

No. 855,238.

PATENTED MAY 28, 1907.

J. V. ERICSON.
SAIL REEFING APPARATUS.
APPLICATION FILED FEB. 25, 1907.

2 SHEETS—SHEET 1.

FIG. 1.

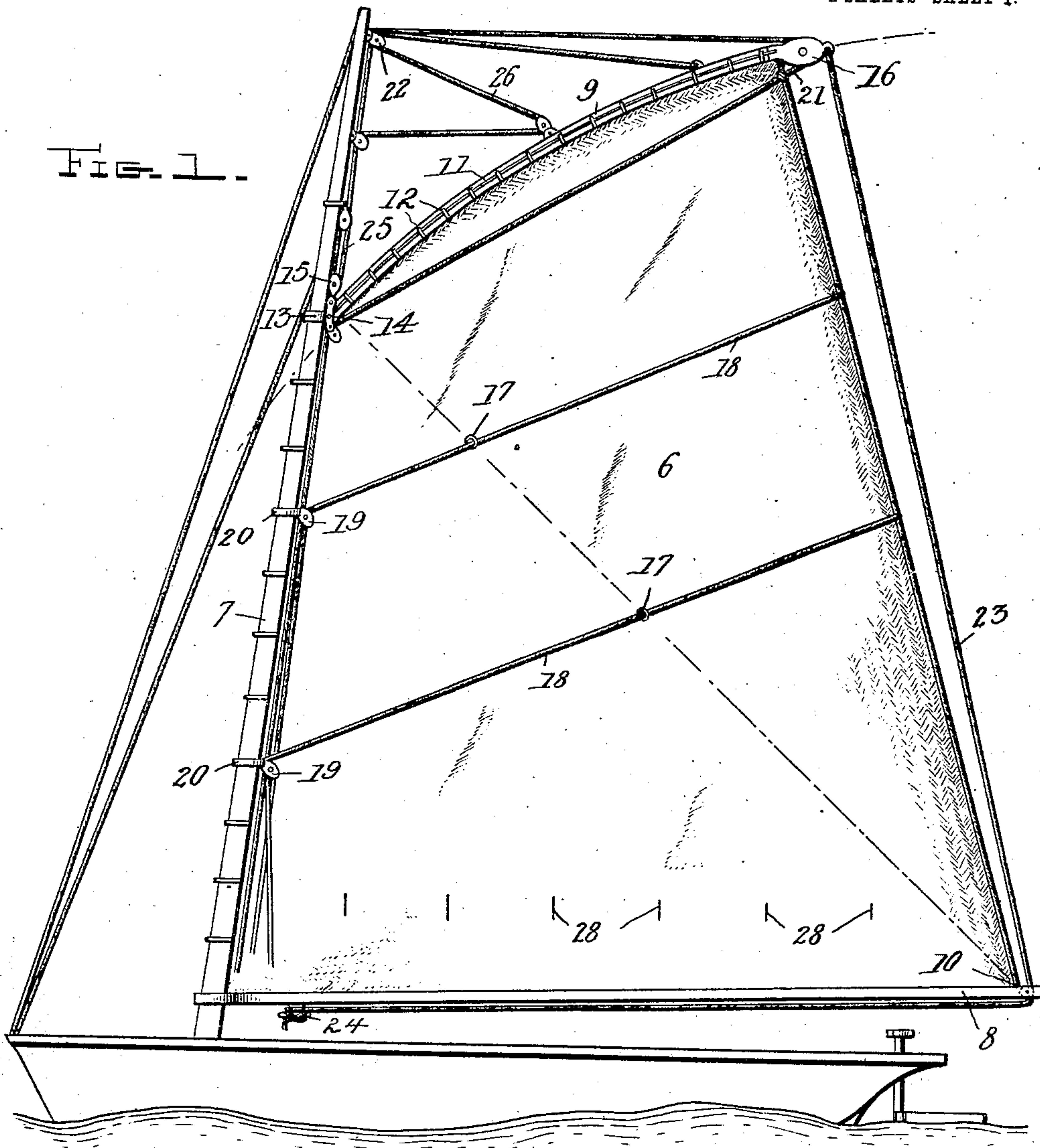


FIG. 3.

