

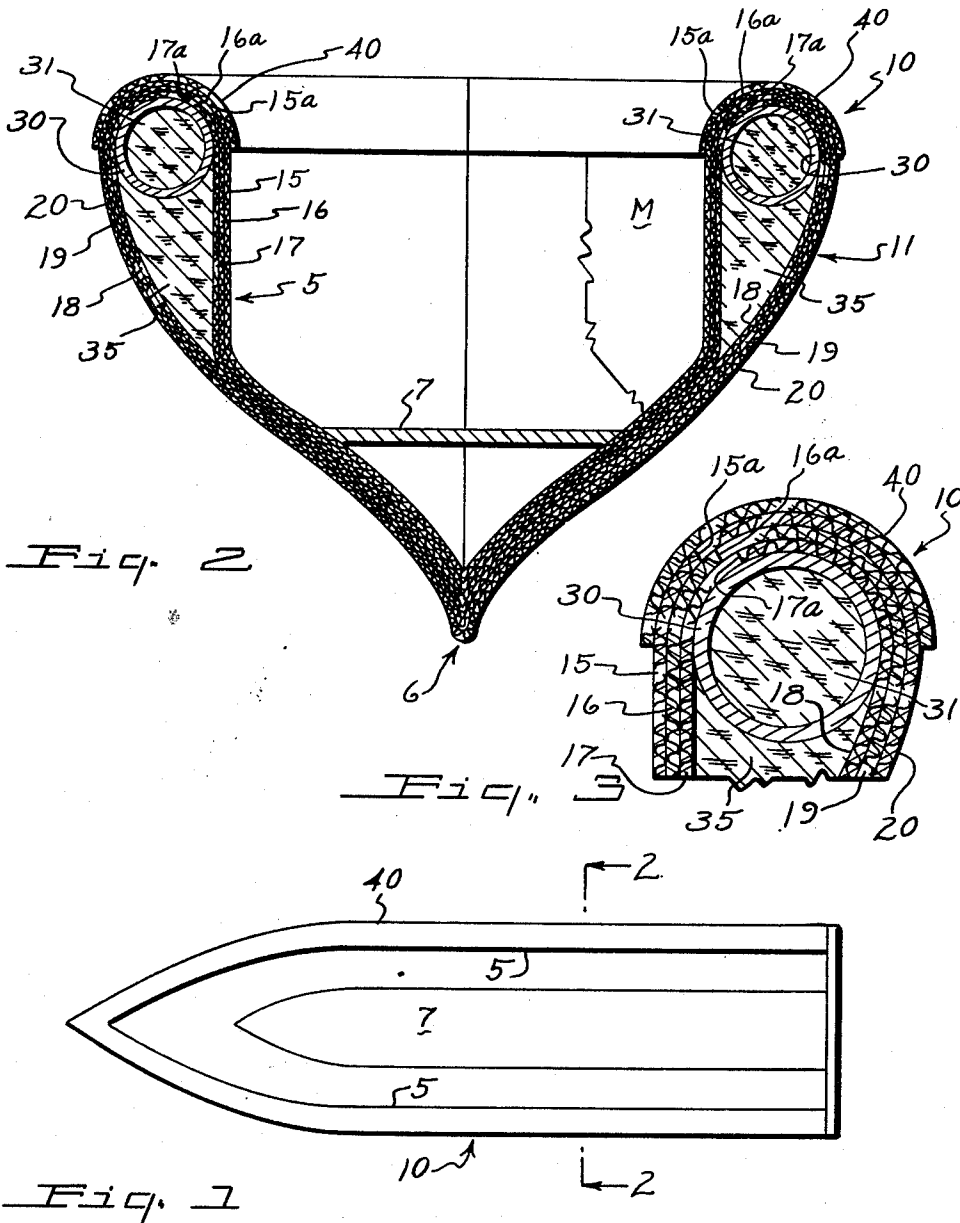
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BOAT CONSTRUCTION

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BOAT CONSTRUCTION

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My invention relates to boat construction and has for one of its objects the provision of a boat incorporating a novel gunnel construction.

Another object is the provision of a boat embodying novel means providing added buoyancy at and adjacent the gunnels to prevent tipping.

It is also an object of my invention to provide a boat having unusual resiliency in its gunnel portions to render it capable of withstanding blows and abuse which would seriously damage a boat otherwise constructed.

My invention involves other features of novelty and utility, the nature of which will become obvious from the following detailed explanation of a presently preferred embodiment, for the purposes of which explanation I shall refer to the accompanying drawing, in which:

Fig. 1 is a top plan view;

Fig. 2 is a cross section on line 2—2 of Fig. 1, but showing a fragmentary portion of the mold upon which the boat is formed; and

Fig. 3 is an enlarged fragmentary section of a gunnel portion.

In the drawing I show my boat as comprising sides 5 which converge at the bottom 6, a false bottom 7 being provided. The gunnel portions 10 are provided with sponsons 11 as will be described.

I prefer to form the sides of woven fabric sheets impregnated with a substantially waterproof plastic solution such as cellulose in a volatile solvent solution, or of any of the well-known synthetic resin plastic solutions. I prefer to use a thermoplastic material because of its resiliency and lack of brittleness.

Typically, I may use burlap sheets 15—20, each of which is impregnated, before being laid, with a volatile solution containing about 13% by weight of ethyl cellulose and suitable solvents and diluents such as ethyl acetate, isopropyl alcohol, toluene and benzene, each of the sheets being dipped in the solution before its application so that it becomes thoroughly impregnated.

