June 15, 1943. H. R. SCHLAGEL 2,322,160

BOAT HULL

Filed Sept. 19, 1941

Fig. 1

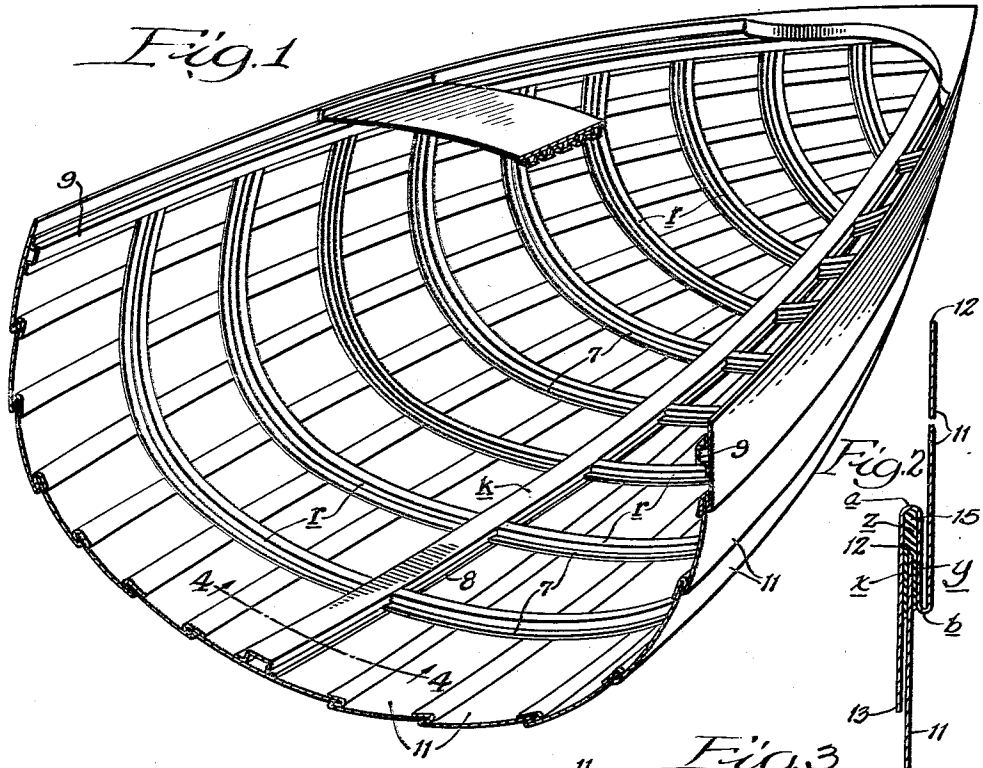


Fig. 2

Fig. 3

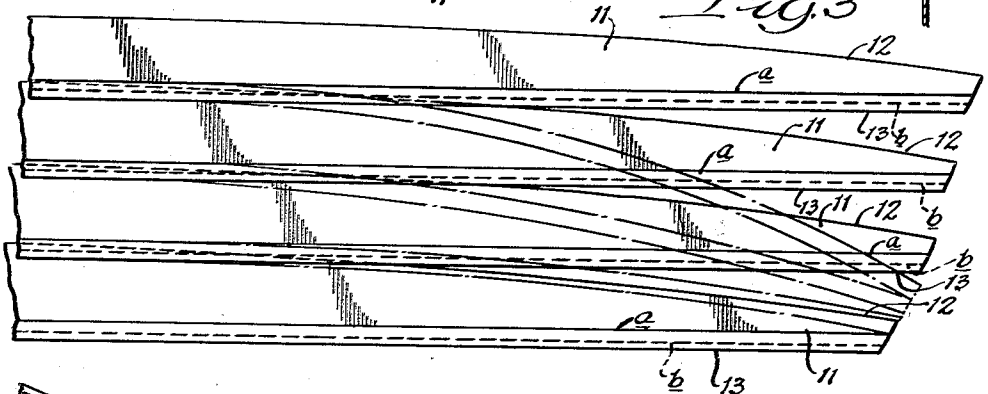
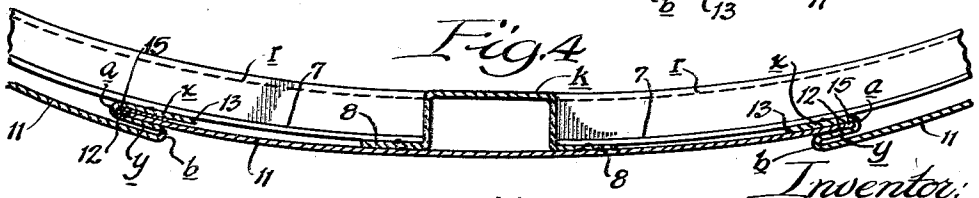


