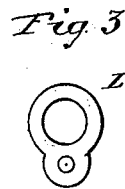
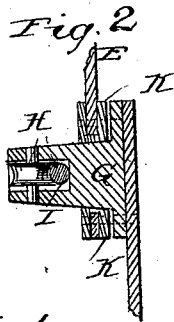
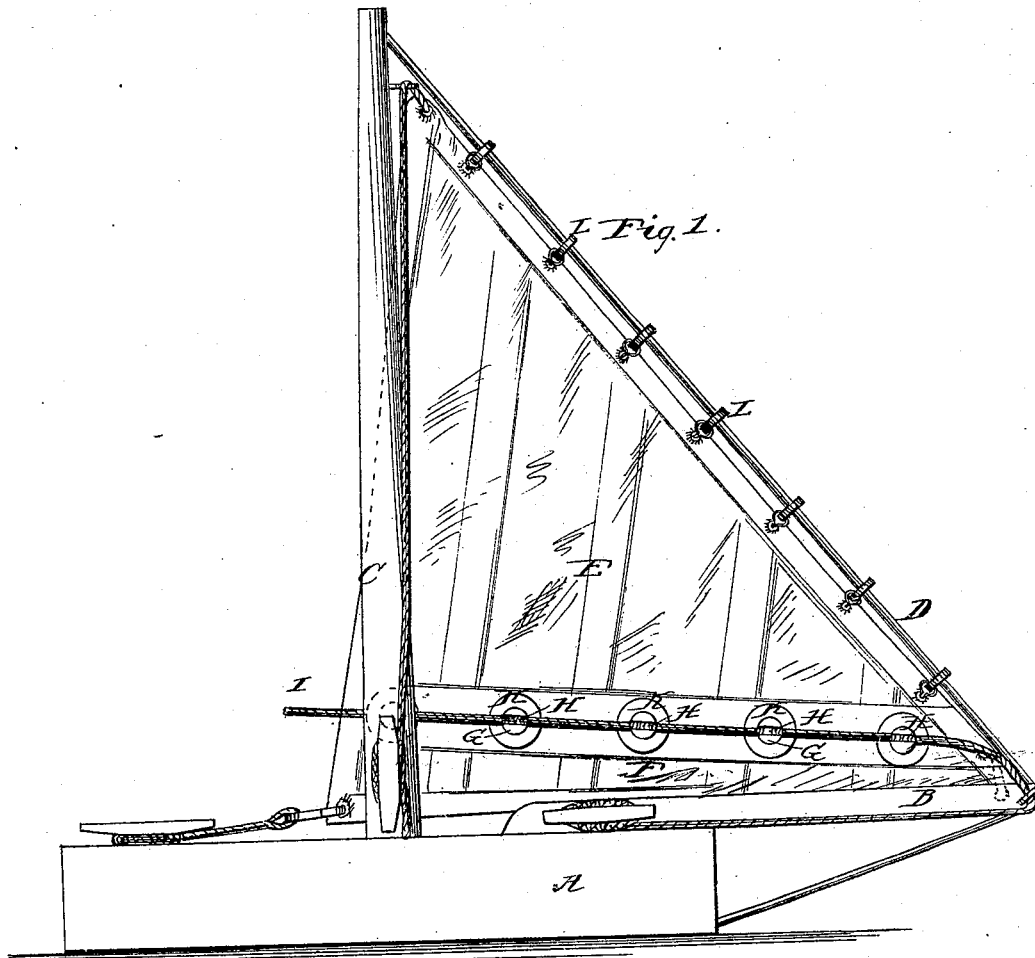


O. W. ATWOOD.  
REEFING SAILS.

No. 188,491.

Patented March 20, 1877.



Witnesses  
*Frank A. Distenck*  
*Augustus Watson.*

Inventor.  
*O. W. Atwood*

By *Daniel Breed*  
*att'y*

# 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.