June 14, 1932. J. NOWAK 1,863,498

COLLAPSIBLE BOAT

Filed June 24, 1931 2 Sheets-Sheet 1

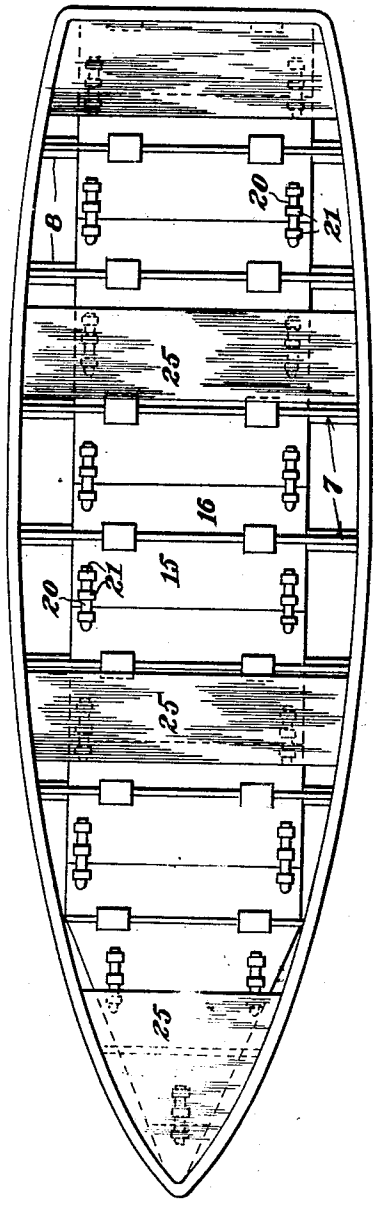


Fig-1-

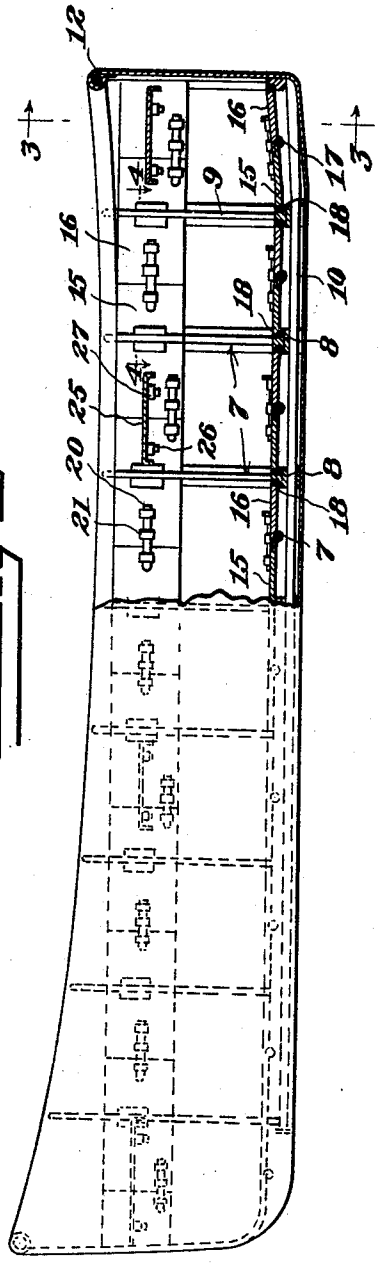


Fig-2-

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June 14, 1932. J. NOWAK 1,863,498

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Filed June 24, 1931 2 Sheets-Sheet 2

Fig. 5.

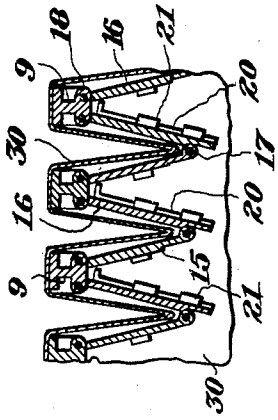


Fig. 4.

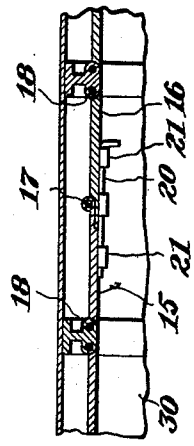
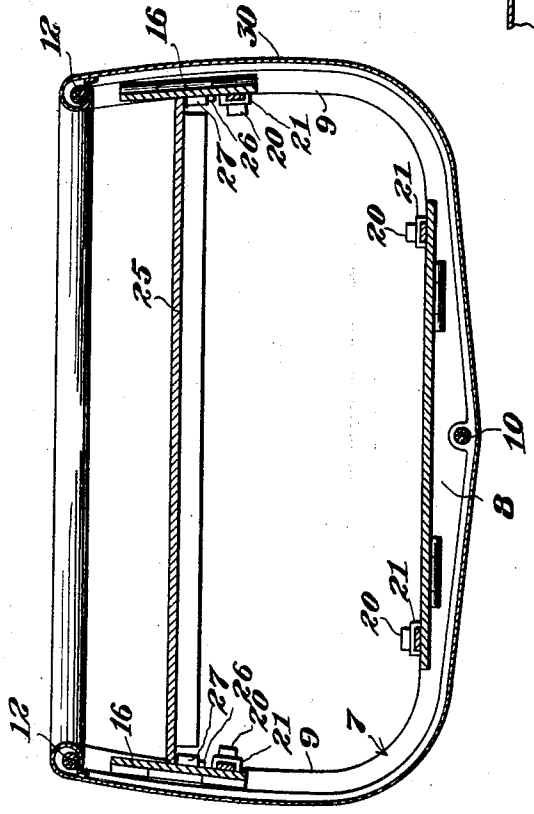


