

May 27, 1941.

J. CHLOPICKI

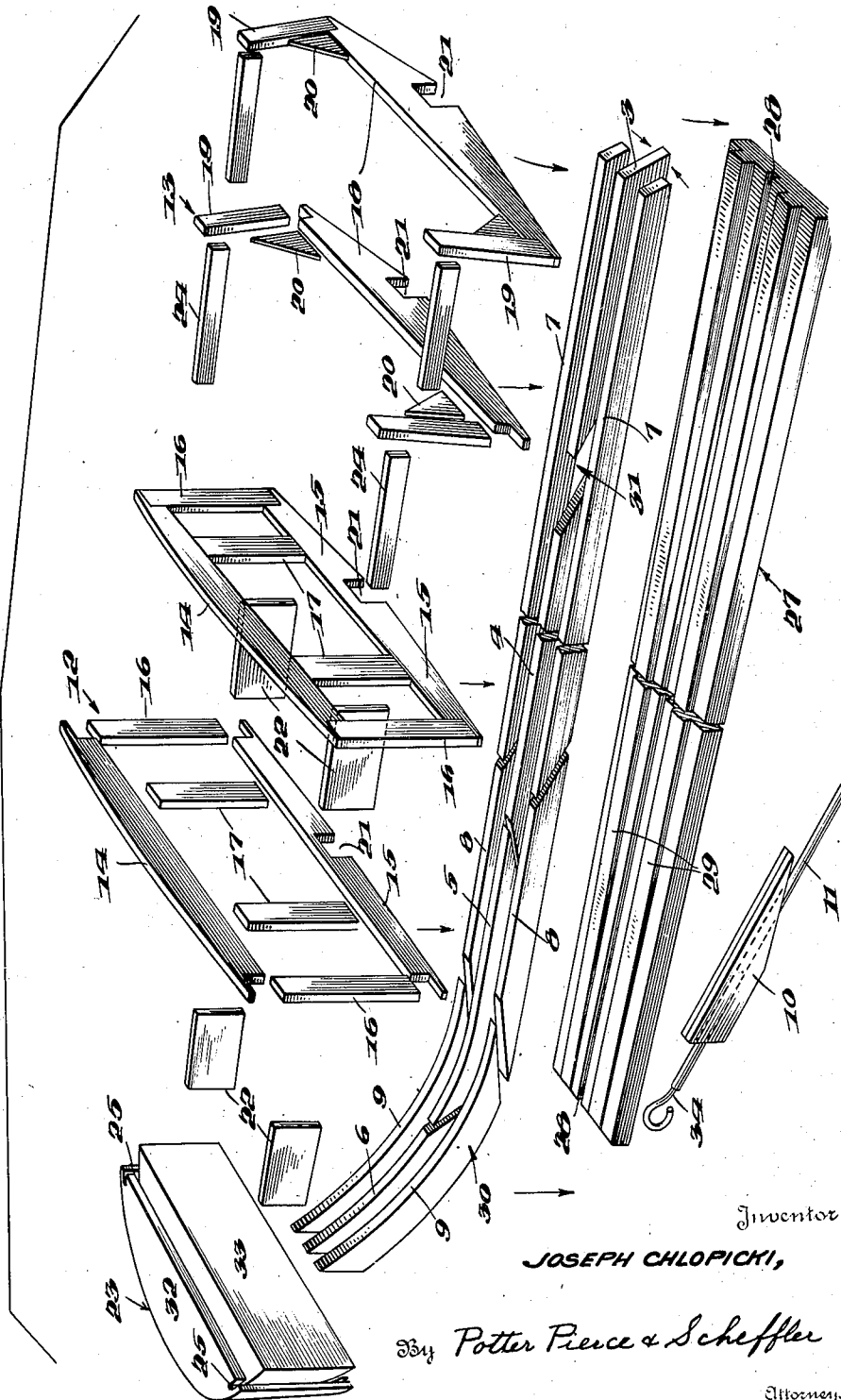
2,243,372

MODEL BOAT

Filed Dec. 2, 1939

3 Sheets-Sheet 1

Fig. 1.