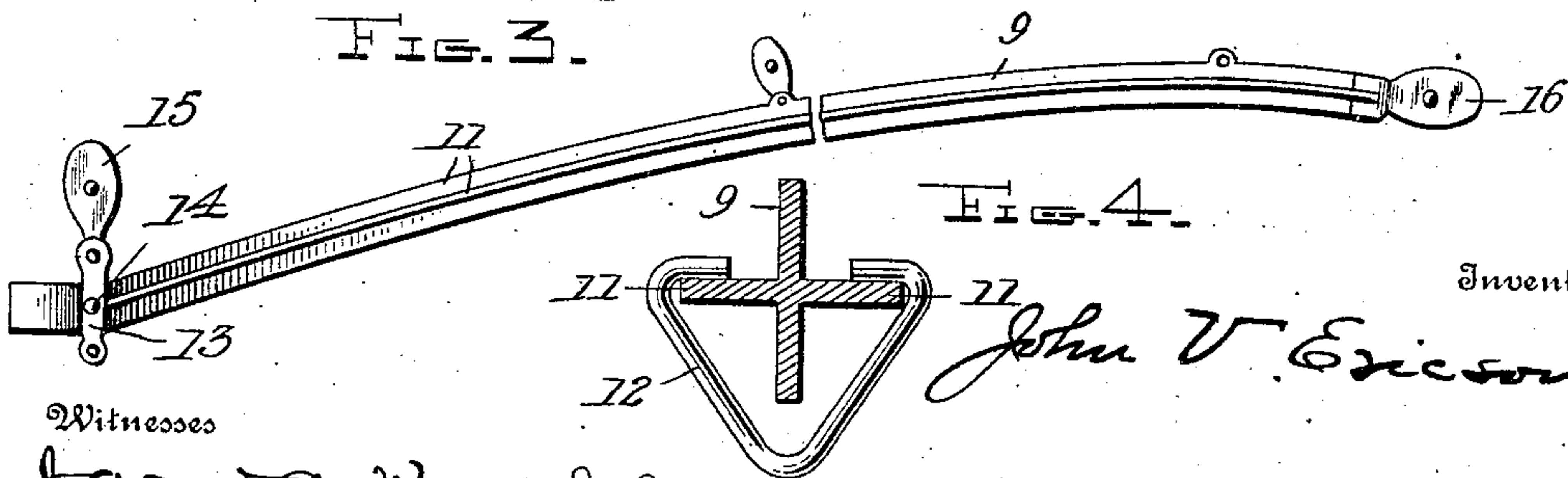
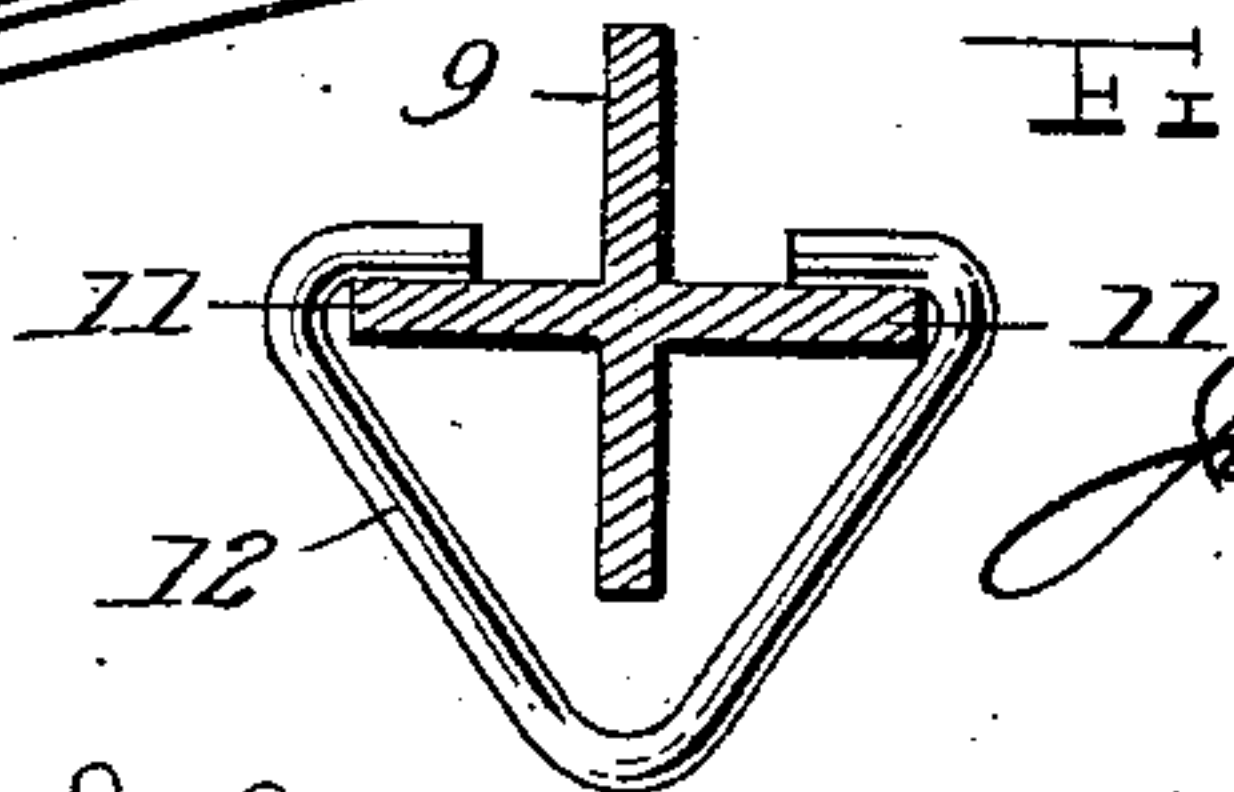


