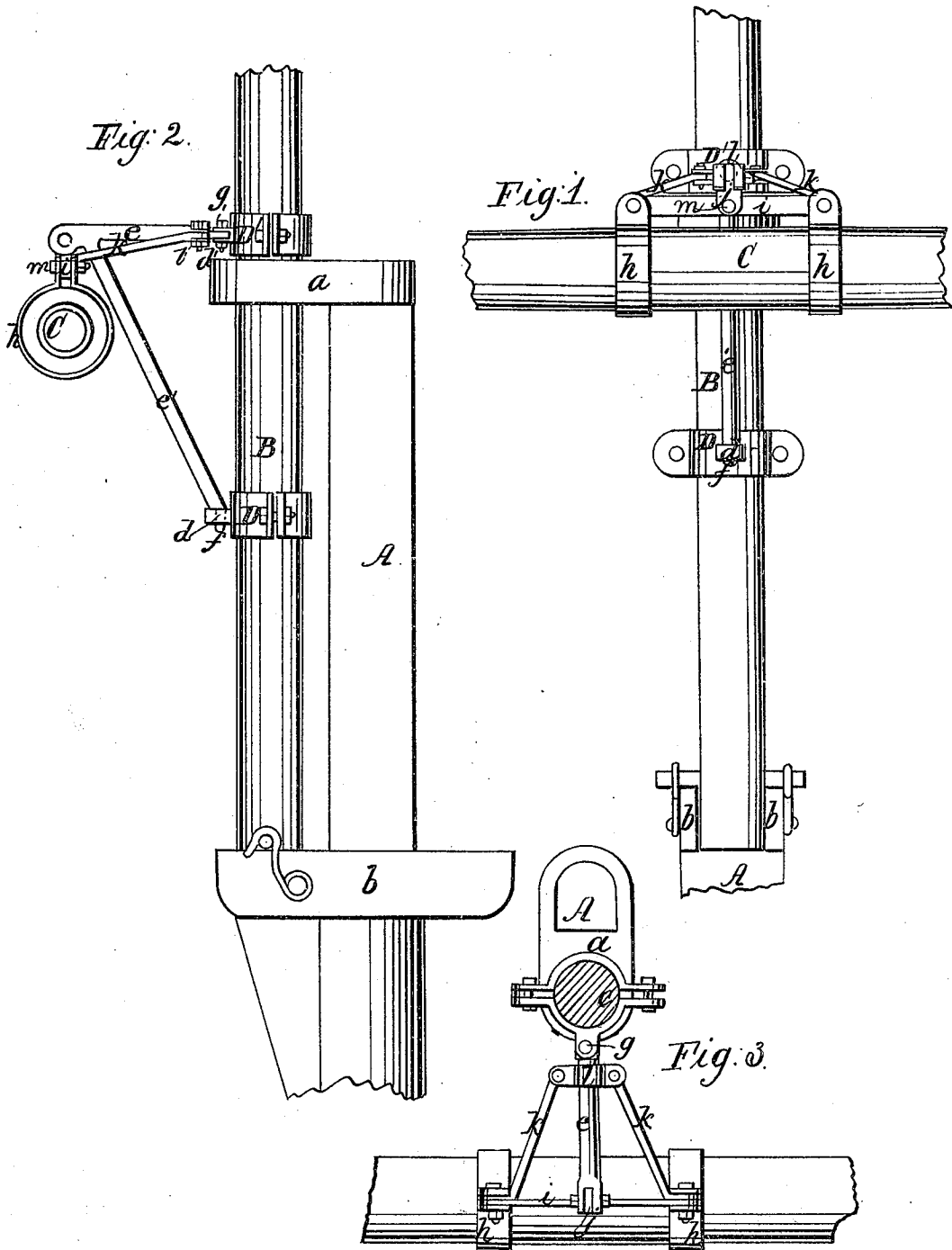


T. Batty,
Masts & Spars.

N^o 13,861.

Patented Dec. 4, 1855.



UNITED STATES PATENT OFFICE.

THOMAS BATTY, OF BROOKLYN, NEW YORK.

SUSPENDING SHIPS' YARDS.

Specification of Letters Patent No. 13,861, dated December 4, 1855.

To all whom it may concern:

Be it known that I, THOMAS BATTY, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in the Hanging of Ship Yards; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a front view of the upper part of a ship's lower mast and lower part of the topmast, with a standing topsail yard hung according to my invention. Fig. 2, is a side view of the same; and Fig. 3, a top view of the same, the topmast being shown in section.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in certain improvements in hanging ship's yards which are more particularly applicable to standing topsail yards as it will obviate the objection which exists to the attachment of the yard to the cap.

A, is the lower mast; and *a*, is its cap.

B, is the topmast.

b, b, are the trestle trees.

D, D', are two clamp bands secured to the topmast, one a short distance above and the other below the cap *a*, the said clamps carrying the supports *d, d'*, for a wrought iron swing crane *e, e'*, from which the yard C, is hung. The bottom of this crane is made with a pivot *f*, to fit a hole or bearing in the lower support *d*, and the upper part is fitted to form a knuckle joint with the support *d'*, and secured by a pin *g*, which with the pivot *f*, are both in one line parallel or nearly so with the mast. The yard is

slung by two quarter bands *h, h*, from the ends of an iron beam *i*, which is suspended at the middle of its length by a shackle *j*, from the crane. The ends of the above beam are stayed to the back part of the arm *e* of the crane by two oblique braces *k, k*, which are bolted to the ends of the beam and to a collar *l*, which turns freely on the arm *e*. The above stays may however be dispensed with in many cases and will only be required for very heavy yards like the standing topsail yards of large ships. When these stays are employed the journal or part of the arm *e*, on which the collar *l*, turns should stand as nearly as possible in line with the pin *m*, of the shackle *j*, which is the center on which the yard swings vertically, and then the stays will not interfere with the vertical swinging of the yard. By hanging the yard in this manner great freedom of movement is obtained and the yard is thrown well out from the mast so as to keep the sail clear, and yet it is as well supported as it could be if close to the mast. Being hung below the center *m*, on which it swings vertically it tends to hang on a balance, and being slung by bands placed at some distance from the center of its length it receives less strain than if suspended by one band at the center.

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

The arrangement of the yard, the beam *i*, and the crane *e, e'*, substantially as and for the purposes herein set forth.

THOMAS BATTY.

Witnesses:

JOS. GEO. MASON,

WM. TUSCHE.