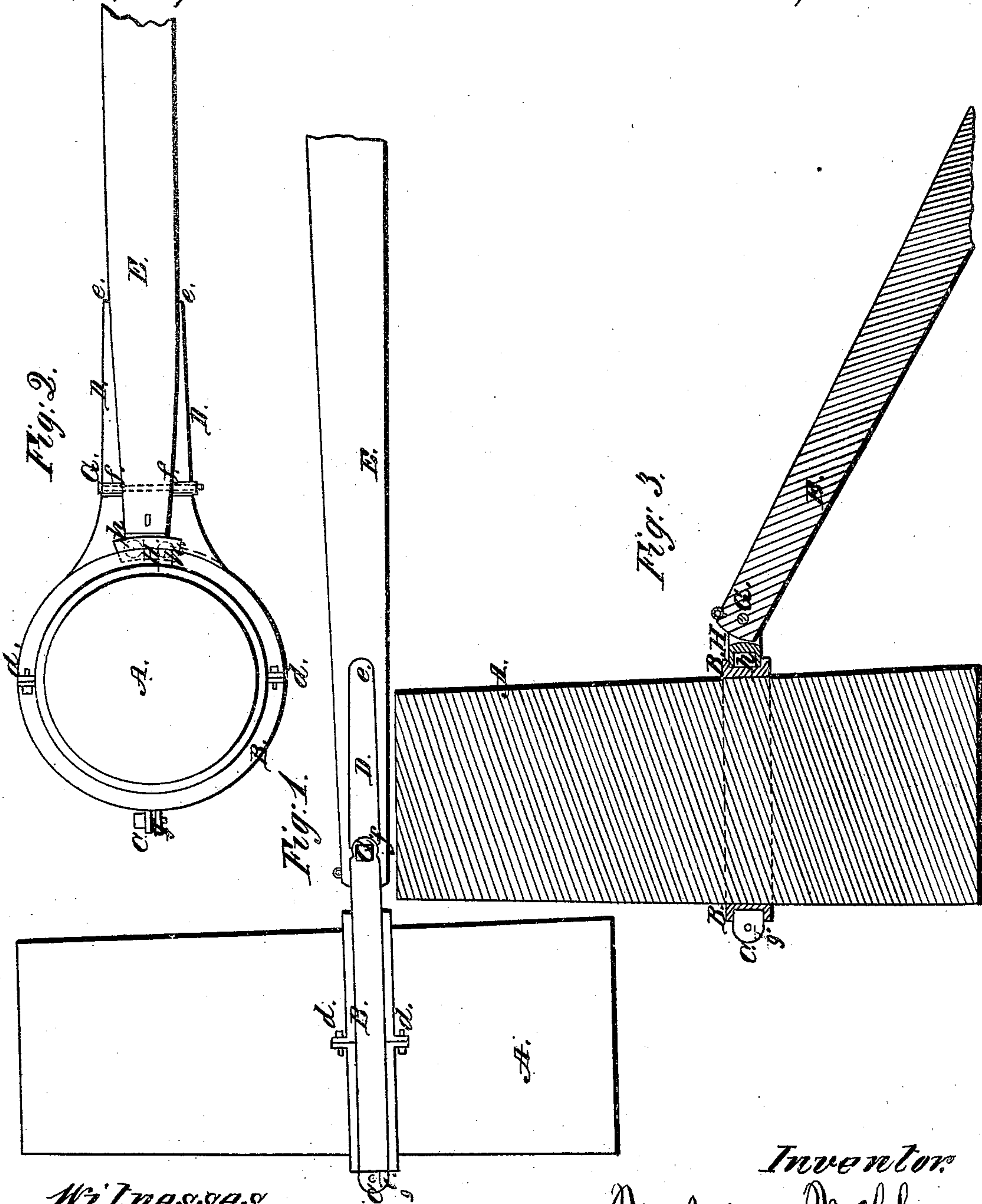


M. McClain.

Attach'g Booms to Masts.

No 40,273.

Patented Oct 13, 1863.



Witnesses.

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UNITED STATES PATENT OFFICE.