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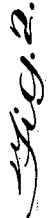
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Fig. 6.

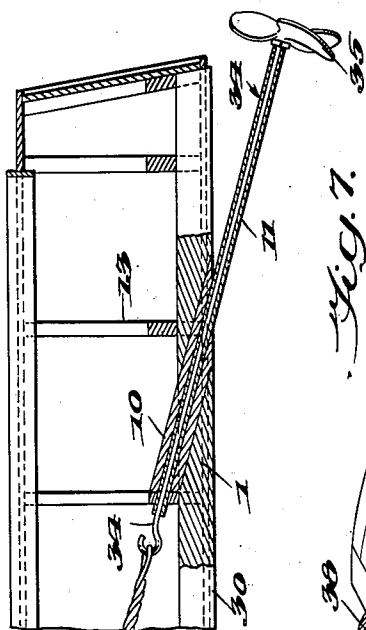


Fig. 7.

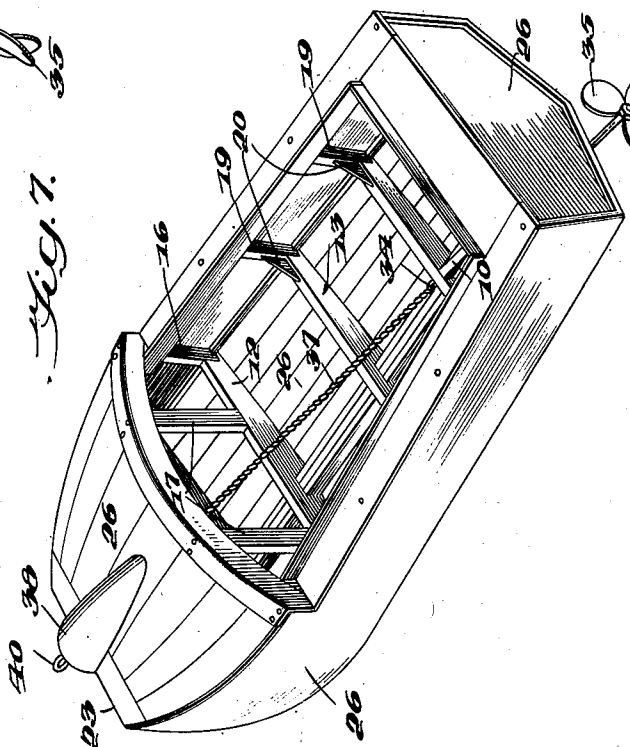


Fig. 4.

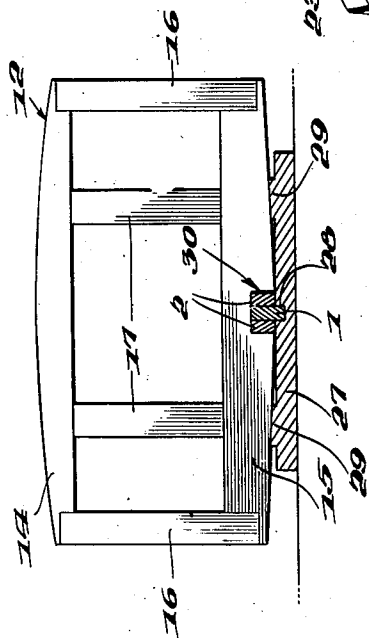
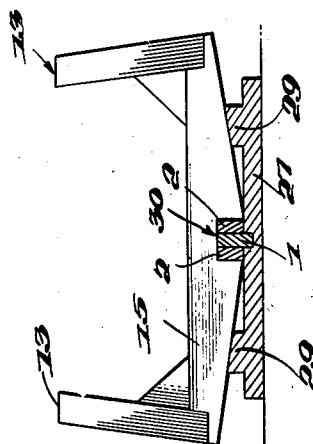


Fig. 5.



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UNITED STATES PATENT OFFICE

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MODEL BOAT

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Application December 2, 1939, Serial No. 307,327

4 Claims. (Cl. 9-6)

This invention relates to boats, apparatus to be used in constructing the same, and a method of constructing the same.