FIG. 4.



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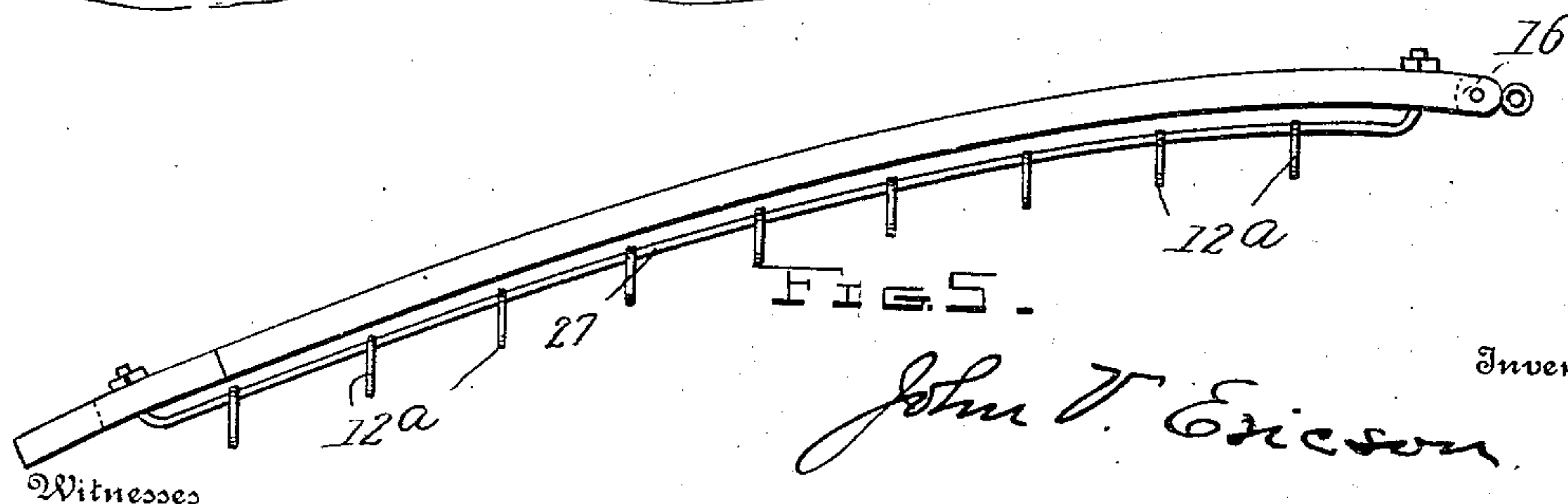
