

(No Model.)

J. H. COFFIN.
SAIL FOR VESSELS.

No. 479,133.

Patented July 19, 1892.

FIG. 1.

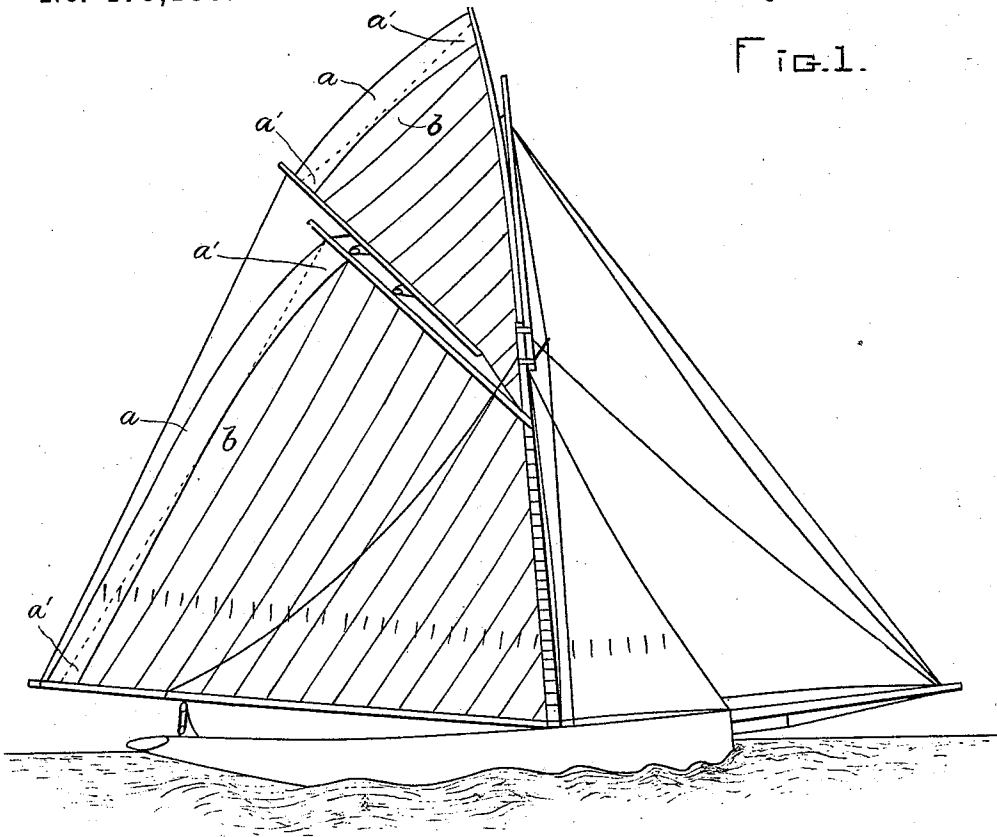
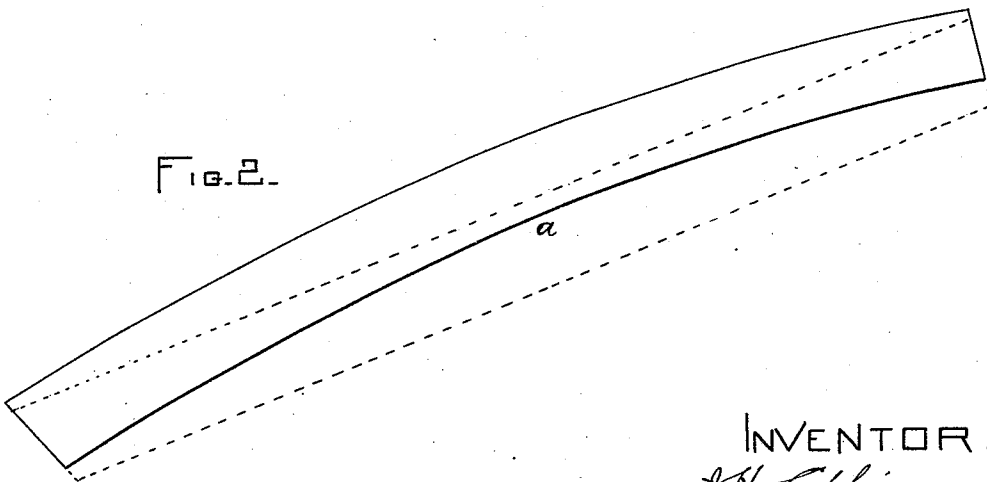


FIG. 2.



WITNESSES.

J. T. Ball.
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INVENTOR.

J. H. Coffin
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UNITED STATES PATENT OFFICE.

JOSEPH H. COFFIN, OF SOMERVILLE, MASSACHUSETTS.

SAIL FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 479,133, dated July 19, 1892.

Application filed June 6, 1891. Serial No. 395,341. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. COFFIN, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain
5 new and useful Improvements in Sails for Vessels, of which the following is a specification.

This invention relates to the sails of yachts and other vessels; and it has for its object to
10 provide an improved sail which shall set well and be capable of catching the wind to the best advantage and prevent what is technically termed "flirting" of the sail.

My invention is particularly adapted for
15 the mainsails and top-sails of yachts and other vessels, although it may be applied to other sails also.

The invention consists in the provision at the free or sloping edge of a sail of a "swelled
20 leech," comprising a curved strip which has a concave inner edge and a convex outer edge and which is affixed to the sail, as I will now proceed to describe and claim.

In the accompanying drawings, forming a
25 part of this specification, Figure 1 represents a side elevation of a sailing-vessel of cutter rig having a mainsail and a top-sail provided with my improvement. Fig. 2 represents a
30 view of my improved edge strip, the dotted lines showing the original form of the strip or piece, while the full lines show its finished shape.

The same letters of reference indicate the same parts in all the figures.

35 In carrying out my invention I take a strip *a* of canvas or other suitable material of the form shown in dotted lines in Fig. 2 and by stretching, dampening, rubbing, and pressing the same cause it to permanently assume the
40 curved form shown in full lines in Fig. 2. When the strip has assumed the said curved form, I sew it onto the strip *b* at the free edge of the sail, thus providing the latter with a swelled leech—that is, a leech having an

expanded or stretched outer edge. It will be
45 seen that the said curved strip overlaps at its ends the strip *b* of the sail, so that the material is double and greatly strengthened at the portions *a' a'*. I have found that this improved edge strip improves the set of the
50 sail, making the free edge thereof stiffer and causing it to set straighter than it would without the said improvement. As the sail stretches the curved strip *a* will gradually be
55 straightened out by wear or pull thereon; but it will always tend to straighten and tighten the free edge of the sail and allow of the escape of wind therefrom, so as to prevent all
60 flirting or flapping of the sail—a thing very objectionable in the sailing of vessels.

I do not desire to limit myself to any particular means or method of giving the curved
strip *a* its curved form, as the same may be cut in a straight strip and caused to assume
65 a curved shape in a variety of ways, the essential features of the invention being a sail provided with a swelled leech, consisting of a curved strip *a* or a strip having a stretched
70 or expanded outer edge, which strip is attached to the slopping edge of the sail by stitching it thereto along its entire length or connecting it in any other suitable way.

I claim—

The improved sail for sailing-vessels, provided with a swelled leech, consisting of a
75 curved strip of any suitable sail material, having a concave inner edge and a convex outer edge, said concave inner edge being attached to the length of the after-leech of the sail, as set forth.
80

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 27th day of May, A. D. 1891.

JOSEPH H. COFFIN.

Witnesses:

C. F. BROWN,
A. D. HARRISON.