One of the objects of the present invention is to provide a kit including the constituent parts from which a model boat can be readily constructed without, or substantially without, the use of rivets, bolts or the like for joining the parts together.

Another object of the invention is to provide a prow construction which facilitates the application of the planking forming the deck, sides and bottom of the boat.

Another object of the invention is to provide an assembly jig which facilitates construction of the boat.

Another object of the invention is to provide a keel construction which facilitates assembling therewith a propeller shaft assembly.

Another object of the invention is a method of constructing a model boat from the constituent parts thereof.

In the accompanying drawings Fig. 1 illustrates essential parts of the boat in their relative positions ready for assembly, and the assembly jig;

Fig. 2 is a plan view of a boat partially assembled upon the jig;

Fig. 3 is a vertical longitudinal section on the line 3-3 of Fig. 2;

Fig. 4 is a vertical transverse section on the line 4-4 of Fig. 3;

Fig. 5 is a vertical transverse section on the line 5-5 of Fig. 3;

Fig. 6 is a fragmentary vertical longitudinal section of the aft portion of the boat showing the screw assembly.

Fig. 7 is a perspective view of a finished boat in accordance with one embodiment of my invention.

Referring to the drawings, the framework of the model boat shown comprises a plurality of transverse ribs 12 and 13, a keel 30 and longitudinal spacing or bracing members 22 and 24. The ribs are disposed in parallel spaced relation upon the keel, forward ribs 12 being in the form of quadrangular frames and aft ribs 13 being substantially U-shaped when assembled. Depending upon their position on the keel, the said ribs differ in dimensions and shape and thus determine the outside contour of the boat. To the framework is attached the prow piece 23 and planking 26 forming the top, bottom, side, and stern surfaces of the boat.

The constituent parts of the boat, with the exception of the driving mechanism, are preferably

made of very light wood such as balsa and are adapted to be glued together with a waterproof cement or glue, preferably with a quick drying waterproof cement such as a nitro-cellulose cement.

According to the invention, the constituent parts of the boat are prefabricated in the proper shape and size so that they can be readily assembled by young persons and others possessing little mechanical skill.

The keel 30 is laminated and preferably consists of three layers, a center layer 1 and side layers 2 united therewith on each side. The center layer preferably projects below the side layers. The center layer is made in at least two parts comprising an aft section 3 and a forward section 4 having adjacent ends in spaced relation whereby to form an opening 31 extending from the top to the bottom of the keel for the reception of a shaft log 10. As shown in Fig. 1, the center layer may comprise, in addition to parts 3 and 4, the parts 5 and 6. Each side layer is preferably made in several sections, 7, 8 and 9, cut to suitable shape such that when joined to make the keel, the latter will have the desired contour. Parts 3 and 4 are spaced apart sufficiently to snugly seat the shaft log 10. The adjacent ends of parts 3 and 4 are preferably cut at an acute angle to the keel so that the opening therebetween extends backward from the top to the bottom of the keel at the desired propeller shaft angle.

Ribs 12 consist of top members 14, bottom members 15, side members 16 and braces 17, both ends of the members 14 and 15 being notched to receive the side members 16.

Ribs 13 consist of a bottom member 18, two side members 19 and two triangular braces 20 which fit into the angle between the bottom and side members, said side members fitting into notches at each end of the bottom member. The bottom rib members have at their centers a notch 21 so that they fit snugly over the keel. Forward ribs 12 are spaced apart and braced by spacers 22 which extend between the braces 17, or, in the case of the forwardmost rib, between said braces 17 thereof and the back face of the prow piece 23. The ribs 13 are braced by spacers 24 placed between the bottom edges of the ribs and, if desired, also between the upper edges thereof.

The prow piece 23 comprises a block having one or more of its side faces undercut to form rearwardly opening grooves 25. Said grooves may be in the back face of the prow piece but are preferably forward thereof. As shown in Figs.

