Jan. 10, 1950 R. W. HARDMAN ET AL 2,493,816

BOAT STRUCTURE

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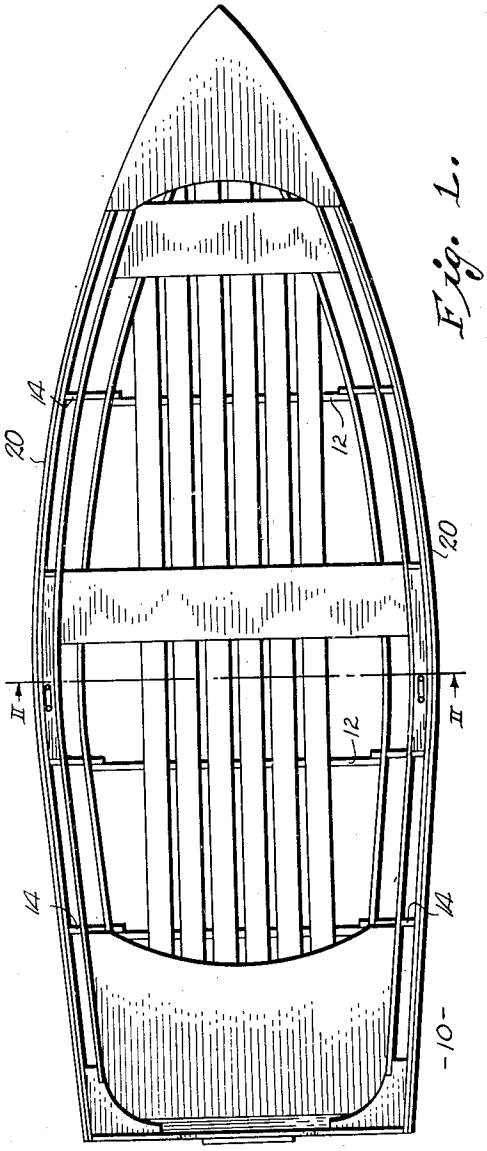


Fig. 1.

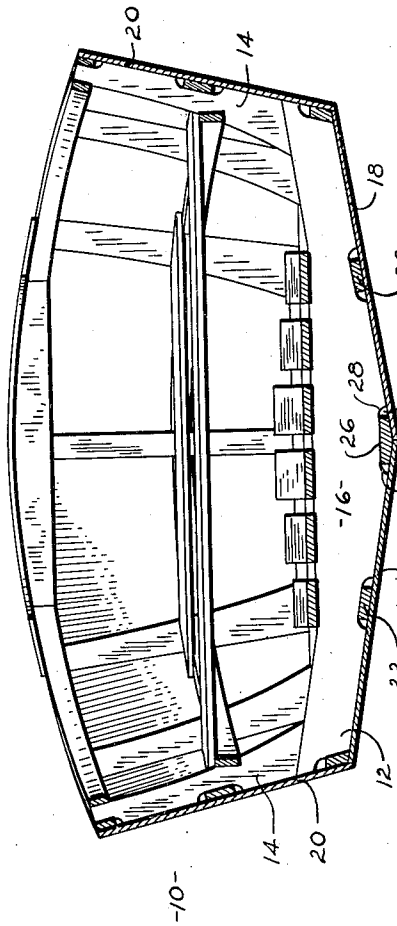


Fig. 2.

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BOAT STRUCTURE

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1 Claim. (Cl. 9—6)

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This invention relates to boats and particularly the structure thereof as regards the frame and its component parts and the manner of joining the same.

The primary aim of this invention is to provide a boat structure wherein the ribs and battens of the frame are joined by providing notches in the ribs having lengths greater than the widths of the entering battens to facilitate production of the boat, avoid splitting of the ribs and battens during assembly or after the boat has been put into use and to allow drainage of the boat floor.

Further aims of this invention are to provide a boat structure wherein the battens of the frame work of the boat are joined with the ribs thereof through the medium of specially contoured notches, a part of the length thereof being flat and substantially equal to the width of the battens received by the respective notches while the remaining portions of the lengths of the notches are arched to eliminate sharp corners and to provide strength at zones of interconnection between the ribs and battens of the frame of the boat and the skin thereof.

Other objects of the invention will appear during the course of the following specification referring to the accompanying drawing, wherein:

Fig. 1 is a top plan view of a boat made in accordance with the present invention; and

Fig. 2 is a vertical cross sectional view taken on line II—II of Fig. 1.

One of the most troublesome problems presented to the boat manufacturer is that of accurately interfitting the parts of the frame thereof without splitting the units and without consuming an undesirable amount of time. To facilitate the assembly of boats and to insure the desired amount of strength, the battens and ribs of the boat frame are joined through the medium of specially formed notches about to be described.

The boat body broadly designated by the numeral 10 comprises a frame including a series of transverse ribs 12 having uprights 14 at the sides of the boat and a base member 16 overlying the skin 18 at the bottom of the boat.

Skin 20 along each side of the boat body 10 cooperates with skin 18 in creating a completely water-tight shell held in place and to form by the several ribs 12. Interconnecting battens 22 extend longitudinally of boat body 10 and intersect ribs 12. Battens 22 are received in notches 24 provided in elements 14 and 16 of ribs 12 and it is the form of these notches that permits the

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accomplishment of the desired objects of the invention.

The widths of battens 22 vary and, therefore, the form of notches 24 must be altered to suit the width of the batten which it receives. Each notch 24 has a flat length 26 along the bottom thereof substantially coextensive with the width of the batten 22 to be received by the notch. The end portions of notches 24 are arcuate as at 28 and merge with the flat length 26. When the battens 22 are introduced into their respective notches, they are glued or otherwise fastened in place so that their outer faces are in the same plane as the outer edges of the frame members in which they are formed.

When the battens are assembled with the frames as above set forth and as shown in Fig. 2 of the drawing, a space on each side of each batten 22 along the bottom of the boat is presented to permit drainage and to prevent pocketing of water between the several cross bottom members 26 of frame 12. The battens 22 may be combined with their respective notches 24 with greater speed when the said notches are formed as just set forth and danger of splitting during assembly or after the boat has been put into use, is eliminated.

The grain of the material from which battens 22 are formed is usually such as to intersect the grain of the material from which the parts 14 or 16 of frame 12 are made and, therefore, a differential in expansion is usually encountered where the parts become wet. This has always resulted in a splitting or a swelling that is detrimental to the strength and shape of the boat and it has actually been found in practice that the notching as above described will eliminate these objections.

Forming the notches as shown, will also reduce the time and cost of making the boat since precision work incident to creating sharp corners is eliminated.

It is realized that boats having physical characteristics different from those shown and described may be made without departing from the spirit of the invention or scope of the appended claim.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

A boat frame comprising a series of substantially U-shaped, parallel ribs, each having an elongated base member provided with a number of spaced, elongated notches in the outermost edge thereof, and an upright member at each

end respectively of said base member, said upright members each being provided with a number of spaced, elongated notches in the outermost edges thereof; and a plurality of elongated battens interconnecting said ribs, there being a batten within each notch respectively, the depths of the notches being substantially the same as the thickness of the battens, and the width of the battens being less than the lengths of the notches, said notches each being defined by a flat bottom wall and a pair of opposed, concave end walls, one face of each batten engaging said flat wall of corresponding notches, the longitudinal edges of the battens being spaced from proximal end walls of corresponding notches.

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