

ALIEN PROPERTY CUSTODIAN

VEHICLE BODY

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No Drawing. Application filed May 6, 1941

The present invention relates to a process of fabricating reinforced vehicle bodies from artificial resins and fibrous materials, such as wood.

A method of making vehicle bodies from laminated artificial resin materials has already been proposed. According to this method, the vehicle body is composed of finished wall parts by uniting the marginal portions after the parts have been pressed out of laminated artificial resin materials by using pressure and heat. Paper webs are used as filling material or artificial resin carriers which during preparation are impregnated with an artificial resin material and after placing several layers over one another they are pressed in a die to form an artificial material of great strength. A part of the vehicle body made in this manner is characterized by its high elasticity which is comparable with hardened spring steel. However, the coefficient of elongation or expansion of such material is limited so that a breakage can occur in the case of very violent shocks.

An artificial material of a similar type is known which contains thin layers of debarked wood in place of the above described paper webs. These wood layers are also treated before the pressing operation with an artificial resin such as on the phenol or cresol basis and after the pressing operation, they form an artificial mass which shows the veining of the wood in a glossy surface.

According to the present invention, there are pressed out of such artificial resin material, which contains the thin wood layers as filling material, the wall parts in one piece for a vehicle body with their marginal portions reinforced for the union and for increasing the strength of the panels. A particularly high resistance or strength of the wall panels can be attained if woods are used which have a high fiber strength as is the case for example with ash, pine and similar long fiber woods. Oak and beech have a very strong fiber bond and are also suitable for making the wall parts.

In order to obtain elastic properties of the wall panels which are satisfactory in every respect, it is advantageous to arrange the wood layers, impregnated with artificial resin, over one another with the fibers of one wood layer arranged crosswise with respect to the direction of the wood fiber of an adjacent layer. The uniting edges are formed by bending the wood layers during the insertion thereof in the pressing dies. Further layers of wood veneers cut into strips are placed thereon for forming the necessary reinforcements and ribs. Additional artificial resin mass, which contains irregularly distributed filling materials, may also be added especially for rounding out the corners and edges and united with the other material during the same pressing operation.

The artificial materials for the construction of bodies for automobiles according to the present invention, which are produced by using wood veneers have the same strength qualities as artificial resin materials with paper insertions. The bending strength attains values exceeding 2,000 kilograms per square centimeter while with respect to the notch shock strength, values exceeding 80 cm.kg/cm² are attained.

By using the material herein described the body of artificial material can be made very resistant to all hard stresses and very light for improving the operating characteristics of the vehicle. Moreover, if suitable kinds of wood are used, a very fine surface having a natural appearance can be produced so that a special lacquering will be superfluous. This laminated wood material is also particularly adapted for the inner equipment.

The use of the wood veneer as resin carrier has the further advantage of immediate use and almost complete utilization of the wood from which the cellulose fiber for obtaining paper layers could only be produced with difficulty and with considerable waste.

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