Fig. 3.



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UNITED STATES PATENT OFFICE

JOHN NOWAK, OF BROOKLYN, NEW YORK

COLLAPSIBLE BOAT

Application filed June 24, 1931. Serial No. 546,583.

This invention relates to collapsible boats.

The invention will be fully and comprehensively understood from a consideration of the following detailed description when read in connection with the accompanying drawings which form part of the application, with the understanding, however, that the improvement is capable of extended application and is not confined to the exact showing of the drawings nor to the precise construction described and, therefore, such changes and modifications may be made therefrom as do not affect the spirit of the invention nor exceed the scope thereof as expressed in the appended claims.

In the drawings:

Fig. 1 is a plan view of the collapsible boat.

Fig. 2 is a side elevation partly broken away.

Fig. 3 is a vertical section taken on line 3—3 of Fig. 2, looking in the direction of the arrows.

Fig. 4 is a horizontal section taken on line 4—4 of Fig. 2, looking in the direction of the arrows; and

Fig. 5 is a view similar to Fig. 4 but showing the structure folded.

Referring to the drawings for a more detailed description thereof, the numeral 7 is applied to each of a plurality of spaced parallel cross frame members which are, in general, U-shaped in front and rear elevation and I-shaped in cross section, said members comprising bottoms 8 and upright side members 9 integral with the bottoms. Horizontal apertures are provided in the bottoms 8 at the center thereof, said apertures being in alignment to receive a flexible rope 10. A flexible rope 12 passes through the upper ends of the uprights 9 of the cross members 7.

Between, and connected to, the frame members 7, at the bottom and at both sides thereof, are foldable or collapsible means which are preferably in the form of plates which may be made of metal, said plates being pivotally or hingedly connected to the mentioned cross frame members 7. The illustration of the invention shows a pair of plates between adjacent frame members 7, the plates being designated by the numerals 15 and 16 which are hingedly connected together at 17 and are pivotally connected to the cross members at 18, the inner portions of the mentioned plates overlapping, the plates 16 being offset at their lapping portions so that the plates may be co-planar. From the structure recited it is readily seen that the plates 15 and 16 may be folded together and that the cross frame members 7 may be brought close together when the mentioned plates are folded. Means are provided for holding the mentioned plates against collapse or folding, said means being herein shown as comprising latches 20 held in position by brackets 21, secured to the mentioned plates, it being necessary only to withdraw the mentioned latches from latching positions in order to allow the boat to be collapsed. Seats 25 are provided in the boat, said seats having depending side lugs 26 passing through brackets 27 to hold the seats in the boat, said brackets 27 being secured to the side plates 15 and 16. A flexible waterproof covering 30, which may be for example a water-proof fabric, is employed to cover the frame of the boat, a covering of this nature allowing the entire boat to be collapsed.

What is claimed as new is:

1. A collapsible boat comprising a plurality of frame members, plates hingedly connected together with their hinged edges in overlapping relation to limit them to the same plane in one position, the hinges permitting folding of the plates into contact with each other, the sets of hingedly connected plates being arranged one set between each set of frame members and hingedly connected to the same, to permit folding of the frame members down against each other or extend them into spaced relation, bolts mounted on each pair of plates on the opposite faces from the hinges for spanning relation to the line of connection between the plates, and a flexible covering over the frames.

2. A collapsible boat comprising a plurality of frame members, plates hingedly connected together with their hinged edges in overlapping relation to limit them to the

same plane in one position, the hinges permitting folding of the plates into contact with each other, the sets of hingedly connected plates being arranged one set between each set of frame members and hingedly connected to the same, to permit folding of the frame members down against each other or extend them into spaced relation, bolts mounted on each pair of plates on the opposite faces from the hinges for spanning relation to the line of connection between the plates, and a flexible covering over the frames, the hingedly connected plates connecting the bottoms and sides of the frames and those connecting the bottoms being of a substantial width to constitute a floor when the frames are extended.

In testimony whereof I hereby affix my signature.

JOHN NOWAK.