vehicle body.

An object of the present invention is to provide a boot construction for a motor vehicle of the convertible type in which the outboard edges of the boot are provided with a series of fastening elements adapted to be snapped over the adjacent rolled edge of the back belt molding of the vehicle body in such manner as to be readily detachable yet hold the boot securely in place. A further object is to completely conceal the fastening elements from view when the boot is attached to the body, and also to provide a resilient binding at the edge of the boot overlying and engaging the upper portion of the molding so as to provide a seal therebetween.

Still another object of the invention is to provide a boot construction for a convertible body in which the inboard and outboard edges of the boot are secured to the body by different types of fastening means, with the fastening means at the outboard edge of the boot being more readily detached by means of an upward pull upon the boot so that the operation of raising the top of the convertible automatically, by reason of the engagement between the top linkage and the interior of the boot, disconnects the fastenings at the outboard edge of the boot from the adjacent molding permitting the boot to fall into its compartment, and thus eliminating the necessity for manually detaching the boot when it is desired to raise the top.

Other objects and advantages will be made more apparent as this description proceeds, particularly when considered in connection with the accompanying drawings, wherein:

Figure 1 is a fragmentary perspective view of the rearward portion of a motor vehicle of the convertible type, showing the boot for the top in its operative position attached to the body.

Figure 2 is a plan view of a portion of the construction shown in Figure 1, partly broken away, showing the fastening means between the outboard edge of the boot and the adjacent belt molding.

Figure 3 is a cross sectional view taken on the plane indicated by the line 3—3 of Figure 2.

Figure 4 is a fragmentary exploded perspective view, partly in section, showing a portion of the belt molding of the vehicle body and a fastening element.

Figure 5 is an enlarged cross sectional view of a convention fastening element used between the boot and the top of the rear seat.

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Referring now to the drawings, and particularly to Figure 1, the reference character 11 indicates a motor vehicle body of the convertible type having side panels 12 and a rear deck panel 13 provided with a luggage compartment lid 14. The vehicle is shown with the top down and with the boot 16 in place. The outboard edge of the boot is secured to the back belt molding carried by the vehicle body 17 and its inboard edge is secured to the upper portion of the rear seat 18. Conventional lift of the dot snap fasteners 19 are utilized to secure the inboard edge of the boot 16 to the adjacent seat.

The boot 16 is of conventional construction, being formed of several pieces of vinyl material stitched together to provide a boot of the desired contour to cover the well in the body into which the top is lowered.

The outboard edge of the boot 16 is provided with a flexible binding 21 preferably formed of rubber or similar material and arranged to overlap the adjacent edge of the belt molding 17. The belt molding is of course conventionally secured to the side panels 12 and rear deck panel 13 of the vehicle body by means of concealed fasteners (not shown).

Reference is now made to Figures 2 and 5 for a more detailed description of the fastening means between the boot and the molding. The belt molding 17 has an arched body portion 22, an outboard rolled edge 23, and a cylindrical beaded portion 24 at its inboard edge. The cylindrical portion 24 encloses a reinforcing wire 26 to provide greater rigidity to the edge of the molding. The cylindrical beaded portion 24 of the molding continues into an outwardly extending marginal flange 27 forming a narrow neck portion 28 with the adjacent part of the body portion 22 of the molding.

As best seen in Figure 3, the outboard edges of the boot 16 are reinforced by a strip of heavy fabric 29, and the adjacent marginal edges of the boot material and the reinforcing material are embraced by the binding 21. The binding has a U-shaped body portion 31 the opposite bifurcations of which are stitched to the boot material and the reinforcing material. The binding is also formed with an integral outwardly extending flange 32 arranged to yieldably engage the inboard edge of the body portion 22 of the molding 17 to provide a weather seal and form a neat appearance therewith.

A series of fastening elements or clips 33 are provided around the outboard edges of the boot to yieldably attach the boot to the adjacent belt molding 17. Each clip has a flat body portion

34 provided with a pair of apertures 35 through which extend rivets 36 securing the clip to the heavy reinforcing material 29, which in turn is of course secured to the edge of the boot 16. The upper heads of the rivets are therefore concealed by the boot material.

Extending outwardly from the body portion 34 of each clip 33 are spring fingers 37 and 38. The intermediate spring finger 37 is relatively wide and is bent downwardly to embrace the lower portion of the cylindrical beaded edge 24 of the molding. The outer spring fingers 38 are narrower and are bent upwardly to embrace the upper edge of the cylindrical beaded portion of the molding. The spring fingers 37 and 38 are preformed and shaped so as to be capable of being snapped over the cylindrical beaded portion of the molding upon the application of a moderate amount of manual pressure, and to be retained thereon against inadvertent detachment, yet capable of being readily detached by pulling the boot away from the molding.

