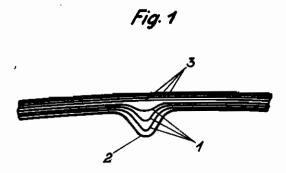
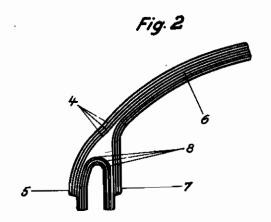
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LAMINATED BODY

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LAMINATED BODY

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This invention relates to a laminated body, and more particularly to the construction of a vehicle body formed of laminated sheets of artificial material.

An object of this invention is the provision of 5 a novel sheet of laminated artificial material.

A further object of this invention is to provide an improved ribbed or edged sheet of laminated artificial material.

sion of an improved ribbed or edged vehicle body part formed of laminated artificial material.

Still another object of this invention is to provide a novel roof structure for a vehicle body formed of laminated artificial material.

An additional object of this invention is to provide a roof structure for a vehicle body formed of laminated artificial material with integral strengthening ribs or mouldings.

A more specific object of this invention is the 20 provision of a ribbed or edged roof structure for vehicle bodies of laminated artificial material, wherein the said ribs or edges are made as an integral continuation of at least a part of the laminations of the main roof structure.

Other objects will become apparent from the following description taken in connection with the attached drawing showing two illustrative embodiments of the invention, and wherein:

Fig. 1 is a cross-sectional view through the 30 central part of a vehicle roof, showing one embodiment of my invention; and

Fig. 2 is a transverse cross-section through the edged portion of the roof and the side wall of the vehicle body.

In the first embodiment of this invention illustrated in Fig. 1, which shows a longitudinal central cross-sectional view of a portion of a vehicle roof formed of laminated artificial material, there is illustrated the manner in which a part 1 40 ing beams for the sides of the vehicle. of the longitudinally extending lamination is folded to form a transverse strengthening rib 2. while the remaining laminations 3 extend continuously without deformation to form the remainder of the roof structure. It will be noted 45 that aside from the position of the rib 2, the laminated roof structure is not altered, and that those parts of the laminations I which are folded to form the rib are merely integral folded or curved portions of the remainder of the lami- 50 nated roof structure.

The laminated sheet forming the roof structure may be made in any manner known to the art, such, for example, as from super-imposed layers of paper of fabric with layers of a phenol 55 resin, which has been heated and pressed together to form a laminated integral mass. Instead of a phenol resin, cellulose, thiourea and similar compounds could readily be used.

The formation of a transverse or strengthening rib for a vehicle roof in the manner described above, adds materially to the rigidity of the roof, as contrasted with other types of ribbing which have therefore been used. It has been proposed Another object of this invention is the provi- 10 to form a desired strengthening rib by adding supplemental transverse strips of laminations to the laminated body before heat and pressure have been applied, whereupon the artificial material acts to bind the added lamination through 15 the rest of the sheet. It has also been proposed to add ribs consisting solely of the artificial material without laminations. In neither of these cases do the ribs contribute toward really increasing the rigidity of the structure, while at the same time they are easily broken, as for example, in a collision. Such breaking results in producing a large number of splinters, making this type of construction extremely dangerous. Since, in the present case, the ribs are merely a 25 continuation of the laminations of the main part of the roof they not only produce a desired strengthening action, but will not burst and splinter in case of collision.

> The same principle is applied in the second example illustrated in Fig. 2. In this case, at the side edges of the roof, the laminated sheet is split into two parts forming integral continuous edgings 5 and 7 which may surround the side wall of the vehicle, here shown as formed of a 35 further folded laminated sheet of material 8. A construction of this character not only permits a rigid and smooth interconnection between the roof and the side wall, but in addition, the two ribs 5 and 7 act as longitudinal strengthen-

Obviously, the principles of this invention are capable of many applications. For example, the ribs and mouldings can be formed of laminated sheets of material which have been folded several times so that broad ribs and mouldings of still greater strength will result. While the invention is particularly adaptable in the production of vehicle body parts, it may find use in the formation of other parts, particularly involving those of difficult shape. In all cases, however, this will result in a part having extremely high rigidity and strength in all directions, and one which is not easily splintered upon impacts.

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