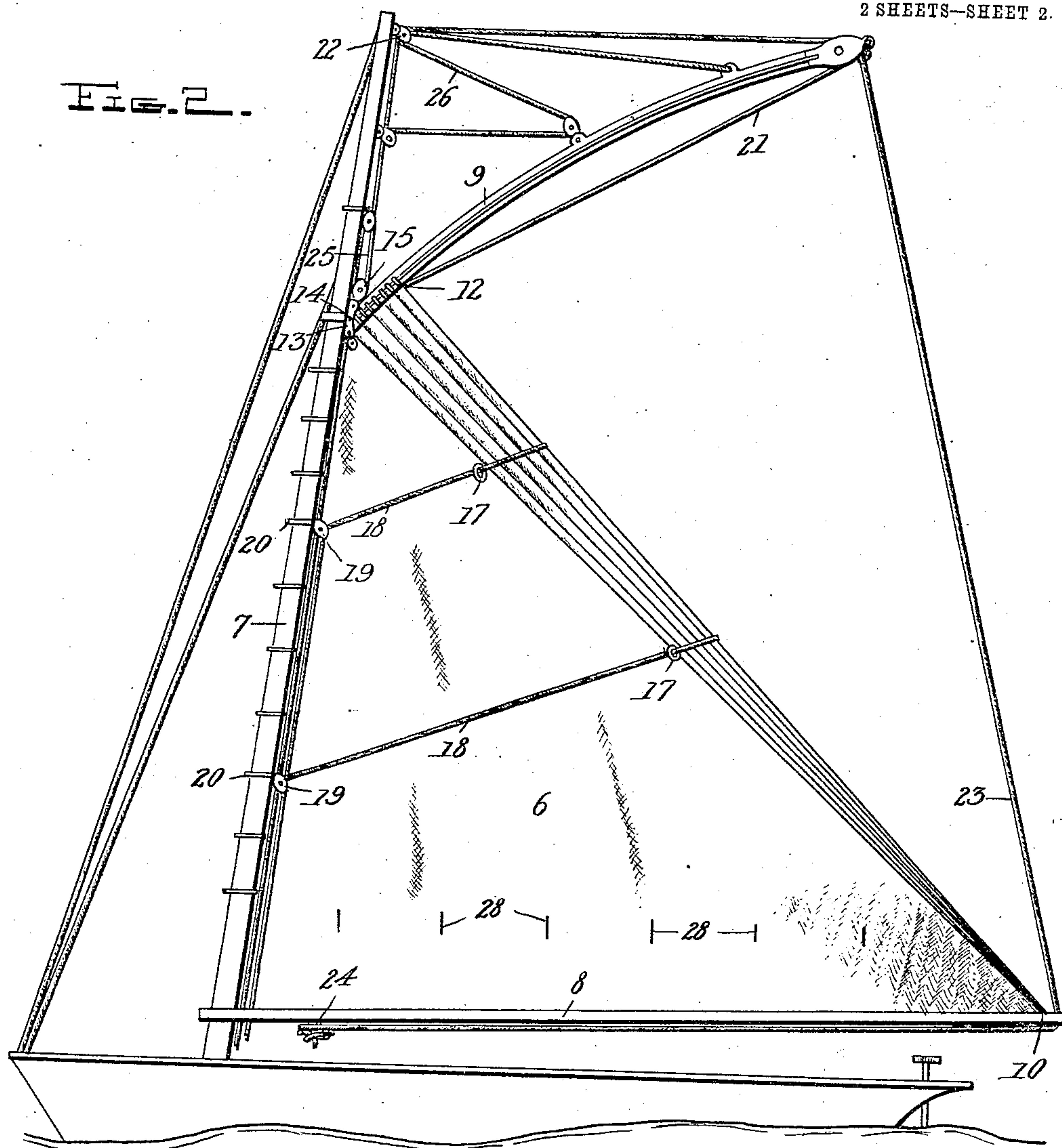
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2 SHEETS—SHEET 2.

FIG. 2.