Fig. 4



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BOAT HULL

Huntington R. Schlagel, Des Plaines, Ill.

Application September 19, 1941, Serial No. 411,453

5 Claims. (Cl. 9—6)

My invention relates to the construction of boat hulls, and more particularly to a planking in which metal plates are interfitted when secured to the boat framework.

It is a principal object of my invention to provide a construction whereby the various metal planks, each in the form of a strip, will be adapted to interfit smoothly, operatively and tightly under all conditions, yet with capacity for yielding at the joints in response to strains and stresses incident to working. It is a further object to provide a boat which is strong, light, inexpensive and relatively easy to construct.

Other objects and advantages of my invention will appear from the following description taken in conjunction with the drawing, wherein:

Figure 1 is a perspective sectional view of the hull of a boat constructed in accordance with my invention;

Fig. 2 is an enlarged detail in section showing a joint between two planks;

Fig. 3 is a view in elevation of the planks showing two stages in the application of the planks;

Fig. 4 is a detail in section, taken on line 4—4 of Fig. 1.

In the construction of a boat hull pursuant to my invention I first complete a framework having transverse ribs *r* and a keel *k*. The ribs *r*, here shown as formed in the shape of a channel with flanges 7 out-turned from its parallel walls, may be secured to the keel *k* which is also shown as of channel cross-section with out-turned flanges 8. The rib flanges are rested against those of the keel to which connection may be made as by spot welding. At their upper ends the ribs are connected to a top rail 9, also of channel form, if desired.

In connection with a suitable hull framework, such as the one just described, I utilize a planking which comprises a plurality of metal strips 11. Each strip is formed of yieldable sheet metal, such as steel, having one longitudinal edge 12 entirely unformed. This edge may be straight from end to end, if the plank is to be fitted where the hull sides are relatively straight, or it may be tapered toward the opposite longitudinal edge either for the full distance or any part thereof, according as may be found most desirable. In the region of the other longitudinal edge 13, however, I provide a bend *a* and, slightly removed therefrom, a second bend *b*, the two bends being parallel and extending in a direction longitudinally of the strip and each through 180° although in reverse directions to provide adjacent but spaced plies *x* and *y* which form between them a channel *z* for the reception of the unformed edge portion of an adjacent strip. To assist in guiding the unformed edge of one strip into the channel *z* between the plies *x* and *y* of another strip, the ply *x* is extended out beyond the bend *b* in each case.

The strips are laid lengthwise along the framework of the boat, and are secured fixedly thereto, as by a welding connection between the plies *x* and the rib flanges 7 (see Fig. 4). As each strip is interfitted with the next, or subsequently, the joint therebetween may be sealed as by a mastic cement 15 which tends to remain slightly pliable over a long period. Such a joint will remain sealed even though there be slight relative movement between the planks in response to working of the boat hull or for other reasons.

To accommodate the planks to the varying contour of a boat hull it is usually necessary that each be shaped to an exact fit. With my interfitting planks, however, this need not be done, it being sufficient if the unformed edge of the strips, some or all of them, be tapered to conform generally with the contour of the boat. For example, a short double-ender will require more tapering of the unformed edges of the planks; also those planks nearest the gunwale, provided that the sheer is slight, need be tapered very little, if at all. The channel between the plies *x* and *y* of one strip is sufficiently deep to receive the unformed edge portion of another plank for distances that may vary widely, and still provide a leak-proof joint with the aid of a suitable mastic cement. In practice the planks will be formed flat (see the full line showing of Fig. 3) and then, when fitted to position over the hull framework, will be bent endwise and otherwise so that their tapering ends will interfit by approaching each other as indicated by the dot and dash line showing in Fig. 3.

