

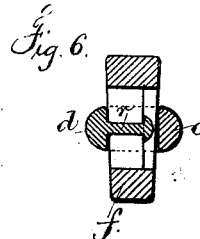
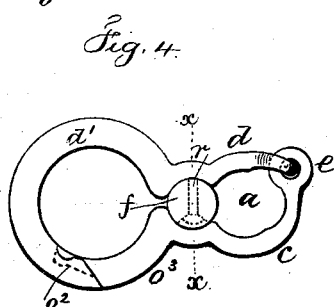
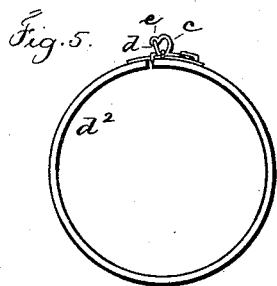
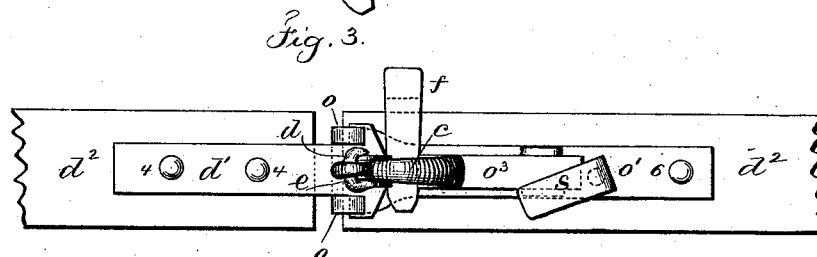
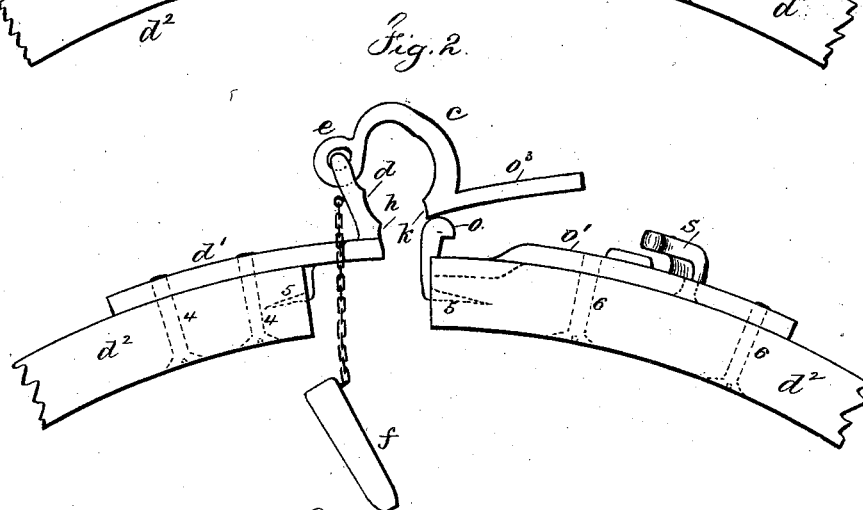
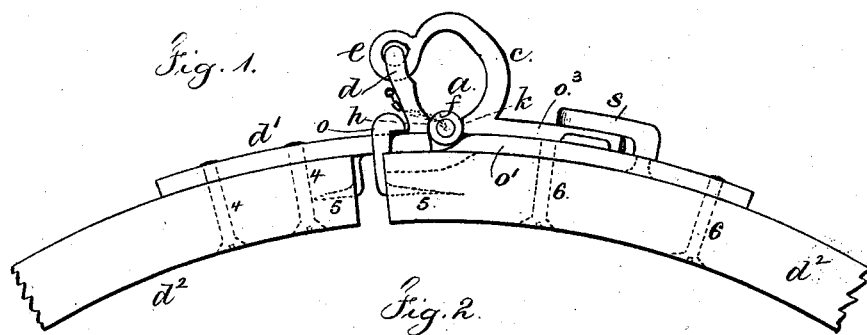
(No Model.)

C. A. MATHIESEN.

SAIL HANK.

No. 261,620.

Patented July 25, 1882.



Witnesses

Charles Smith  
J. Hall

Inventor

Carl A. Mathieson  
per Lemuel W. Ferrell att.

# UNITED STATES PATENT OFFICE.

CARL A. MATHIESEN, OF BROOKLYN, NEW YORK.

## SAIL-HANK.

SPECIFICATION forming part of Letters Patent No. 261,620, dated July 25, 1882.

Application filed September 29, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, CARL A. MATHIESEN, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Sail-Hanks, of which the following is a specification.

In Letters Patent No. 210,951, granted to me December 17, 1878, a hank is represented in which there are two eyes, one for the leech-rope and the other for the stay-rope, the two eyes being hinged and having an interlocking clasp.