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UNITED STATES PATENT OFFICE.

JOHN V. ERICSON, OF CHICAGO, ILLINOIS.

SAIL-REEFING APPARATUS.

No. 855,238.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed February 25, 1907. Serial No. 359,103.

To all whom it may concern:

Be it known that I, JOHN V. ERICSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sail-Reefing Apparatus, of which the following is a specification.

This invention is a device or apparatus for reefing fore-and-aft sails, and includes means whereby a plain or gaff sail may be reduced to a triangular or leg-o'-mutton sail in a speedy and efficient manner, and without the use of the ordinary reef points, which, however, can be utilized to still further reduce the sail if necessary.

The invention is illustrated in the accompanying drawings, in which

Figure 1 is a side elevation of a boat with the sail set. Fig. 2 is a similar view with the sail reefed. Fig. 3 is an enlarged detail of a metal gaff. Fig. 4 is a cross section thereof. Fig. 5 is a side view of a wooden gaff.

Referring specifically to the drawings, 6 indicates the sail spread between the mast 7, the boom 8, and the gaff 9. The latter is curved to form an arc having its center at the clew of the sail at 10, and the top or head of the sail has a curve corresponding to that of the gaff.

The metal gaff shown in Figs. 3 and 4 is cross shaped in cross section, and its side flanges 11 support the traveling hangers 12 which are bent to the head of the sail and which are slidable along the gaff. The inner end of the gaff is pivoted to the jaw 13 at 14, and said jaw carries the throat halyard block 15, and the gaff has a pulley 16 at the peak or outer end.

The sail has rings 17 sewed to both sides thereof, for the brails 18 to run through, and these rings are preferably placed on or about a line from the inner end of the gaff to the tip of the boom. The brails are connected to the leech of the sail and extend thence through the rings 17 and through blocks 19 connected to the traveling rings 20 on the mast, and thence down to convenient position for manipulation from the deck. An out-hauling line 21 is connected to the peak

of the sail and runs thence over the pulley 16, through a block 22 at the top of the mast, and thence down beside the mast.

The boom 8 has a sheave hole at the tip, through which the line 23 runs and connects with the peak of the gaff 9, and is made fast to a cleat 24 under the boom. The sail also has the ordinary throat halyards 25 and peak halyards 26 for hoisting the same.

The wooden gaff shown in Fig. 5 has a metal guide rod 27 on the under side, on which runs the sliding hangers 12^a, for the same purpose as above referred to.

To reef the sail the head of the sail is hauled in by the brails 18, the hangers 12 sliding along the gaff, and the sail may thus be reduced to leg-o'-mutton form as shown in Fig. 2, the folds being gathered between the brails and reefed in to the line of the rings 17 through which the brails run. The sail may be further shortened, if necessary, by the use of the points 28, in the usual manner. For resetting the sail the out-hauling line 21 is used.

It is obvious that a sail provided by my invention may be reefed very quickly, since it is only necessary to loosen the out-hauling line and haul in the brails; and the sail may be reset with equal facility.

I claim:

1. The combination with a mast and gaff, of a sail the head of which has traveling connections with the gaff, rings attached to the sail on a line between the outer foot clew and the throat, brails connected at the leech and extending across the sail and through said rings and to the mast and arranged to draw in the head of the sail along the gaff, and an out-hauling line running from the peak of the sail to the outer end of the gaff, and arranged to draw the head of the sail out along the gaff.

2. The combination of a gaff curved on an arc concentric with the clew at the outer lower corner of the sail, a sail having traveling hangers at the head slidable along the gaff, and means to draw the head of the sail in or out along the gaff, to reef or set the same.

3. The combination with a mast, and a curved gaff concentric with the outer clew at the foot of the sail, of a sail the head of which has traveling connections with the
5 gaff, rings attached to the sail on substantially a line between said clew and the throat, brails connected at the leech and extending through said rings to and down the mast, and an outhauling line connected to the peak of

the sail and extending to the tip of the gaff 10 and thence to and down the mast.

In testimony whereof I affix my signature, in presence of two witnesses.

JOHN V. ERICSON.

Witnesses:

JOHN D. MAWL,
GEORGE BROWN..