J. D. COUGHTRY.

Portable Folding Boat.

No. 218,716. Patented Aug. 19, 1879.

Fig. 1.

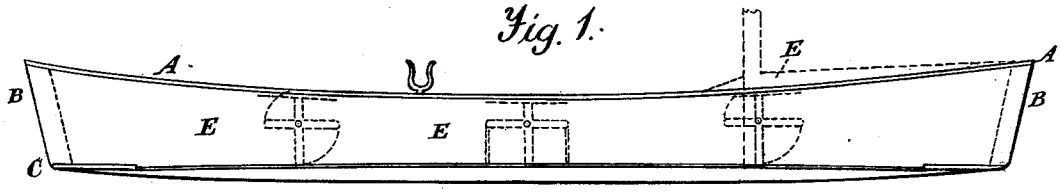


Fig. 2.

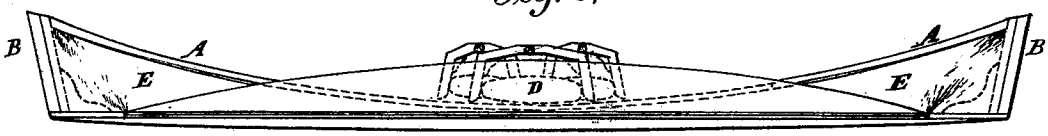


Fig. 4.

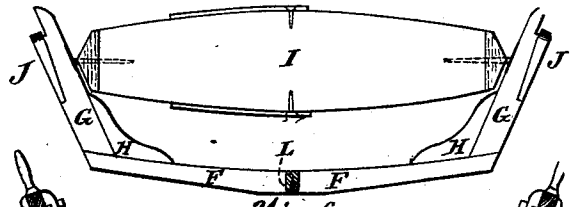


Fig. 6.

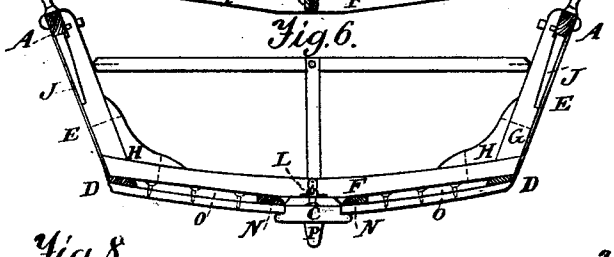


Fig. 3.

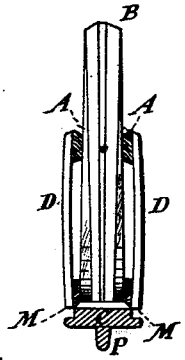


Fig. 8.

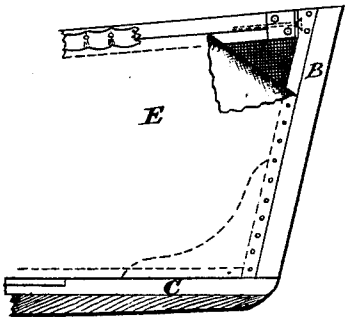


Fig. 5.

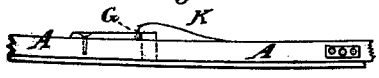
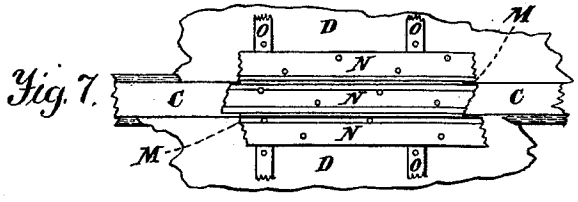


Fig. 7.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN D. COUGHTRY, OF NEW YORK, N. Y.

IMPROVEMENT IN PORTABLE FOLDING BOATS.

Specification forming part of Letters Patent No. **218,716**, dated August 19, 1879; application filed March 10, 1879.

To all whom it may concern:

Be it known that I, JOHN D. COUGHTRY, of the city, county, and State of New York, have invented a new and useful Improvement in Portable Folding Boats; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 2 shows the boat when folded for transportation or stowing. The bottom D, turning upward on its hinges at either side, incloses and protects the pivoted wales A A, which meet and lie parallel to and just above the keel C, and the cross-sections, Fig. 4, are stowed between the bottom pieces, making the outside width of the boat when closed about four and a half inches only.

