

J. Nute.

Attaching Rigging to Masts.

N^o 107,093.

Patented Sept. 6, 1870.

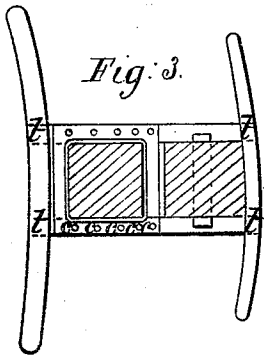


Fig. 3.

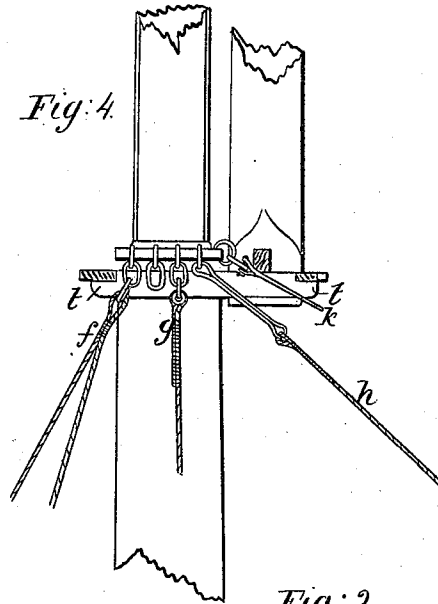


Fig. 4.

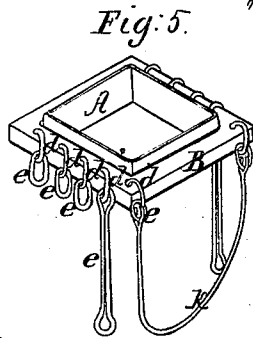


Fig. 5.

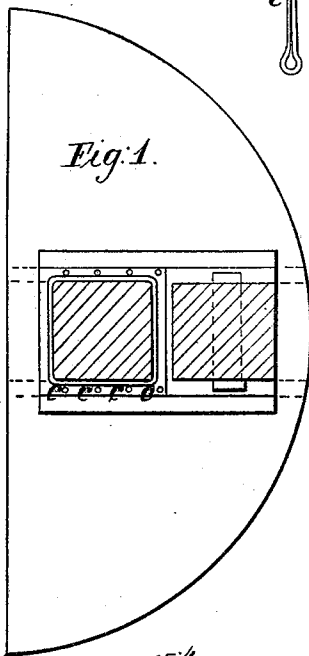


Fig. 1.

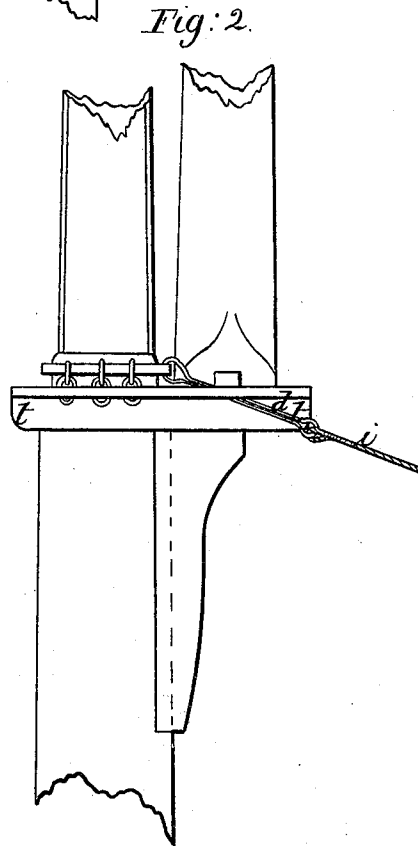


Fig. 2.

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JAMES NUTE, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 107,093, dated September 6, 1870.

IMPROVEMENT IN APPARATUS FOR ATTACHING STANDING RIGGING TO MASTS.

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

I, JAMES NUTE, of Boston, in the county of Suffolk and State of Massachusetts, have invented a Method of Attaching the Standing Rigging of Vessels to the Mastheads of Lower Masts and Top Masts, of which the following is a specification.

Nature and Object of the Invention.

My apparatus consists of a double (or compound) wrought-iron band fitted upon the masthead just above the trestle-trees, to which band the shrouds and stays are attached by means of links made into the outer portion of said compound band and iron shackles rigged into and supporting the standing rigging.

Description of the Accompanying Drawing.

Figure 1 represents the apparatus (without the links) as seen from above on a section of a lower foremast-head.

Figure 2 represents a side view of the same, with the links, one of the latter being in position to support the forestay.

Figure 3 represents the apparatus (without the links) as seen from above on a section of the foretopmast-head.

Figure 4 represents a side view of the same, with the links, and also with a bail, (the use of which will be duly explained,) a topmast-shroud and backstays, all properly attached, and a long link in its proper position to support the foretopmast-stay.

