(No Model.)

M. Y. RANSOM.

FORMER FOR BOAT BUILDING.

No. 391,272. Patented Oct. 16, 1888.

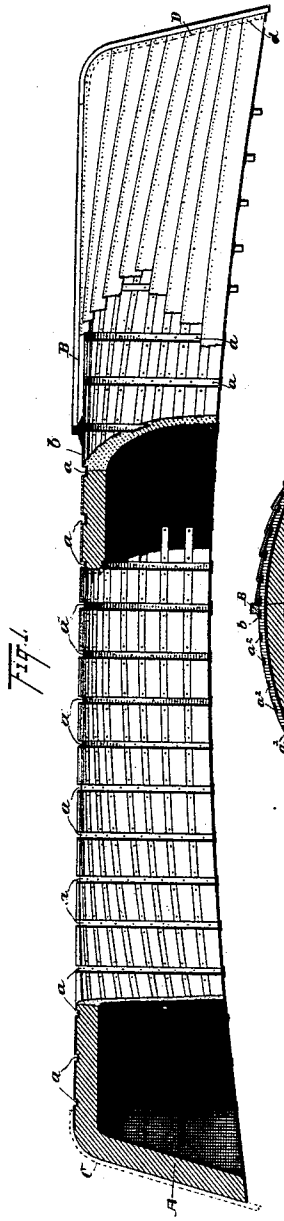


Fig. 1.

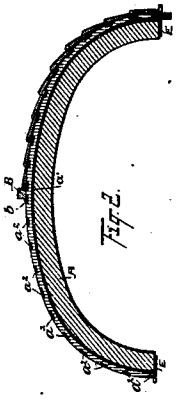


Fig. 2.

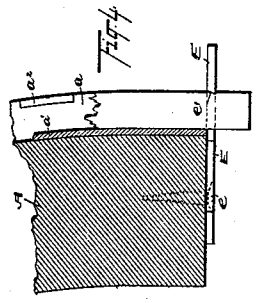


Fig. 4.

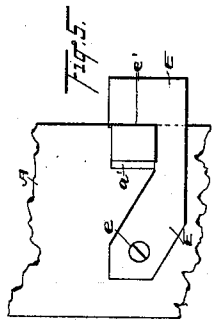


Fig. 5.

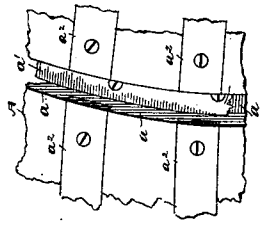


Fig. 6.

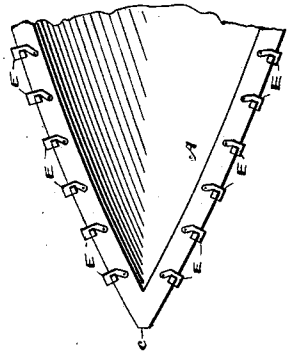


Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

MOSES Y. RANSOM, OF CLEVELAND, OHIO.

FORMER FOR BOAT-BUILDING.

SPECIFICATION forming part of Letters Patent No. 391,272, dated October 16, 1888.

Application filed April 21, 1888. Serial No. 271,389. (No model.)

To all whom it may concern:

Be it known that I, MOSES Y. RANSOM, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Formers for Boat-Building; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to an improved former on which to construct, respectively, so-called "lap-strake" or "clinker" boats and canoes, in which the contour of the former corresponds exactly with the desired internal dimensions of the boat or canoe to be built, the said former having a series of transverse external grooves adapted to receive the ribs of the boats or canoes, such grooves being faced at the bottom with metal for clinching such nails as are driven through the ribs; also, the longitudinal strakes of the former where the different planks overlap each other are faced with metal, usually set flush with the surface of the former for clinching the fastening nails that secure such planking.

In the accompanying drawings, Figure 1 is a side elevation partly in section. Fig. 2 is an elevation in transverse section. Fig. 3 is a bottom plan of the former. Figs. 4 and 5 are enlarged elevations in section and plan in detail. Fig. 6 is an enlarged perspective of a section of the former.

