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2,833,555

VEHICLE SAFETY BELT

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Fig. 1.

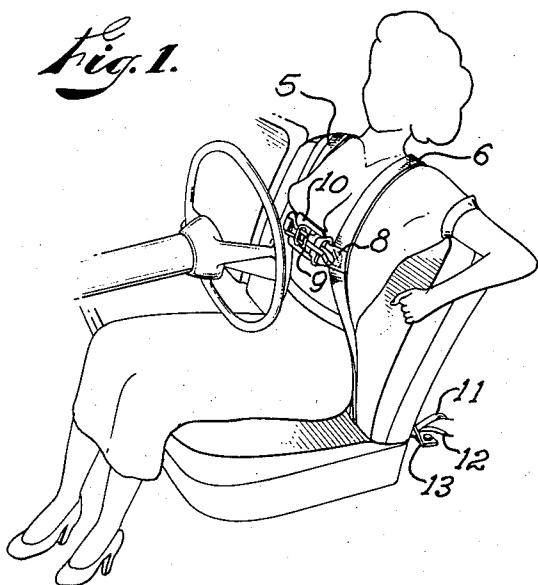


Fig. 4.

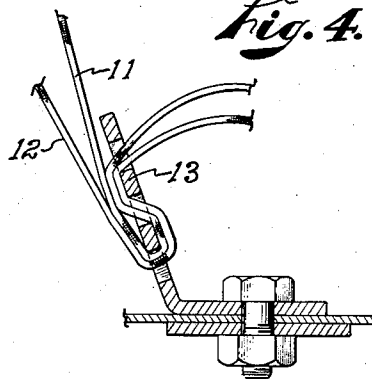


Fig. 2.

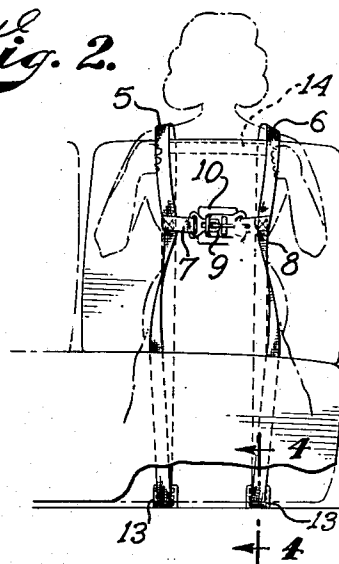
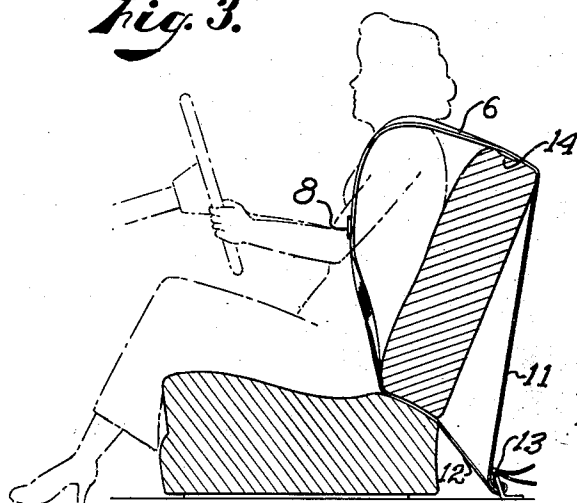


Fig. 3.



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AGENT

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VEHICLE SAFETY BELT

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1 Claim. (Cl. 280—150)

This invention relates to safety devices for vehicles, either road-borne or air-borne, and relates more particularly to a novel form of safety belt.

It has long been the practice in aeroplanes to provide belts for the safety of occupants, and more recently such belts have come into use in automobiles. However, the public, as a whole, appears skeptical as to their inherent safety in automobiles. Too many automobiles have movable seats, the backs of which, or even the seat portions, may be tilted for the convenience of persons entering or leaving. It is quite useless to strap a person to an article which moves or which may be torn bodily from its foundation.

The use of lap belts places the strain of sudden impact upon the weakest portion of the human anatomy. Either the belt lies across the abdomen or it lies across the thighs. In one case, the belt may serve only effectually to cut a person in two; in the other, the body may pivot above the belt and be thrown sideways, possibly through a door or window.

It is an object of this invention to provide a safety belt which is located upon the ribs and shoulders of a user, and therefore takes full advantage of the skeletal strength and resistance of the user.

Another object of this invention is to provide side support to the upper part of the body of a user, to prevent the aforesaid pivoting of the upper body.

Still another object of the invention is to provide simple and effective safety belt means which are moored to the floor of the vehicle, rather than to a seat or raised portion of the vehicle, and which therefore fasten the user in place as effectually as is possible.

