Feb. 26, 1935. T. E. MEAD 1,992,711

BOAT

Filed April 21, 1933 2 Sheets-Sheet 1

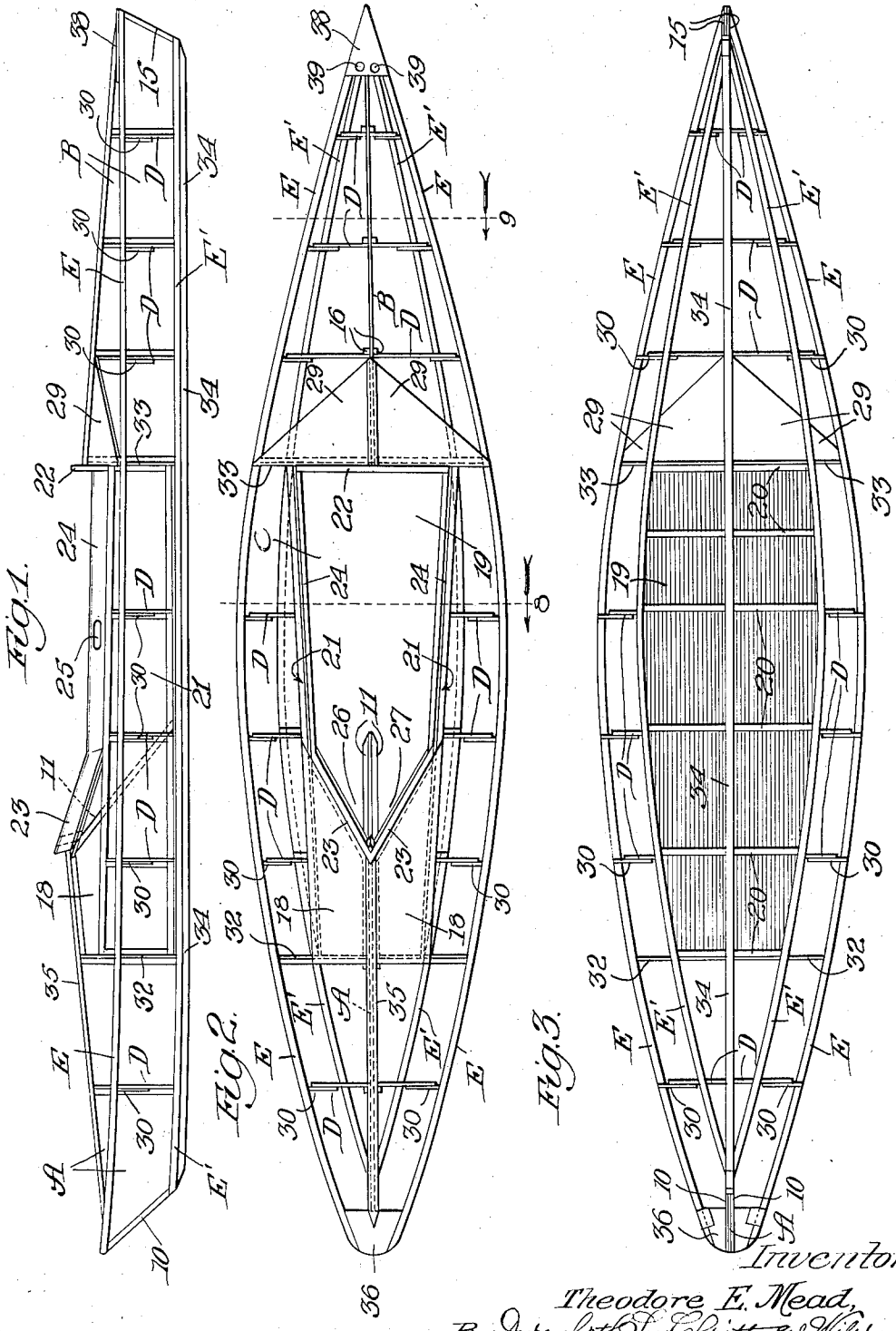


Fig. 1.

Fig. 2.

Fig. 3.