A represents a former embodying my invention, the same being usually constructed of planks, the walls thereof being of such thickness (usually from four to six inches, more or less) as to render the former absolutely rigid as against any pressure or strain brought to bear on the former in building the boat. As aforesaid, the external surface of the former corresponds with the desired internal dimensions and form of the boat to be built thereon, and such former would therefore have flattened sections *b*, *c*, and *d*, adapted to receive the keel B, stem C, and stern-piece D, these members of the boat being secured together and temporarily fastened in place on the former. The former is provided with a series of external tranverse grooves, *a*, the same being of suitable depth and width to receive the ribs of the boat, leaving the ribs flush with the external surface of the former. These grooves at the bottom thereof are faced with metal strips a' for clinching the nail that may be driven through the ribs in fastening, for instance, the planks and keel to the ribs. Metal strips a^2 extend lengthwise of the former, between the grooves *a*, along the strakes, where the planking overlap each other. Strips a^2 are usually set in flush with the surface of the former, and are in position to clinch the nails that secure the laps of the planks. Having a rigid former upon which to construct the boat or canoe, the size and shape of the different pieces of planks and other members of the boat can be determined with nicety, and accurate patterns can be provided, so that the different pieces used in constructing the boat can be dressed by machinery and in quantities at a small cost as compared with hand-work heretofore employed for such purpose.

In assembling the parts, after the keel, stern, and stem pieces have been secured together and temporarily fastened in place on the former, the ribs are next placed in grooves *a*, the ribs being thrust endwise through under the keel. The ribs are then bent downward until they fit snugly in grooves *a*, and the ribs are then secured by means of hooks E. These hooks are usually flat plates of steel of about the form shown, being pivoted at *e* to the under side of the former opposite to the respective grooves *a*, each hook having a sharp edge, e', that engages a rib, and by indenting the wood thereof prevents the rib from drawing endwise, by means of which the ribs are firmly held upon the bottom of the groove—that is to say, upon the plates a'. Next the planks adjacent the keel, known as the "garboard strakes," are placed in position and nailed to the stem and stern pieces. The keel has usually laterally-projecting ledges b', that these planks overlap and to which they are nailed, and are also nailed to the ribs. The planks in turn are placed in position, each plank overlapping the preceding plank, and the laps are nailed; also, the different planks are nailed to the ribs. By means of the plates a' and a^2 the nails are nicely clinched on the inside as they are driven. After the planks are all secured the boat may be scribed on the inside, the under face of the former serving as a guide to give the proper shear to the boat; also, the gunwales may be secured in place, after which

the boat is removed from the former to receive the wales and such decking and internal finish as may be required, and the boat is so far completed before it is removed from the former that it retains the shape of the latter perfectly, whereas with hand-made boats it is seldom that the two sides of the boat measure alike, the frame-work of the boat having been sprung more or less in the course of construction.

Of course different formers have to be constructed for the different varieties of boats; but as a very great number of boats may be built from one former the builder can well afford to expend time enough on each former to shape it perfectly, in which event he is assured of making perfectly-formed boats and at a greatly-reduced initial cost over the method heretofore practiced in boat-building.

What I claim is—

1. In boat-building, a former the contour of which corresponds with the desired internal dimensions of the craft to be built, said former having a series of external transverse grooves adapted to receive the ribs of the boat, said grooves being faced at the bottom with metal, and metal facing at the points where the planks overlap each other, substantially as set forth.

2. In boat-building, a former the external surface of which corresponds with the desired internal dimensions of the boat or canoe to be built, said former having the longitudinal strake thereof where the planks overlap each other faced with metal, substantially as set forth.

3. In boat-building, a former having grooves faced at the bottom for receiving the ribs and having metal facing where the planks overlap each other, substantially as indicated, and hooks pivoted to the edge of the former in position to engage the ribs and hold the latter in place in the grooves, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 24th day of January, 1888.

MOSES Y. RANSOM.

Witnesses:
ALBERT E. LYNCH,
CHAS. H. DORER.