No. 649,525. Patented May 15, 1900.

# J. C. NICHOL.

## BOAT.

(Application filed Oct. 5, 1899.)

(No Model.)

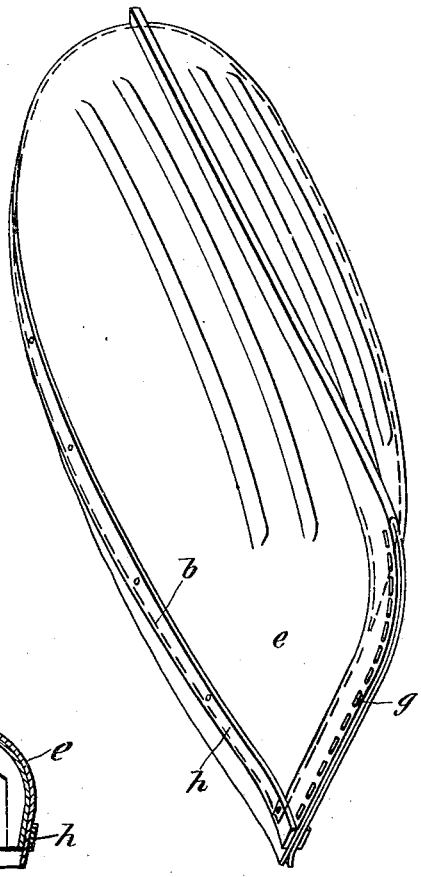



Fig. 1

Fig. 4

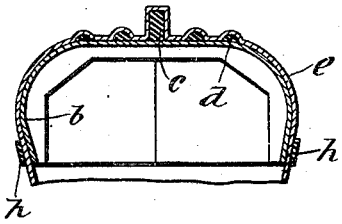



Fig. 3

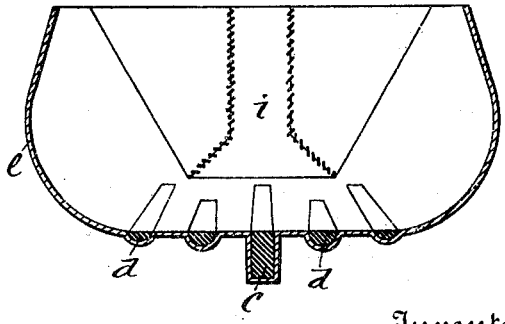
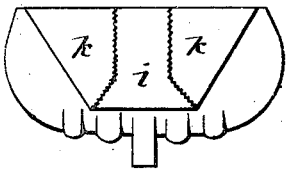



Fig. 2




Witnesses

Inventor

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# UNITED STATES PATENT OFFICE.

JOHN CHRISTOPHER NICHOL, OF MONTREAL, CANADA.

## BOAT.

SPECIFICATION forming part of Letters Patent No. 649,525, dated May 15, 1900.

Application filed October 5, 1899. Serial No. 732,739. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN CHRISTOPHER NICHOL, of the city of Montreal, in the district of Montreal and Province of Quebec, Canada, have invented certain new and useful Improvements in Boats; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates particularly to the art or manufacture of boats, canoes, and the like, and has for its object to provide a molded boat and one that will be more durable than if constructed by building up and joining together separate sections of material, besides being constructed in less time than has been possible heretofore. To this end I saturate a fabric, either in one piece or in a number of sections, in a solution of shellac or other resinous substance and apply the saturated fabric to a form of pattern from which the desired shape is imparted to the fabric and upon which it is allowed to dry.

The preferred manner of carrying out my invention is to saturate a sheet of felted fabric in a solution of shellac. This sheet while wet is applied to a pattern or mold either by laying it upon or stretching it over the mold, and the ends of the sheet are joined together over the bow and stern portions, or such ends folded and joined, the shell thus molded then being allowed to dry, and trimmed and furnished as usual, after which it is ready to take the water. For full comprehension, however, of my invention reference must be had to the accompanying drawings, in which like symbols indicate the same parts, and wherein—

Figure 1 is a perspective view of a boat in course of construction upon its mold. Fig. 2 is a rear end view of the completed boat. Fig. 3 is a transverse sectional view taken about midway of the length of the boat; and Fig. 4 is a similar view to Fig. 3, but showing the shell upon the mold.

The pattern *b* may be of any desired contour, and preferably has a keel-strip *c*, rectangular in cross-section, and a series of strips *d*, of small semicircular cross-section, laid upon the portion thereof from which the bottom of the boat is molded. The felted fabric *e* is saturated, preferably by immersion in shellac, which renders it while wet perfectly pliable and in a condition to be readily manipulated. A sheet of the fabric thus saturated is then preferably laid upon the pattern and the strips *c* and *d*, to all of which it will, owing to its pliable nature, cling. While the fabric may, if desired, be pressed into the interstices between the keel-strips *c* and the strips *d* (which are located equidistant apart and on each side of said keel-strip) and between said strips *d* in order to impart a superior finish, yet I have found this quite unnecessary, as the natural weight of the saturated fabric will cause it to sink into all recesses. The edges of the folded portions of the end *f* of the sheet that envelops the bow portion of the mold are joined together, preferably, by stitching *g*. A pair of stretcher-strips *h* are then secured along the side edges of the sheet to cause it to adhere firmly to the gunwale portions of the mold, and finally the end *i* of the sheet is preferably spread over to completely cover the stern portion of the mold, and the folds *k* thus presented are then stretched over the stern and stitched or otherwise fastened securely in place. The shell of the boat thus molded is then allowed to thoroughly dry. The stretcher-strips *h* are then removed, and the shell, which when dry, although slightly elastic, is comparatively rigid, can then be removed from its mold, and after receiving the flooring, seats, and usual trimmings is ready to take the water.

I prefer in heavy boats to allow the keel-strip *c* and strips *d* to remain in their places embedded in the felted fabric in order to provide means whereby the flooring, foot-rests, and the like may be secured in place, although in light boats or canoes the corrugations formed by the strips *h* and keel molded by the keel-strip will impart sufficient rigidity to the bottom of the craft.

It is obvious that the time expended in stretching the sheet over the mold or pattern and forming the joint at each end, as the saturation of the sheet and drying of the shell require no attention, is all that need be expended in the construction of the shell of a boat, canoe, or the like, according to my invention. Consequently any one of average intelligence can manufacture a craft of this na-

ture in about one-tenth the time it has heretofore taken a skilled boat-builder to build one of the usual type. It is further obvious that if a punt form is desired both ends can be constructed according to my description of the construction of the stern, or both ends finished according to the bow, or other changes made in the precise construction of the boat without departing from the spirit of my invention.

While I have described in detail the method or process of constructing the boat, I do not herein claim such process, as the same forms the subject-matter of a separate application, filed on the 17th of April, 1899, under Serial No. 713,409.

What I claim is as follows:

1. A molded boat of a single layer of saturated felted fabric.

2. A boat molded from a single layer of felted fabric saturated in a solution of a resinous substance and adapted to be stitched, substantially as set forth.

3. A boat molded from a single sheet of heavy felted fabric saturated in a solution of resinous substance and extending from end to end and side to side of the boat, substantially as set forth.

4. A boat molded from a single layer of heavy felted fabric saturated in a solution of shellac, substantially as described.

5. A boat molded from a single sheet of heavy felted fabric saturated in a solution of shellac and extending from end to end of the boat, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

JOHN CHRISTOPHER NICHOL.

Witnesses:

WILLIAM P. MCFEAT,

FRED J. SEARS.