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BOAT

Filed April 21, 1933 2 Sheets-Sheet 2

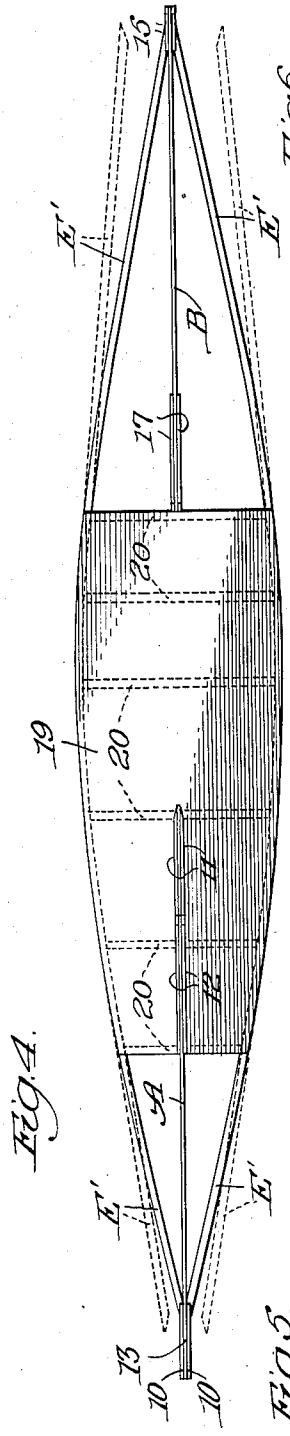


Fig. 4.

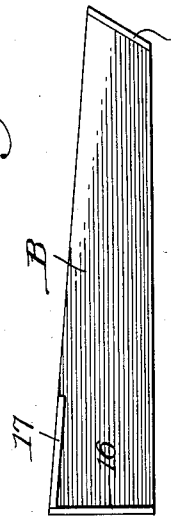


Fig. 6.

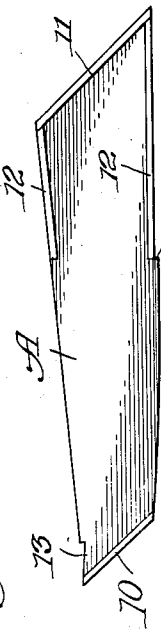


Fig. 5.

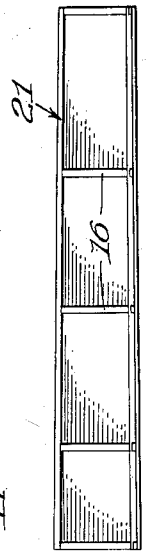


Fig. 7.

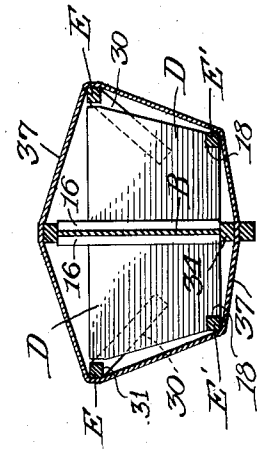


Fig. 9.

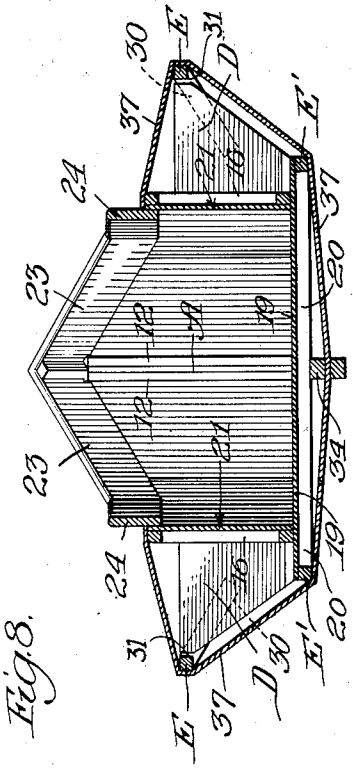


Fig. 8.

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# UNITED STATES PATENT OFFICE

1,992,711

## BOAT

Theodore E. Mead, Evanston, Ill.

Application April 21, 1933, Serial No. 667,275

6 Claims. (Cl. 9—6)

This invention relates to a boat and more particularly to an extremely light type of boat in which a skeleton frame is covered by waterproof fabric.