Figure 5 is an isometric view of the two parts of my apparatus, as intended to be applied to the foretopmast, placed together for use, but detached from the mast-head.

General Description.

The inner portion, A, of my compound band, is itself a broad band of wrought-iron, say from seven to nine inches wide by one-half to five-eighth inches thick, and fits closely upon its mast-head directly above the trestle-trees *t t*, where the mast is squared. This band is galvanized (coated with zinc) after being wrought to its exact shape. This I call the inner band. Its outside is tapered from below upward just enough to receive and hold securely the outer portion of the compound band below described.

Thin plates of wrought iron, resting upon the trestle-trees, and secured to them, will prevent, in case of necessity, the band A from settling and cutting into the wood of the trestle-trees.

The outer portion, B, of my compound band is also of wrought iron, (not galvanized,) say two to three inches deep, *i. e.*, between its upper and under surfaces, and three to four inches thick, *i. e.*, from its outer edge to its inner surface that rests on the inner band. This I call the plate-band. The central opening of the

plate-band is just large enough to allow the band to slip with ease partly down upon the inner band, tapered to receive it, as before stated. The surfaces of this central opening are beveled slightly, to correspond to the taper of the inner band, and the plate-band is made to fit very firmly upon the inner band by being heated and shrunk on.

Near the outer edge of the plate-band, on the side toward the beams of the vessel, eyes, *c c c c c*, are made, three, four, or five, in number, according to the rig of the particular mast, and in each eye is inserted a wrought-iron link, *d*.

At the foretopmast-head of a square-rigged vessel a second link, *e*, is made into each of the above-described links *d d d d d*. At the foremast-head the forward one of the links *d d d d d* is made long and of the general shape seen in fig. 2, while into each of the others a second link, *e*, is made. The size of the iron to be used for the links and for the bail the practical shipsmith will determine, having due reference to the dead-eye straps, eye-bolts, or other devices to which the rigging is set up below.

To make use of my apparatus, the upper ends of the shrouds, swifters, and forestay of the lower foremast, and of the foretopmast stay, shrouds, and backstays of the foretopmast are doubled through bull's eyes or over lift-shackle thimbles, and seized in the usual manner below the doublings. The bull's eyes or lift-shackles are then secured in place by being shackled into their respective links, as shown in fig. 4, and the several shrouds, &c., can afterward be set up at the lower ends in the usual manner.

In fig. 4—

f represents the starboard-backstays attached by a bull's eye;

g represents the forward topmast-shroud on the starboard side, attached by a lift-shackle, (with thimble;) and

h represents the starboard half of the foretopmast stay, in connection with its appropriate link, though not properly attached to it.

In fig. 2—

i represents the starboard half of the forestay in connection with its appropriate link, but not properly attached to it.

In large square-rigged vessels the jib-stay and flying-jib stay now generally lead to the foretopmast-head; and

In figs. 4 and 5—

k represents a bail, (similar in general shape to the bail now sometimes used on the mast-heads of fore-and-aft schooners,) each of its ends terminating in two eyes, so as to receive a bolt, best shown in fig. 4. By this bolt either end of the bail is shackled to the lower forward link provided for it, as shown in the drawing.

The jib-stay and flying-jib stay are attached, side by side, to the bail *k* in the manner shown for attaching the shroud *g*, fig. 4, to the third lower link. In practice it may sometimes be found that the lower ends of the long links, and perhaps the ends of the bail, are spread outward by the width of the trestle-trees *t t*. This may be prevented in the manufacture by bending each long link and each arm of the bail outward in the center to a bow-shape.

The foregoing description, and the drawing referred to, give the details applicable to the foremast-head and foretop-mast-head of a ship. The apparatus may, however, be applied to any lower mast-head, whether square-rigged or not, and to any top-mast-head by making such alterations or omissions in the details as a practical shipsmith would find necessary. Thus the plate-band *B*, on the main-mast of a fore-and-aft schooner, would have, at the most, but three eyes on each side, and no long links.

If applied to yachts and other small vessels, the several parts of the apparatus would, of course, be diminished in size.

The advantage of using my apparatus consists—

First, in saving both the rigging and the mast-head from being rotted by the moisture that always collects when the old method is followed, and from being cut and worn away (as in the old method) by the strain and working of the mast-head in the eyes of the rigging; and

Secondly, in the opportunity it gives to renew any portion of the standing rigging of a lower-mast or square-rigged topmast, without stripping and sending down all the spars above it.

Claims.

1. The plate-band *B*, (whether of iron or any other metal or composition of metal,) made substantially as and for the purposes hereinbefore set forth.

2. The combination, in one apparatus, of the inner band *A* and the plate-band *B*.

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Witnesses:

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