MELVILLE MCCLAIN, OF PEMAQUID, MAINE.

IMPROVED MEANS FOR ATTACHING BOOMS TO MASTS.

Specification forming part of Letters Patent No. 40,273, dated October 13, 1863.

To all whom it may concern:

Be it known that I, MELVILLE MCCLAIN, of Pemaquid, in the county of Lincoln and State of Maine, have invented certain new and useful Improvements in Attaching Booms to Masts of Vessels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention consists in constructing a metallic clamp or collar fitting closely and tightly around the mast, said collar having two projecting flanges—one on top of collar and one on the bottom or lower side—for the purpose of securing an exterior collar which is hinged or jointed to the boom. This plan prevents the abrasion and rough wear and tear which vessels of fore-and-aft rig are subject to by the present system of attaching booms to masts, and at the same time forming a neat-looking fixture, perfectly controllable, and simple in construction, as shown in the drawings.

In the drawings, Figure 1 is a side elevation of a portion of said mast and boom connected by the metallic clamp or collar. Fig. 2 is a plan or top view of the same. Fig. 3 is a vertical longitudinal section of the mast and boom.

In the drawings, A is the mast, around which is a metallic clamp or collar, B, which is made in two semicircular parts, with flanges projecting out from the upper and lower edges of the said collar, for the purpose of keeping in place an exterior collar, C. The semicircular parts of the collar B are fastened around the mast A by means of bolts or screws *d d*, passing through projections which extend up and down from opposite ends of the said collar, and by which means the collar B may be made to fit the mast snugly and tightly, so as to prevent its moving or turning in shifting sail.

C is the exterior clamp or collar, and is also made in two parts, semicircular, or nearly so, with arms D D extending out, to which the boom E is attached by means of bolts *e e*, passing through the arms D D and the boom E. The arms D D are made with hinged joints *f*

f, for the purpose of allowing the boom E to be raised and lowered as desired.

G is a bolt which connects the extending arms D D at the hinged joint. The said bolt also passes through the boom E, near the end, and is secured by means of a nut screwed on to the end of the bolt, the said bolt having a head on the end opposite the nut. The exterior collar, C, is secured around the interior collar, B, between the flanges, by means of bolts or large screws *g g*, which pass through projections extending out from the ends of the said semicircular parts of the collar, opposite the arms, by which means the said semicircular parts are fastened firmly together. Then, by means of the boom E, the exterior collar, C, is allowed to turn upon the interior collar, B, for the purpose of shifting sail. The friction attendant upon the turning of the exterior collar, C, upon the interior collar, B, is prevented by means of friction-rollers *h h*, which are contained in a metallic box, H, made for that purpose. The metallic box H, containing the friction-rollers *h h*, is kept in its proper place by means of the flanges projecting out from the collar B and the corners in the projecting arms D D, thus preventing the said box H from being raised or lowered from its place, and also from being shifted endwise from its proper place, the friction-rollers *h h* being designed to act upon the interior collar, B.

The advantages of this attachment over other modes usually adopted for attaching booms to masts can be readily seen, first, in the semicircular construction of the collar, by which means it is attached to and detached from the mast without difficulty, and at the same time can be more snugly secured to the mast by means of the bolts or screws which are provided for that purpose, thus preventing the abrasion of the mast; second, in the construction of the hinged joint, thus allowing the boom to be raised or lowered without affecting the collar which is attached to the mast; third, in the combination therewith of the friction-rollers which prevents the friction of the interior and exterior collars in shifting sail—thus when all parts are combined making a neat, simple, and perfectly controllable fixture.

Having thus fully described my invention,

what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination and arrangement of the interior collar, B, and exterior collar, C, with the boom E and the mast A, substantially as and for the purpose set forth.

2. The combination and arrangement of the hinged joint D with the boom E and the exterior collar, C, substantially as and for the purpose set forth.

3. The combination and arrangement of the friction-rollers *h h* with the metallic box H and the collars B and C, substantially as and for the purpose set forth.

MELVILLE McCLAIN.

Witnesses:

M. M. WELLS,
WM. W. MARSHALL.