An object of the invention is to provide a boat of extremely light weight which is sturdy and seaworthy. A further object is to provide a lightweight boat of novel frame and cockpit construction the specific advantages of which will appear as the specification proceeds.

The invention is illustrated, in a preferred embodiment, by the accompanying drawings, in which—

Figure 1 is a side view in elevation of the frame of a boat embodying my invention; Fig. 2, a top plan view; Fig. 3, a bottom plan view; Fig 4, a top plan view of the bottom frame portion of the boat; Fig. 5, a side view in elevation of the front spar or center sheet; Fig. 6, a side view in elevation of the rear center spar or center sheet; Fig. 7, a side view in elevation of the cockpit side wall; Fig. 8, a transverse sectional view, the section being taken as indicated at line 8 of Fig. 2; and Fig. 9, a transverse sectional view, the section being taken as indicated at line 9 of Fig. 2.

In the illustration given, A designates the front center spar or center sheet; B, the rear center spar or center sheet; C, the cockpit; D, the bulkheads; and E and E', the longerons.

The front center spar A is shaped, as shown more clearly in Fig. 5. The front inclined wall of the member A is preferably buttressed on each side with cleats 10. The rear inclined wall of the member is also preferably buttressed with cleats 11. The top and bottom portions at the rear are also strengthened by braces or cleats 12. Preferably, the forward top portion of the member A is cut away at 13, as shown more clearly in Fig. 5. On the lower side of the member A, and near the center, a portion of the wall is cut away to form a notch or offset 14.

The rear center spar B is provided with cleats 15, 16 and 17, as illustrated more clearly in Fig. 6. Secured to the members A and B, by means of cleats 16, are a plurality of bulkheads D, the bulkheads extending on each side of the members A and B. As shown more clearly in Fig. 9, each of the bulkheads is provided at its lower outer corner with a V-shaped recess 18 adapted to receive the lower longerons E'. Means for attaching the upper outer corner to the upper longeron E will be described hereinafter.

The boat is preferably provided with a bottom strip 19 which is secured to the tops of the lower longerons E'. The floor is adapted to extend under the rear portion of and engage shoulder 14 of the forward center spar A. To support the bottom 19, cross-strips 20 may be secured between the two lower longerons E'.

The cockpit C is provided with side walls 21, the rear and front walls being formed by bulkheads, as will be later described. At the rear of the cockpit and above the bulkheads extends a curbing wall 22. Toward the front portion of the cockpit is a V-shaped curbing 23; and over the rear portion of the side walls 21 extend curbing walls 24 provided with handholes 25. The cockpit is preferably constructed so as to be watertight. With the construction shown, it will be noted that the rear portion of the forward center spar A extends within the cockpit C, dividing the forward end of the cockpit into leg compartments 26 and 27. An apron 28 of suitable veneer wood is preferably secured over the compartments 26 and 27, as shown more clearly in Fig. 2.

In order to brace the rear portion of the frame, I provide a triangular sheet 29, as shown more clearly in Fig. 2, which extends up to the cockpit C. Any strain placed upon the rear portion of the boat frame is thus transmitted to the longerons E beside the cockpit.

In addition to the bulkheads between the center spars A and B and the longerons, I provide additional bulkheads D between the sides of the cockpit and the longerons. The manner of securing the lower corners of the bulkheads to the lower longerons E' has already been described. In securing the upper corners of the bulkheads to the upper longeron, I prefer to employ adjustable cleats 30. The cleats are provided at their outer ends with V-recesses 31 adapted to receive a corner of the upper longeron E. In the asssembling of the boat, I prefer to attach the cleats 30 to the bulkheads by glue, and to shift them to the desired position with respect to the longerons E. The cleats may then be nailed to the bulkheads. The bulkheads 32 at the forward end of the cockpit and 33 at the rear end of the cockpit are preferably not secured by cleats, but are notched to receive the upper longerons E. In assembling the longerons, the upper longerons E are first brought into engagement with bulkheads 32 and 33. After the longerons are secured at their ends in the proper position, the remaining bulkheads are brought into firm connection with the longerons E by adjusting the cleats 30 as described above.

In order to provide communication between the compartments formed by the bulkheads and

also to provide a keel, I extend a longitudinal bottom strip 34 underneath the bulkheads and braces 20 of the bottom. The strip 34 also serves to keep the fabric in the proper position with respect to the bottom structure.