It will be seen that the boot and the marginal binding 21 conceal the fastening elements 33 from view when the boot is in operative position with the clips in engagement with the adjacent edge of the molding. A trim exterior appearance is therefore presented.

The fasteners 19 between the inboard edge of the boot and the top of the rear seat 18 are conventional button type fasteners each having a button 41 provided with a threaded shank 42 securing it to the seat 18. A retainer 43 carried by the boot has a snap engagement with the button 41 and is detached by a pull axially of the button and retainer.

In use, the boot may be entirely removed from the vehicle by detaching the fasteners 19 as well as the clips 33, or, as is often done, the inboard edge of the boot may be left fastened to the upper edge of the seat by means of the snap fasteners 19. In this case it is only necessary to detach the clips 33 at the outboard edge of the boot from the adjacent belt molding. This can be done manually if desired. The type of fastener and molding and the engagement therebetween, however, is such that the operation of raising the top automatically detaches the clips 33 from the molding. If the conventional power driven top mechanism is actuated while the boot is attached, the top mechanism linkage and roof rails rise beneath the boot, engaging the underside thereof and exerting an upward and forward pressure thereon. This pressure automatically pulls the clips 33 from their snap engagement with the cylindrical beaded edge 24 of the belt molding, eliminating the need for manually detaching the fasteners. Continued upward movement of the top causes the boot, still attached at its forward or inboard edge to the seat by means of the snap fasteners 19, to fall into the well provided for the top. Since the conventional fasteners 19 provided at the inboard edge of the boot require an axial pull to detach them, they are not detached as readily as the clips 33 at the outboard edge of the boot by reason of the raising of the top, and remain attached.

It will be understood that the invention is not to be limited to the exact construction shown and described, but that various changes and modifications may be made without departing from the spirit and scope of the invention, as defined in the appended claims.

What is claimed is:

1. In a motor vehicle having a convertible type body provided with a well for receiving the top, a belt molding secured to the body adjacent the edges of the well, said molding having a continuous cylindrical beaded edge at its inboard side, a fabric boot for covering the well when the top is down and having a marginal edge adapted to overlap the cylindrical beaded edge of the molding, a plurality of fastening elements secured to the underside of said boot and each having a plurality of spring fingers adapted to resiliently engage opposite sides of the cylindrical beaded edge of the molding, and a binding secured to the outboard edge of the boot and having a portion thereof extending partially over the belt molding and concealing the fastening elements from normal view.

2. The structure defined by claim 1 which is further characterized in that the cylindrical beaded portion of the molding is provided with a solid wire core reinforcement, each fastening element having a central spring finger provided with an arcuate portion for engaging one side of the cylindrical beaded edge of the molding and a pair of spring fingers on opposite sides of the central finger provided with arcuate portions for engaging the opposite side of the cylindrical beaded portion of the molding, said spring fingers having outturned end flanges for guiding the fastening elements over the cylindrical beaded portion of the molding, the fingers being spaced apart in their free position a distance less than the outside diameter of the cylindrical beaded portion.

3. The structure defined by claim 1 which is further characterized in that a heavy fabric reinforcing strip is secured to the outboard edge of the boot on the underside thereof, and said binding having a bifurcated portion embracing the marginal edges of the adjacent boot and reinforcing material and a downwardly extending integral flange adapted to engage the body portion of the belt molding, and rivets securing said fastening elements to the reinforcing strip with the upper heads of the rivets being located between the boot material and the reinforcing strip.

4. In a convertible type motor vehicle having a body provided with side panels, a rear deck panel, and a rear seat so located as to form therebetween a well for receiving the vehicle top when lowered, a belt molding secured to the side and deck panels adjacent the edge of the well, a boot adapted to cover the well and having its outboard edges overlapping said molding and its inboard edges overlapping said seat, fastening elements securing the inboard edge of said boot to said seat, said belt molding having a cylindrical rolled edge adjacent the well, and a plurality of fastening elements secured to the boot adjacent its outboard edge and provided with spring fingers for detachably securing the clips to the cylindrical rolled edge of the belt molding, said second mentioned fastening elements being more readily detached than said first mentioned fastening elements by an upward pull upon the boot.

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