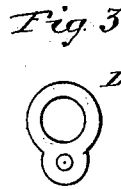
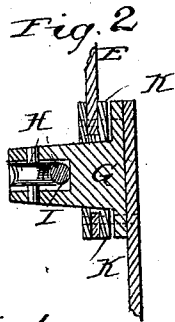
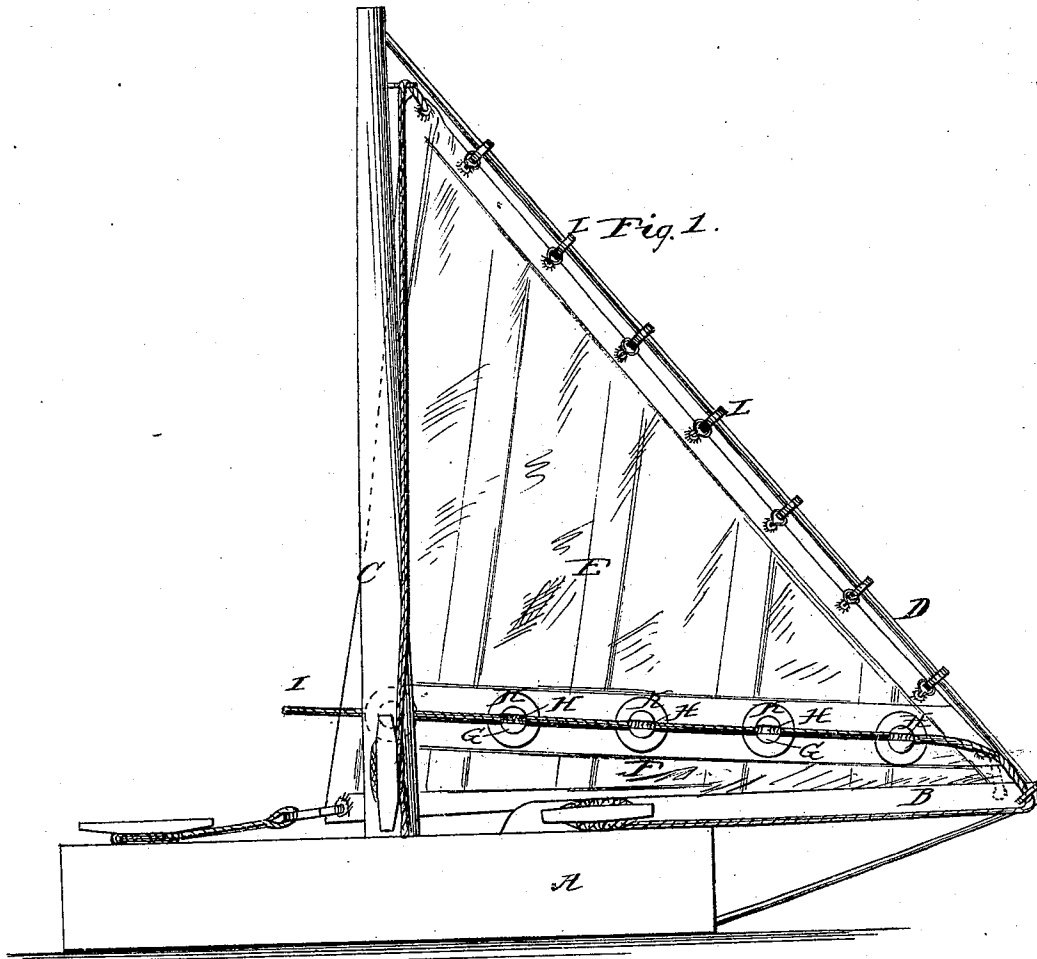


O. W. ATWOOD.
REEFING SAILS.

No. 188,491.

Patented March 20, 1877.



Witnesses
Jm G Distenck
Augustus Watson.

Inventor.
O. W. Atwood
By Daniel Breed atty

UNITED STATES PATENT OFFICE.

OTIS W. ATWOOD, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN REEFING SAILS.

Specification forming part of Letters Patent No. **188,491**, dated March 20, 1877; application filed February 26, 1877.

To all whom it may concern:

Be it known that I, OTIS W. ATWOOD, of Lynn, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Uniting and Reefing Sails, of which the following is a specification:

In the accompanying drawings, Figure 1 is a side view of the bowsprit and part of a vessel with my improvements attached thereto. Fig. 2 is a detached view of the grommet. Fig. 3 is a side view of one of the sliding rings.

In the accompanying drawing, the bow of a vessel is seen at A, with the bowsprit B and mast C thereto attached. The jib-stay is shown at D, with the jib-sail E attached in the usual manner.

In uniting the bonnet F to the sail E I employ grommets having metallic rings K and toggles G, provided with sheaves or rollers H for the reefing-line I, which is drawn through the toggle under the rollers. This is done from the deck of the vessel without going out upon the bowsprit or lowering the jib-sail E.

Having described my invention, I claim—

The metallic grommet-ring K, in combination with the toggle G, provided with roller H, substantially as set forth.

OTIS W. ATWOOD.

Witnesses:

BENJ. A. WARD,
CHARLES T. RUSSELL.