Over the forward center spar A may be extended a top strip 35.

A nosepiece 36 may be placed in the front portion of the boat within the recess 13 afforded by the center spar A.

Over the boat frame, as described, a suitable fabric 37, such as canvas, treated with a waterproofing material, such as nitrate dope or the like, is then stretched and secured in any suitable manner. At the rear end of the boat, a plywood gusset 38 may be placed and drain openings 39 may be formed in the gusset and cover. If water should leak into the boat at any point, it may flow under the bulkheads to the rear of the boat and be drained through openings 39. Plugs of cork, etc. (not shown) may be used to close the openings 39.

In the construction of the frame, any suitable materials may be employed. I have found basswood veneer as a suitable material for the center spars, bulkheads, and other parts. Any light and sturdy material may, however, be employed in the production of the frame.

In using veneer woods and treated canvas fabric, I have been able to produce a sturdy seaworthy boat weighing less than eighteen (18) pounds. The boat is so constructed as to ride easily upon the waves with little danger of turning over. If overturned, the boat floats and may be readily turned into upright position and the water removed from the cockpit.

In the construction illustrated, the center spars A and B serve as a framework which unites the various parts of the boat together. The extension of spar A into the cockpit C further strengthens the central portion of the boat. The arrangement of the longerons and bulkheads results in a boat of true lines and compact construction.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible, in view of the prior art.

1 claim:

1. In a boat of the character set forth, a frame comprising a pair of center spars spaced apart and in longitudinal alignment, said spars extending the depth of the boat, a cockpit extending between said center spars and receiving a portion of the front center spar, said center spar dividing the front portion of the cockpit into a pair of compartments, bulkheads secured to said center spars and cockpit and extending on each side thereof, longerons extending from the remote ends of said center spars and lying adjacent the upper and lower end portions of said bulkheads, means for securing said longeron ends together and for securing the bulkheads to said longerons, and a flexible fabric covering for said boat.

2. In a boat of the character set forth, a frame comprising a pair of center spars spaced apart and in longitudinal alignment, said spars extending the depth of the boat, a cockpit between said center spars and receiving a portion of the forward spar, said spar dividing the forward portion of the cockpit into foot compartments, bulkheads secured to said center spars and cockpit and extending on each side thereof, longerons connected at their ends and lying adjacent the upper and lower end portions of said bulkheads, means for securing said bulkheads to said longerons, and a flexible fabric covering for the boat frame.

3. In a boat of the character set forth, a frame comprising a pair of lower longerons secured together at their ends, a bottom secured to said longerons, a cockpit secured to said bottom, center spars between said longerons and in longitudinal alignment, said spars extending the depth of the boat, one of said center spars being cut away to receive a portion of said bottom and extending into said cockpit, bulkheads connecting said center spars to said longerons, and a flexible fabric covering extending around the boat frame.

4. In a boat of the character set forth, a frame comprising a pair of center spars spaced apart and in longitudinal alignment, said spars extending the depth of the boat, a water-tight cockpit between said center spars, said cockpit receiving a portion of the forward center spar and being divided thereby into foot compartments, a cover for said foot compartments, bulkheads secured to said center spars, longerons secured together at their ends and lying adjacent the upper and lower end portions of said bulkheads, means for securing said bulkheads to said longerons, and a flexible fabric covering for the boat frame.

5. In a boat of the character set forth, a frame comprising a pair of center spars spaced apart and in longitudinal alignment, said spars having a depth substantially equal to the depth of the frame, a water-tight cockpit between said center spars, bulkheads secured to said center spars and to said cockpit, longerons secured together at their ends and lying adjacent the upper and lower end portions of said bulkheads, means for securing said bulkheads to said longerons, and a flexible fabric covering the boat frame.

6. In a boat of the character set forth, a frame comprising a pair of center spars spaced apart and in longitudinal alignment, said spars extending from the top to the bottom of said frame, a water-tight cockpit between said center spars, said cockpit receiving a portion of the forward center spar and being divided thereby into foot compartments, a cover carried by said center spar and extending over said foot compartments, bulkheads secured to said center spars and said cockpit, longerons secured together at their ends and also secured to the outer end portions of said bulkheads, and a flexible fabric covering for the boat frame.

THEODORE E. MEAD.