In forming the boat I first place the impregnated sheet 15 on the mold, fragmentarily shown at M, and after allowing the sheet to preliminarily cure until most of its solvents are released, I additionally brush coat its outer surface with some of the solution and superimpose thereon the next successive impregnated sheet 16, which is likewise allowed to cure and is brush coated, after which the third impregnated sheet 17 is applied and allowed to cure.

The top edges of the sheets 15—17 terminate in staggered relation as shown at 15a, 16a, 17a, said edge portions being curved outwardly and formed

upon a tube 30. The tube is preferably of a waterproof plastic such as a vinylidene chloride resin known under the trade mark "Saran." The tube may be initially retained in place by any suitable anchorage or support and is filled with a buoyant material 31. I prefer to use as the material 31 a waterproof plastic such as styrene foam, a product made by Dow Chemical Company.

I then apply the next impregnated sheet 18 after brush coating the lower portion of the last applied sheet 17 with the cellulosic solution. The sheet 18 adheres to the last applied sheet 17 at its lower portion but diverges therefrom adjacent its top edge, being there curved about the tube 30 to terminate in contact with the upper edge of sheet 17, being adhered to the tube with a suitable adhesive such as a coating of the cellulosic solution. The somewhat triangular space between the upper portions of sheets 17 and 18 is filled by a like waterproof buoyant material 35 preformed to fit the space. Where styrene foam is used as the filling 35, its outer surface is first coated with a hydrophylic colloid such as thlokol or urea or phenolic resin to render it impervious to the solvents contained in the cellulosic solution with which the sheet 18 is impregnated.

Next, the impregnated sheet 19 is applied and allowed to cure as before described, after which it is brush coated with the cellulose solution and then the outer impregnated sheet 20 is applied and cured, after which a gunnel cover strip 40 is applied. Preferably, strip 40 is of a woven fabric such as cotton batting, having a relatively smoother finish than burlap, and is impregnated and bonded to the sheets 15 and 20 with the same cellulosic solution.

The top ends of the sheets 19 and 20 preferably overlap the adjacent ends of sheets 16 and 17 to provide an effective water-tight seal.

While I have described only six laminae, 15—20, it will be understood, of course, that any desired number of laminae may be employed to build up the boat to any desired section or thickness; and likewise the gunnel cover strip may be composed of a plurality of laminae. Also, the tube 30 may be composed of laminae of the same material as that of which the laminae 15—20 are composed, if desired.

A boat constructed in accordance with my invention possesses relatively great buoyancy above the water line so that it may not be easily tipped; the novel sponsons provide semi-circular gunnels of considerable diameter, so that the gunnels will not present any sharp edges; and since the spon-

sons are highly resilient, they will yield to blows instead of being punctured thereby.

I claim:

1. In a boat comprised of laminations forming the sides thereof, a buoyant tube interposed between and housed by the laminations at the gunnel portions thereof, said tubes holding the laminations apart at and adjacent the gunnel portions to provide a space of substantially triangular cross section therebelow, and a filling of buoyant material in said space.

2. A boat comprised of superimposed sheets impregnated and bonded together with an adhesive plastic, said sheets forming the sides of the boat, and a buoyant tube interposed between the sheets at each of the gunnel portions and spacing the sheets apart to provide a sponson associated with each gunnel portion.

3. A boat comprised of superimposed sheets impregnated and bonded together with an adhesive plastic, said sheets forming the sides of the boat, and a buoyant tube interposed between the sheets at each of the gunnel portions and spacing the sheets apart to provide a sponson associated with each gunnel portion, and a filling of buoyant material between the spaced portions of the sheets.

4. A boat comprised of superimposed sheets impregnated and bonded together with an adhesive plastic, said sheets forming the sides of the boat, and a tube interposed between the sheets at each of the gunnel portions and spacing the sheets apart to provide a sponson associated with each gunnel portion, and a filling of buoyant material in the tube and between the spaced portions of the sheets.

5. A boat comprised of superimposed sheets impregnated and bonded together with a resilient

adhesive plastic, said sheets forming the sides of the boat, a tube of resilient material interposed between the sheets along each of the gunnel portions thereof, the top edge portions of the sheets being curved about said tubes.

6. A boat comprised of superimposed sheets of fabric impregnated and bonded together with a resilient thermoplastic adhesive, said sheets forming the sides of the boat and providing a gunnel portion along each top edge, and a tube composed of resilient material interposed between the sheets along each of the gunnel portions, the top edge portions of the sheets being curved about and adhered to the tubes whereby the tubes provide resilient foundations for the respective gunnel portions of the sheets.

7. A boat comprised of superimposed sheets impregnated and bonded together with a resilient adhesive plastic, said sheets forming the sides of the boat, a tube of resilient material interposed between the sheets along each of the gunnel portions thereof, the top edge portions of the sheets being curved about said tubes, and a plastic impregnated fabric sheet bonded to each gunnel portion in covering relation to the top edges of the sheets.

8. A boat comprised of superimposed sheets impregnated and bonded together with an adhesive plastic, said sheets forming the sides of the boat, and a buoyant tube interposed between the sheets at each of the gunnel portions and spacing the sheets apart to provide a sponson associated with each gunnel portion, said sheets forming the respective sides being curved in overlapping relationship at their top edges about said respective tubes.

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