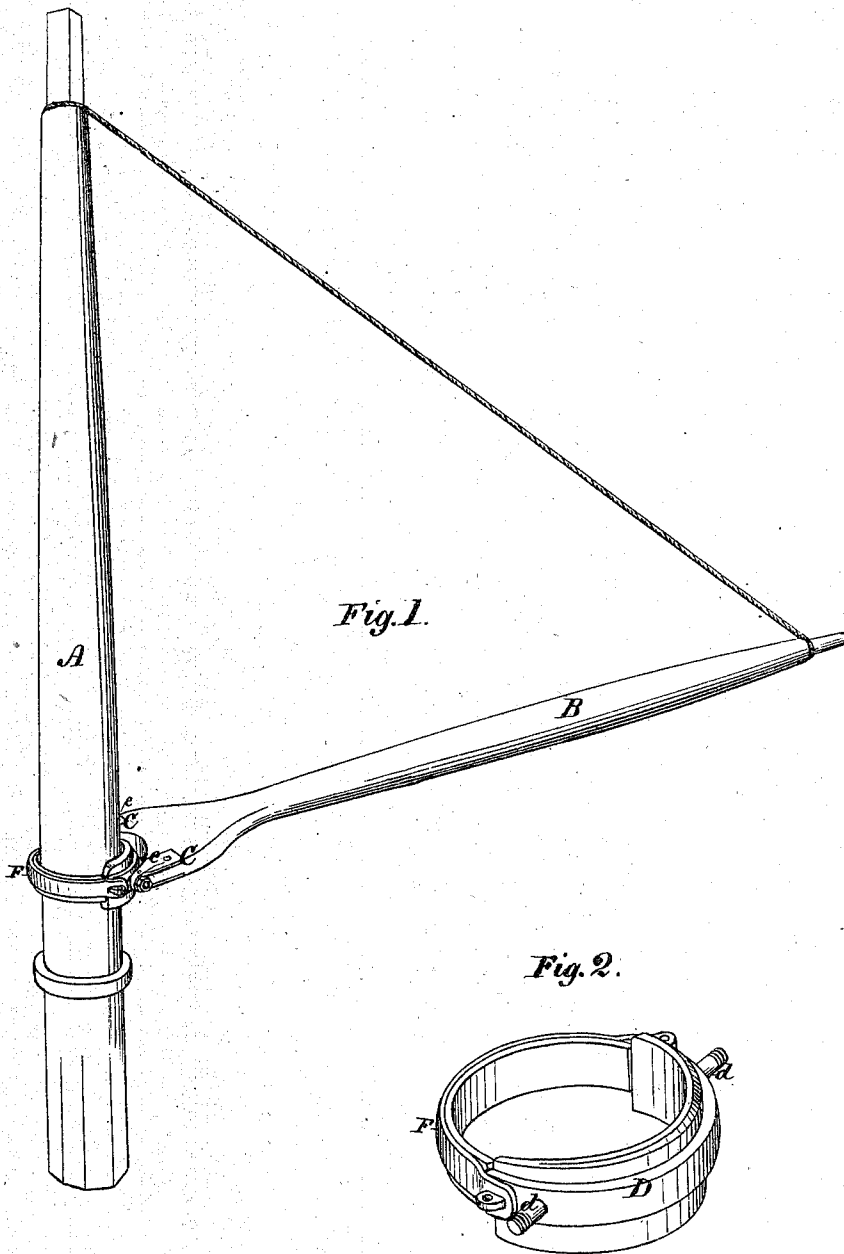


E. ROGERS.

Improvement in Devices for Attaching Booms to Masts.

No. 115,241.

Patented May 23, 1871.



Witnesses.
Phil H. Sarnes.
Frank A. Jackson.

Inventor.
Ezekiel Rogers.
By Wm. Wood
Attorney.

United States Patent Office.

EZEKIEL ROGERS, OF WATERFORD, ASSIGNOR TO HIMSELF AND H. A. BROWN, OF NEW LONDON, CONNECTICUT.

Letters Patent No. 115,241, dated May 23, 1871.

IMPROVEMENT IN DEVICES FOR ATTACHING BOOMS TO MASTS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EZEKIEL ROGERS, of the town of Waterford, and county of New London and State of Connecticut, have invented a new and useful Device for Attaching Booms to Masts.

My invention consists in pivoting the jaws of the boom to opposite sides of a jointed shackle; and I do hereby declare that the following specification, taken in connection with the drawing furnished and forming a part of the same, is a clear, true, and exact description thereof.

Referring to the drawing—

Figure 1 represents, in perspective, a mast with a boom attached thereto by means of my improved device.

Figure 2 represents, in perspective, the jointed shackle detached from the boom and mast.

A is the mast.

B, the boom.

C and C' are the jaws of the boom.

D is the main portion of the shackle.

At its opposite sides are projecting spurs or studs *d*.

e and *e'* are straps attached to the two jaws of the boom. Each of these straps embraces one of the studs *d*, thus permanently connecting with the jaws of the boom the main portion D of the shackle.

F is a binding-strap or auxiliary portion of the shackle. It completes the embracing circle. Its ends are connected, by ears and slots, to the corresponding ends of the main portion of the shackle.

The interior of the main and auxiliary portions of the shackle are lined with wood, so that no undue

wear or friction can occur between them and the mast at the points of contact.

It is desirable in boom-connections to have a free vertical movement when desired, and one which, while it connects the boom firmly to the mast, will also admit of the greatest possible freedom of a semi-rotary movement without materially chafing or defacing the mast at the point of contact.

It will be observed that in hoisting the boom like the one herein described the shackle is lifted evenly on the mast whether the end of the boom be elevated or depressed, and that no clogging of the shackle can possibly be effected by the position of the boom.

For mounting gaffs I employ only the main shackle D, which is pivoted, as already described, to their jaws.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The semicircular shackle D, provided with projecting studs *d* for connecting with the jaws of the boom, and the binding-strap E, the two being connected substantially as described, for the purposes specified.

2. The improved gaff-jaw herein described, consisting of the jaws *e* and *e'*, and the semicircular shackle D, the two being permanently connected by means of the studs *d*, substantially as described.

EZEKIEL ROGERS.

Witnesses:

GIDEON F. RAYMOND,
ABRAHAM S. DUNOUR.