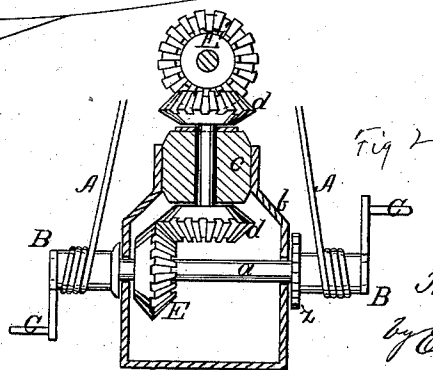
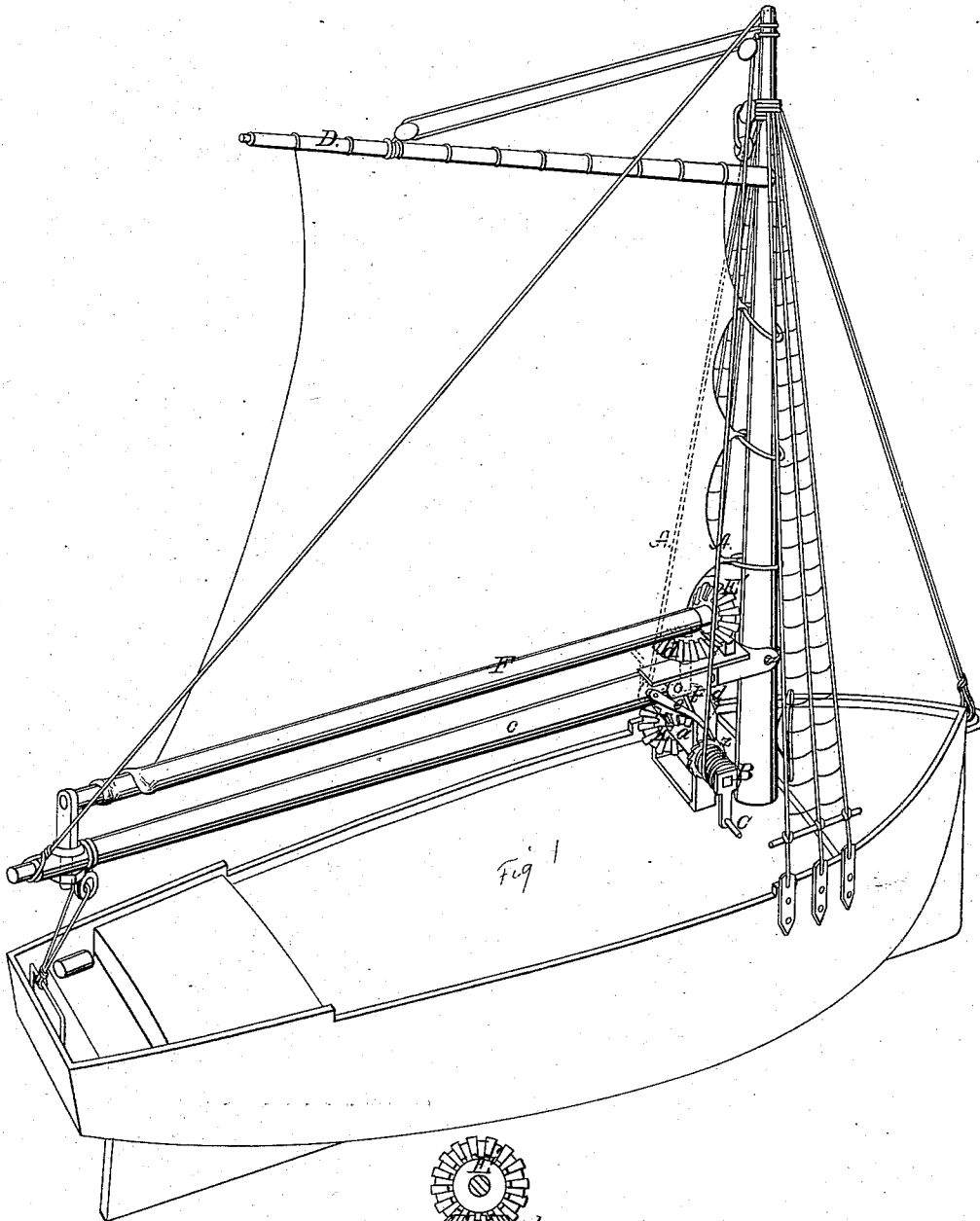


T. B. WILSON.
Reefing Sails.

No. 239,905.

Patented April 5, 1881.



WITNESSES

Villette Anderson
Mary S. Utley

INVENTOR

Thos. B. Wilson,
by E. W. Anderson

ATTORNEY

UNITED STATES PATENT OFFICE.

THOMAS B. WILSON, OF CROCKERY TOWNSHIP, OTTAWA COUNTY, MICH.

REEFING SAILS.

SPECIFICATION forming part of Letters Patent No. 239,905, dated April 5, 1881.

Application filed June 4, 1877.

To all whom it may concern:

Be it known that I, THOMAS B. WILSON, of the township of Crockery, county of Ottawa, and State of Michigan, have invented a new and valuable Mode of Hoisting and Reefing Fore-and-Aft Sails of Vessels; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a perspective view, showing the invention applied; Fig. 2, a detail.

This invention has relation to means for hoisting and reefing fore-and-aft sails; and it consists in the construction and novel arrangement, in connection with the boom and gaff and the halyards, of a boom-roller above and transverse reel-shaft below said boom, and suitable connecting-gear, all as hereinafter shown and described.

In the accompanying drawings, the letter A designates the throat and peak halyards, which are wound around the drums B at the ends of the reel-shaft *a*, the latter being journaled in a frame, *b*, and turned by a crank or cranks, C. On the shaft *a* is keyed, or otherwise secured, a bevel-wheel, E.

F designates the boom-roller, which is seated in bearings on and above the boom *c*, and is provided at its mast end with a bevel-gear, E'.

Through the boom, and suitable bearing-plates secured thereto at its mast end, extends a short shaft having at its upper and lower ends bevel-gear *d*, which are arranged to engage with the wheels E and E' of the crank-

shaft and boom-roller, connecting the same. A pawl, *e*, is pivoted to engage with a ratchet-wheel, *z*, on the crank-shaft.

The halyards having been adjusted to the drums of the windlass, the operation is as follows: In hoisting the crank is turned to the left, winding the halyards upon the drums, and at the same time turning the boom-roller so as to unwind the sail. The sail is reefed by reversing the movement of the reel-shaft, letting off the halyards from the drums, and winding the sail upon the roller.

This improvement is designed to be applied to the booms in ordinary use with fore-and-aft sails, and is adapted to all fore-and-aft sails having booms.

What I claim as my invention, and desire to secure by Letters Patent, is—

A reefing attachment for sails, consisting of a geared boom-roller above the boom, a transverse reel-shaft, and a ratchet and pawl provided with a gear-wheel meshing with the lower gear-wheel of a double-geared vertical shaft, the upper gear-wheel of which meshes with a gear-wheel on the boom-roller, in combination with the gaff and mast and the throat and peak halyards and their tackle, said halyards being connected to drums on the transverse reel-shaft, whereby the sail may be lowered and reefed at one operation by rotating said reel-shaft, substantially as specified.

THOMAS B. WILSON.

Witnesses:

CASLIN HAMILTON,
JOHN J. WISEMAN.