A further important object of the invention, of particular value in two-door automobiles, in which the seat-backs usually tilt forward, is to anchor the user to the seat back, and to anchor both together to the floor in a downwardly and rearwardly direction.

Other objects and advantages inherent in my invention will become apparent as the following description proceeds.

In the accompanying drawing, illustrative of a presently preferred embodiment of my invention,

Fig. 1 is a perspective view in which my improved safety belt is shown strapped in place upon a person;

Fig. 2 is a frontal elevational view;

Fig. 3 is a side elevational view; and

Fig. 4 is an enlarged sectional view on the line 4—4 of Fig. 2, showing the connection of the belt to the floor fastening.

Having reference now to the details of the drawing, my improved safety belt comprises two shoulder straps 5 and 6, to each of which respectively are connected short breast straps 7 and 8 which are coupled by a buckle 9. The buckle 9 may be of any suitable construction but preferably has a back-pad 10 of large area, as the function of the buckled strap 7—8 is to give support over a maximum surface of the wearer's body, and not to cut the wearer in two. It will be noted that the breast straps

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7 and 8 may be stitched or riveted to the shoulder straps 5 and 6.

The shoulder straps 5 and 6 are alike in their method of securing to the automobile body. One end 11 of each strap leads over the shoulder of the wearer and over the back of the automobile seat and thence downward to a fastener 13 which may suitably be a friction clasp secured to the floor of the vehicle. The other end 12 leads downwardly beside the wearer's body and rearwardly between the upholstery of the seat and the seat back, and thence downwardly and may be secured to the same fastener 13. There are, of course, two fasteners 13, respective to the straps 5 and 6, each fastener holding, if desired, both ends of the respective strap.

The adjustment of the safety belt to fit a particular wearer is made at the fastener 13. By taking up on either the end 11 or the end 12 and letting out on the other end, the elevation of the breast strap 7—8 may be raised or lowered as desired; and for persons of different shoulder heights or stoutness similar obvious adjustments may be made. This era of "personal cars" finds many automobiles driven almost exclusively by one person, and once the safety belt in the driver's seat has been adjusted as the driver likes it, it may be kept that way. The belts for passengers may be adjusted by the driver, or by trial and error by the passengers themselves.

Because the fasteners 13 are usually firmly fixed in position and not subject to adjustment in their lateral spacing and because individual persons vary greatly in the width of their shoulders, it is desirable to provide means for holding the strap-ends 11 to a limited relative spacing adjacent and rearwardly of the shoulders of a wearer. For this purpose a cross-strap 14 is provided, which connects the strap-ends 11 approximately at the point in which they pass over the back of the vehicle seat. At this point, the cross-strap 14 does not come into contact with the body of the wearer, and so does not chafe or bind, but merely prevents the strap-ends 11 from spreading so far apart that the shoulders of the wearer are inadvertently released. The wearer is able to move his or her upper body with the minimum of discomfort and restraint, and with the maximum of safety, factors which become important if the wearer is a wriggling child. Ordinarily, the cross-strap 14 will not require adjustment in length, but means for adjustment may be provided if desired.

When the person who is going to wear the safety belt has adjusted it but not yet put it on, the straps 5 and 6 will lie against the seat-back with their respective breast straps 7 and 8, and with the buckle 9 open. The wearer simply slips his arms under the straps 5 and 6, joins the straps 7 and 8, and clasps the buckle 9. The breast strap will be disposed against skeletal strength and not across the soft abdomen. The strap-ends 12, passing under the seat-back and thence to the floor fastener 13, prevent side-sway. The strap-ends 11, passing over the wearer's shoulders and over the seat-back and thence to the fastener 13, hold the wearer to the seat-back and hold the seat-back to the floor, being prevented from spreading by the cross-strap 14. The shoulders of the wearer being thus held in place, the wearer's head and upper body are not endangered by flying forward as is the case with an abdominal belt.

It is to be understood that this description and the accompanying drawing are not to be construed as limitations upon the scope of the invention, the following claim setting forth that scope.

I claim:

A safety belt for a vehicle comprising a pair of shoulder straps having their one ends adapted to extend over the

shoulders of a person and over the back of a seat and having their other ends adapted to extend downwardly and rearwardly at the sides of a person's body and rearwardly under the back of said seat; cross-straps and a connecting buckle therefor secured to said shoulder straps at approximately chest-level of a person; means for holding said one ends of said shoulder straps at a predetermined maximum distance apart at approximately the point at which they extend over the back of said vehicle seat; and fastening means for each of said shoulder straps secured to the floor of said vehicle below the back of said seat and rearwardly of said seat, said means holding both ends of the respective strap adjustably and non-yieldingly.

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