

(No Model.)

T. CLAPHAM.
SPAR FOR VESSELS.

No. 601,494.

Patented Mar. 29, 1898.

FIG. 1.

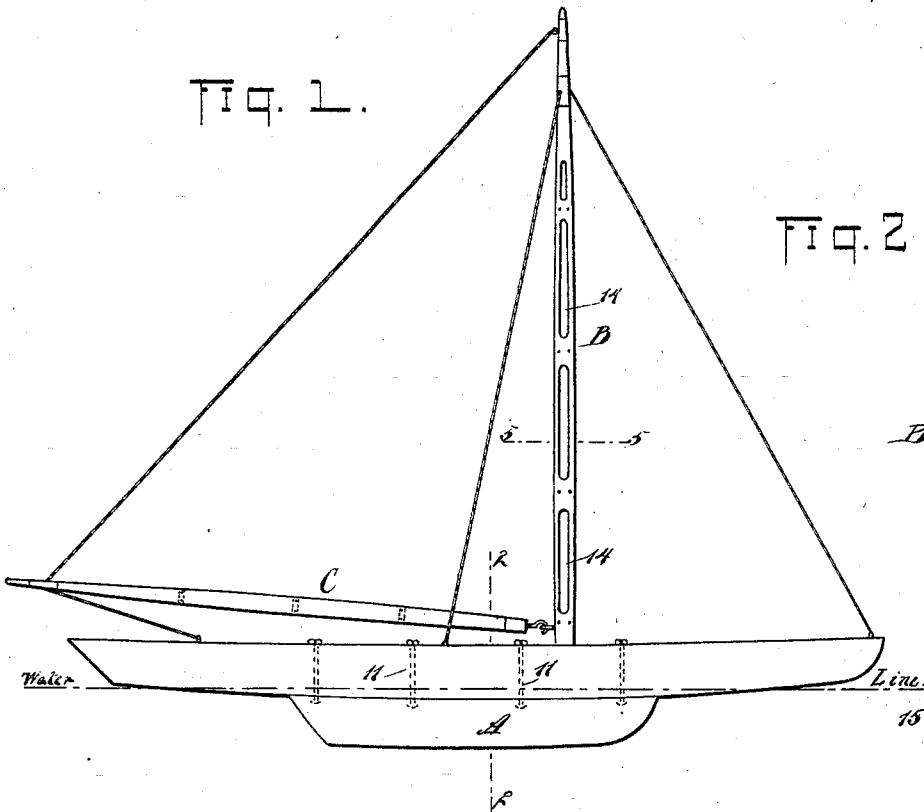


FIG. 2.

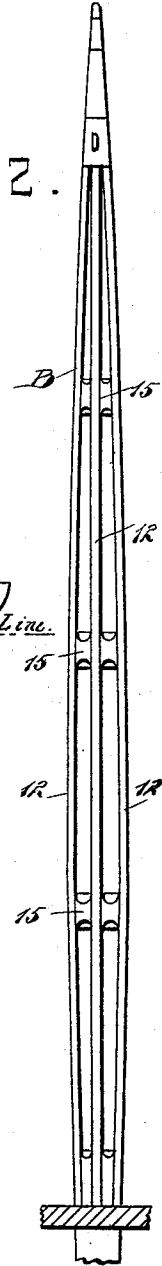


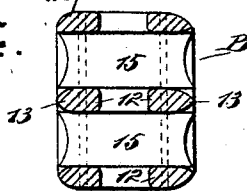
FIG. 3.



WITNESSES

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FIG. 4.



INVENTOR

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SPAR FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 601,494, dated March 29, 1898.

Application filed August 12, 1897. Serial No. 647,972. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CLAPHAM, of Roslyn, in the county of Queens and State of New York, have invented a new and useful Improvement in Spars for Vessels, of which the following is a full, clear, and exact description.

My invention relates to improvements in the spars of vessels, and has for its object to provide a spar which will be exceedingly light and which will offer but little resistance to the wind.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a yacht, showing the improvements applied. Fig. 2 is a front elevation of the mast. Fig. 3 is a plan view of a boom constructed in accordance with my improvements; and Fig. 4 is a horizontal section through the mast, taken substantially on the line 5 5 of Fig. 1.

In the drawings, B is the mast, and C the boom. The mast and boom are built up of flattened longitudinal strips 12, instead of being solid, as is customary. These strips may be two or more in number and are preferably rounded at their longitudinal edges 13, as shown particularly in Fig. 4, and the spars, especially the mast, may have slots or openings 14 made therein to further reduce weight and admit of the wind passing through the spars. The strips or members 12 are pressed apart to any desired distance by blocks 15 or their equivalents, so as to increase strength and stiffness without adding unduly to the weight. The sharp or rounded edges 13 cut

the wind and prevent the mast or spars being winded—that is to say, prevent them from offering resistance to the wind.

It is well known that the spars of vessels as heretofore constructed are not only undesirably heavy, but greatly obstruct the speed of vessels when sailing to windward because of the action of the wind against them. The built-up spars herein described and shown are designed to allow the wind to pass freely through them, as above stated, and thus afford as little resistance as possible.

While I have shown my improvement applied only to the mast and boom, yet it is equally applicable for the gaff, bowsprit, &c.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A spar provided with a series of elongated openings spaced apart and extending transversely through it, and with a second series of transverse openings at right angles to the first series and intersecting the same, substantially as described.

2. A spar, comprising a plurality of longitudinal strips having a plurality of slots and a series of blocks interposed between the strips and to which the said strips are secured, whereby the spar will be provided with two series of openings which are at right angles to and intersect one another, substantially as described.

3. A spar, consisting of a plurality of longitudinal strips having rounded outer edges and provided with a series of slots and blocks arranged between the strips at intervals and to which the said strips are secured, substantially as herein shown and described.

THOMAS CLAPHAM.

Witnesses:

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