The construction herein described has proven advantageous, particularly with small boat hulls which, in practice, may be produced both economically and expeditiously, the finished hulls being symmetrical, strong and leak-proof so as to withstand all the usual rigors to which such boats are subjected.

I claim:

1. In combination with a boat hull framework including a channel keel extending from one end of the boat to the other and channel ribs extending from the keel to the upper edges of the sides of the boat, a planking therefor comprising a plurality of interfitting metal strips formed of yieldable sheet metal and extending from one end of the boat to the other end adapted for se-

curement to the framework, each strip having two longitudinal edges, one unformed from end to end but inclined toward the other, and the other, in the region of its opposite longitudinal edge, being formed with a pair of spaced, longitudinal, opposite reverse bends to provide a pair of adjacent but spaced plies forming between them a channel adapted to receive the unformed edge portion of an adjacent strip, the channel between the plies being deep enough to receive an unformed edge for varying distances therein, and a mastic sealing material placed in the channel around the adjacent unformed edge therein to provide a leaf-proof joint.

2. In combination with a boat hull framework including a channel keel extending from one end of the boat to the other and channel ribs extending from the keel to the upper edges of the sides of the boat, a planking therefor comprising a plurality of interfitting metal strips formed of yieldable sheet metal and extending from one end of the boat to the other and adapted for securement to the framework and covering the channels of the keel and the ribs, each strip having two longitudinal edges, one unformed and the other, in the region of its opposite longitudinal edge, being formed with a pair of spaced, longitudinal, opposite reverse bends to provide a pair of adjacent but spaced plies forming between them a channel adapted to receive the unformed edge portion of an adjacent strip, and a mastic sealing material placed in the channel around the adjacent unformed edge therein to provide a leak-proof joint.

3. In combination with a boat hull having a metallic framework comprising a channel keel extending from one end of the boat to the other and open towards the outside of the boat and spaced channel ribs, open toward the outside and extending from opposite sides of the keel and each formed with outturned flanges, a planking therefor and covering the channels of the keel and the ribs comprising a plurality of interfitting metal strips formed of yieldable sheet metal, each strip having two longitudinal edges, one unformed from end to end but inclined toward the other, and the other, in the region of its opposite longitudinal edge, being formed with a pair of spaced, longitudinal, opposite reverse bends to provide a pair of adjacent but spaced plies forming between them a channel adapted to receive the unformed edge portion of an adjacent strip, the longitudinal strip edge adjacent the reverse bends being extended out beyond the bends to lap past and engage with the next adjacent strip, the channel between the plies being deep enough to receive the unformed edge for varying distances therein, a mastic sealing material placed in the channel around the adjacent unformed edge therein to provide a leak-proof joint, and means forming a connection between the strips and the flanges of the framework ribs.

4. The combination of a boat hull framework including a channel keel extending from one end of the boat to the other and open towards the outside of the boat, and having longitudinal flanges, and channel ribs extending from the keel to the upper edges of the sides of the boat and open towards the outside, and having side flanges presenting planking receiving surfaces, and planking comprising a plurality of interfitting metal strips extending from one end of the boat to the other and fitted against said planking receiving surfaces and covering the channels of the keel and the ribs, each strip having two longitudinal edges, one unformed from end to end but inclined towards the other, and the latter being formed with a pair of spaced longitudinal opposite reverse bends providing a pair of adjacent and spaced plies forming between them a channel adapted to receive the unformed edge portion of an adjacent strip, the channels between the plies having sufficient depth to receive an unformed edge for varying distances therein.

5. The combination of a boat hull framework including a longitudinal keel and transverse ribs, and planking comprising a plurality of interfitting sheet metal strips extending from one end of the boat to the other and fitted against said framework, each strip having two longitudinal edges, one unformed from end to end and the other being formed with a pair of spaced longitudinal opposite reverse bends providing a pair of adjacent and spaced plies forming between them a channel adapted to receive the unformed edge portion of an adjacent strip, the channel between the plies having sufficient depth to receive an unformed edge for varying distances therein to allow for shaping the strips to contour of hull, and an extension on one of each pair of plies projecting beyond the channel between the plies and arranged to guide into said channel the unformed edge of the adjacent strip.

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