1, 2 and 3, the prow piece 23 comprises a front section 32 and a rear section 33, the rear section being of smaller dimensions both vertically and transversely. The back edges of the front section are undercut to form the grooves 25 which are dimensioned to receive the forward ends of planking 26. The inner wall of said grooves is substantially in the plane of the respective adjacent surfaces of said rear section of the block. The rear section flares from the front to the rear so that the side faces thereof serve to support the planking 26 and give the desired contour to the prow of the boat.

The assembly jig 27 comprises a board having on its upper face a groove 28 extending longitudinally along the center adapted to seat the depending center layer of the keel, and wedge shaped rails 29 extending parallel to and spaced from said groove on either side thereof. Each of these rails progressively varies in height to contact the under faces of the bottom cross members 15 and 18 of ribs 12 and 13 respectively, and thus correctly position the ribs on the keel. The upper faces of the rails preferably slant from the outside inwardly to conform to the pitch of the lower faces 15 and 18 of the boat ribs and thus afford maximum contact therewith.

In erecting the boat the constituent parts of the keel and of the ribs are first assembled. The assembled keel is then placed upon the assembly jig 27 so that the center portion of the keel fits into the groove 28. The assembled ribs are then fitted upon the keel at the desired positions which may be marked beforehand on the keel. If desired, the keel may be notched slightly at these positions to seat the ribs. The rails 29 serve to keep the boat ribs 12 and 13 level and in line. After fitting the ribs, they are glued in place. After drying, the spacers 22 and 24 are placed in position and glued. The prow piece is then placed and fixed in position, whereupon the spacers 22 between the prow piece and the first rib are fixed in position.

The grooves 25 in the prow piece 23 are designed to facilitate the laying of the planking 26. The forward ends of these planks are covered with plenty of cement and are pushed into the grooves, whereupon the aft ends of the planking are pinned, clamped or otherwise held in position on the framework, after application of cement thereto, until the cement has set. In this way it is possible to avoid the use of nails, etc., which would tend to split the very thin planking used in making model boats. This method of construction is particularly advantageous in model boats of the type shown in the drawings where the forward deck portion is of rounded contour both longitudinally and transversely. After the

planking has been applied and is set in position, the portion of the prow above the grooves may be planed down substantially flush with the surface of the planking to provide a smooth surface on the prow.

The shaft log 10 is preferably in the form of a laminated log mounting the bearing sleeve 11 for the propeller shaft 34 carrying propeller 35. The forward end of the propeller shaft 34 is formed in the shape of a hook to engage a suitable rubber band motor 37. A suitable housing 38 is mounted adjacent the prow of the boat to seat the anchor block 39 carrying the winding eye 40 for the forward end of the rubber band motor 37. It will be understood that the anchor block 39 will be withdrawn from the housing 38 to permit winding of the rubber band.

While I have illustrated and described the preferred embodiment of my invention, I do not desire to be limited to any of the details shown or described herein, except as indicated in the appended claims.

I claim:

1. A laminated keel for a boat comprising a center layer and side layers united therewith on each side, said center layer including an aft section and a forward section having adjacent ends thereof in spaced relation whereby to form an opening extending from top to bottom of the keel for the reception of a shaft log.

2. A laminated keel for a boat comprising a center layer and side layers united therewith on each side, said center layer including an aft section and a forward section having adjacent ends thereof in spaced relation whereby to form an opening extending from top to bottom of the keel and a shaft log fitting said opening carrying a sleeve bearing at the desired propeller angle.

3. A laminated keel for a boat comprising a center layer and side layers united therewith on each side, said center layer including an aft section and forward section having adjacent ends thereof in spaced relation and at an acute angle to the keel whereby to form an opening extending backward from the top to the bottom of the keel at the desired propeller shaft angle.

4. A laminated keel for a boat comprising a center layer and side layers united therewith on each side, said center layer including an aft section and forward section having adjacent ends thereof in spaced relation and at an acute angle to the keel whereby to form an opening extending backward from the top to the bottom of the keel at the desired propeller shaft angle and a shaft log in said opening dimensioned to fit the same, said shaft log carrying a sleeve bearing running through its center.

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