My present invention relates to an improvement upon the aforesaid devices, whereby the hank is made to clasp the leech-rope more firmly, and also adapted to a mast as well as a stay.

In the drawings, Figure 1 is a side view of the hank in a form adapted to a mast and leech-rope. Fig. 2 is an elevation of the parts as opened. Fig. 3 is a view edgewise of the mast-hoop, and Fig. 4 represents the parts with an eye adapted to a stay. Fig. 5 is a view in smaller size, representing the hank and the whole of the mast-hoop; and Fig. 6 is a cross-section of hank and pin at the line *xx* of Fig. 4.

The eye *a* for the leech-rope is made of the two metal parts *c* and *d*, hinged together at *e*. It is preferable to make these of malleable cast-iron, the hinge *e* being formed of two interlocking eyes, one of which, after being cast, is placed in the flask of the mold, and the second eye cast through the first, as usual in casting harness hardware. The ring or hoop that passes around the mast or the stay is adapted to be opened, and after the parts have been shut together and clasped a tapering pin, *f*, is inserted between the parts *c* and *d* into recesses at *k k*, so as to effect two objects—the first to prevent the hoop or ring becoming unclasped, and the second to press upon the side of the leech-rope and clamp the same firmly into the eye *a*.

When the present improvement is upon a small ring adapted to a stay the parts will be clasped together, as in my aforesaid patent, or the tongue *o*<sup>2</sup> may be at the end of the shorter part *c* of the hank, passing into a recess at the inner end of the longer portion *d* of the hank, as seen in Fig. 4.

With my improvement applied to a mast-

hoop the side *d* of the leech-rope eye is extended in the form of a strap, *d'*, which is fastened by screws 4 to the end of the wooden mast-hoop *d*<sup>2</sup>, and there is a hook, *o*, at the end of a strap, *o'*, that catches into the strap *d'* to join the ends of the wooden mast-ring *d*<sup>2</sup>. It is to be understood that the wooden mast-hoop is put around the mast by pressing the ends apart laterally a distance sufficient to pass the hoop around the mast. The strap *o'* is secured to the mast-hoop *d*<sup>2</sup> by screws 6 6.

The hook *o* may be single and pass into a mortise in the strap *d'*; but I prefer to use a double hook that catches over the T-head at the end of the strap *d'*, as shown.

As it is preferable to be able to disconnect the leech-rope without unhooking the ends of the mast-hoop, I therefore fasten the side *c* of the leech-rope eye to the strap *o'* by a movable pin or button, *s*. I prefer to place the end or strap *o*<sup>3</sup> of *c* between two ribs on *o'*, and turn over it the button *s* to hold it down into place after the leech-rope has been placed in the eye *a*.

The ends of the straps *d'* and *o'* are preferably made with pins or hooked spurs 5 on their under surfaces to pass into the ends of the mast-hoop to lessen the strain of the sail on the screws 4 and 6.

The mast-hoop is of one piece of wood bent to shape. It can be more easily and cheaply constructed than the ordinary mast-hoops, because the lapping and riveting are dispensed with.

The tapering pin *f* may be held in place by a chain; but I prefer to make a longitudinal slot in the pin and provide a feather, *r*, on dotted lines, Fig. 4, upon the part *d* of the hank, the end of which is spread by riveting sufficiently to prevent the tapering pin becoming separated, and at the same time the pin is free to be moved endwise when driven in between the parts *c d*, as aforesaid.

It will be apparent that this sail-hank or mast-ring can be applied on topmast-yards or under any circumstances wherever available.

I claim as my invention—

1. The combination, in a sail-hank, of the parts *c* and *d*, hinged together at *e* to form the leech-rope eye *a*, means for hooking the ends of *c* and *d* together, and the tapering pin *f*, inserted between the parts *c* and *d* so as to press

upon the side of the leech-rope, substantially as set forth.

2. The combination, of the leech-rope eye *a*, the mast-hoop, the straps *d'* and *o'*, and the  
5 hook *o*, substantially as set forth.

3. The combination, with the leech-rope eye *a*, straps *d'* and *o'*, hooks *o*, of the mast-hoop and tapering pin *f*, introduced between the parts of the leech-rope eye, substantially as set  
10 forth.

4. The combination, with the parts *d* and *c*,

hinged together at *e*, and forming the leech-rope eye, of the tapering pin having a longitudinal slot, and the rivet or screw passing through said slot, for the purposes and as set  
15 forth.

Signed by me this 23d day of September,  
A. D. 1881.

C. A. MATHIESEN.

Witnesses:

WILLIAM G. MOTT,

LEMUEL W. SERRELL.