To open the boat for use the bottom pieces, D D, are allowed to fall into their natural position. The wales are raised, each describing a quarter-circle upward and outward. The cross-sections are fitted into place and buttoned, and securing the bottom, to which they are fastened. The cam-levers which sustain the wales are raised, tightening the sides, the seats turned and braced, and thole-pins inserted, when the boat is ready for use, as seen in Fig. 1.

Fig. 4 shows one of the adjustable cross-sections, the number of which depends upon the length of the boat. It consists of floor-timber F, side pieces, G G, and knees H H, permanently joined together and strengthened by the revolving seat I, which is pivoted to side pieces, G G, and held in position when in use by wood or metal braces. The side pieces, G G, fitting into metal or wood sockets K, Fig. 5, are locked by buttons or other simple fastenings, and furnished with cam-levers J J, which stretch the sides E E tightly.

Fig. 6 is a sectional view of the boat, showing a cross-section in position for use. The section is hooked, bolted, or otherwise simply secured to the keel C at L, or may be pivoted so as to turn and set parallel with the keel. The wales A A rest upon the cam-levers J J, which, being turned down, secure and tightly stretch the canvas sides. The keel is strengthened by a false keel, P.

Fig. 7 is a plan of a portion of the bottom, (inside,) showing center joints, M M, upon which the bottom pieces, D D, hinge to the keel C, fitting in a rabbet in the keel. Battens N N protect and strengthen the bottom and hinges. The canvas or other material which forms the hinges M M is fastened securely between the battens N N N and the bottom D D and the keel C, forming a water-tight joint. Cross-battens O O protect and strengthen the bottom; and if heavy loads are to be carried, sockets could be fitted on these battens to clasp over the bottom pieces, F F, of cross-sections.

Fig. 8 shows the canvas side E fastened permanently to the front of stem-piece B, covered and protected by a false stem, (the fastening at the stern is the same,) to the wales A, and also to the upper side of the bottom piece, D, being protected by the latter and by a bead on the wales, as shown.

Rowlocks or thole-pins are fitted to the gunwale in the ordinary manner.

For sailing purposes a mast can be stepped in the usual way, and braced against a cross-section, and a canvas deck be added, as shown by dotted lines in Fig. 1.

This boat can be adapted to any known rig. The bottom may be flat or curved, and either straight or rocker keel may be used. An adjustable sailing-keel may be added.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a folding boat, the canvas sides fastened permanently to the stem, stern, bottom, and wales, and tightly stretched in position by means of cam-levers J J, substantially as described.

2. The adjustable cross sections or braces provided with a hook engaging with an eye in the floor-timber, and secured to the wales by notches and sockets K, and locked in position by buttons or other suitable means, substantially as set forth.

3. The cross sections or braces provided with cam-levers J J, pivoted at their upper ends, and adapted to sustain the wales, and, by being turned down, to stretch the canvas sides in position, substantially as set forth.

4. In a folding boat, the bottom pieces, D D, hinged to the keel C by means of water-tight center joints, M M, and fitting with a rabbet

in the keel, and protected and strengthened by battens N N, substantially as described.

5. In a folding boat, the revolving thwarts I, pivoted at their opposite ends in the side pieces, G G, of the cross sections or braces, and held in position when in use by braces, substantially as and for the purpose set forth.

6. In a folding boat, the flexible covering secured along its upper side or edge, between the wales A and a suitable bead, and along its lower side or edge, between the upper side of the bottom piece, D, and a batten or strip, substantially as described.

7. In a folding boat, the combination of the revolving wales with the stem and stern posts, by means of rounded and smoothed projecting pins or points at each end of the wales fitting into suitable receptacles in metal plates properly fastened upon or inserted in the stem and stern posts, thereby admitting of the wales being sprung into position or detached therefrom without the adjustment or removal of bolts, screws, or other fastenings, all substantially as described.

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Witnesses:

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