Aug. 4, 1936. T. E. MEAD 2,049,968

BOAT RIB

Filed June 16, 1934

Fig. 1.

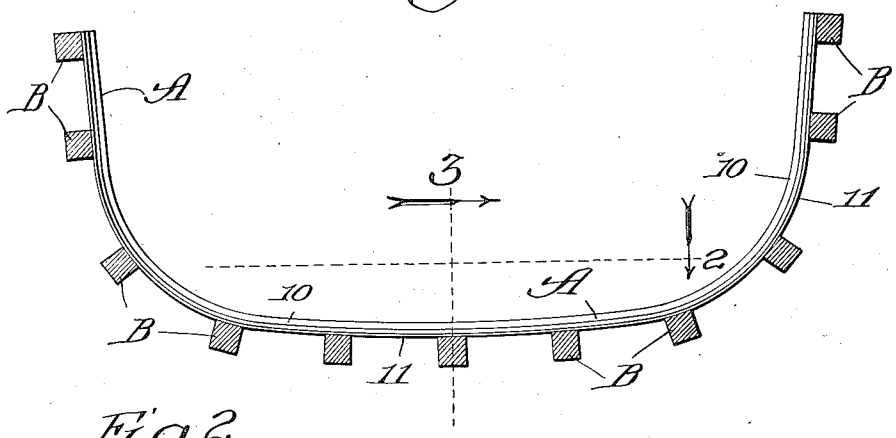


Fig. 2

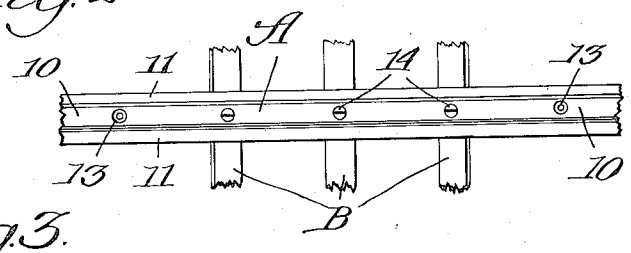
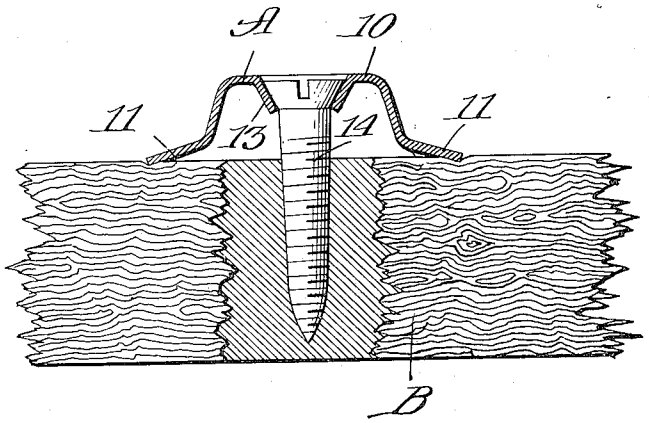


Fig. 3.



Inventor.
Theodore E. Mead,
By Dyrenforth, See, Chritton & Wiles,
Attys

Patented Aug. 4, 1936 2,049,968

UNITED STATES PATENT OFFICE

2,049,968

BOAT RIB

Theodore E. Mead, Wilmette, Ill.

Application June 16, 1934, Serial No. 730,950

3 Claims. (Cl. 9—6)

This invention relates to a boat rib which is particularly adapted for use with small boats such as canoes, and other light or fabric-covered boats.

An object of the invention is to provide a boat rib of extremely light metal which is sturdy and rigid under stress from certain directions where rigidity is required, and which may be attached to the longerons of a boat in such a manner as to grip the longerons with a spring-like hold while concealing the rough edges of the metal. Other specific objects and advantages will appear as the specification proceeds.

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

Figure 1 is a side view in elevation of a rib embodying my invention, the rib being shown attached to the longerons of a boat; Fig. 2, a broken plan view taken along the line 2 of Fig. 1, the rib being shown secured to the three central longerons; and Fig. 3, an enlarged sectional view, the section being taken as indicated at line 3 of Fig. 1.

In the illustration given, A designates the rib and B the longerons to which the rib is secured.

The rib A is preferably formed of aluminum, the metal being treated to give it the characteristics of half-hard aluminum. Such metal is tough, fairly rigid and it has a quality of springiness. I prefer to form the rib with a central raised portion 10, the raised portion being flanked on each side by integral laterally extending flanges 11. Preferably, the flanges taper inwardly, as shown more clearly in Fig. 3. The central raised portion of the rib is provided at spaced intervals with screw openings 12, the openings being encircled by countersunk seats 13 adapted to receive the conical heads of screws 14.

In the manufacture of light fabric-covered boats equipped with ribs A, cross-struts or braces (not shown) connect the longerons B at the top of the rib.

In the operation of the rib, it is placed in position, as shown in Fig. 1, with the screw holes 13 in alignment with the spaced longerons B. The screws are then placed in the openings and screwed into the longerons to bring their heads 14 within the countersunk seats 13. The turning of the screws exerts sufficient pressure upon the raised portion of the rib to draw the spring flanges 11 with their lower cutting edges into the wood body of the longerons. The edges become pressed into the wood, forming a secure joint. The placing of the spring flanges 11 under tension causes the ribs to grip firmly each of the longerons and prevents loose connections between the ribs and the longerons. The boat structure thus becomes taut and rigid. The raised portion 10 of the rib not only provides rigidity for the rib, but also provides a space in which the screw heads may be seated without protrusion.

By employing ribs of the construction described in combination with the usual longerons B, I have been able to construct sturdy fabric-covered boats adapted to carry one or two persons and yet weighing less than thirty pounds. The ribs enable the boat to be readily assembled and when assembled, the unit frame structure is more taut and tightly joined than prior structures not employing the ribs.

While I have shown a rib of specific construction and of a specific preferred metal, it will be understood that variations may be made from such preferred specifications while still employing the spirit of my invention. 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.

I claim:

1. In combination with a boat frame including spaced longerons, a plurality of ribs of resilient light metal extending substantially at right angles to said longerons and secured thereto, each of said ribs having a central raised portion running longitudinally thereof and having integral spring flanges extending downwardly and laterally, and securing means extending through said raised central portion and into said longerons whereby said flanges are held under tension against said longerons.

2. In combination with a small boat frame including spaced longerons, a plurality of substantially U-shaped ribs of resilient light metal secured to said longerons at substantially right angles thereto, each of said ribs having a raised central portion running longitudinally of the rib and having integral, laterally and downwardly extending spring flanges flanking said raised portion and engaging said spaced longerons, said raised portion being provided with screw openings aligned with said longerons, and screws extending through said openings and engaging said longerons to press said flanges under tension against said longerons.

3. In combination with a small boat frame including spaced longerons, a plurality of ribs of

resilient light metal extending substantially at right angle to said longerons and secured thereto, each of said ribs having a central raised portion running longitudinally thereof and having depending spring flanges, said spring flanges having their end portions turned laterally and downwardly, and securing means extending through said central raised portion and into said longerons whereby said end portions of said flanges may be drawn into a position substantially parallel with said longerons.

THEODORE E. MEAD.