C. A. MATHIESEN.

Sail-Hank.

No. 210,951. Patented Dec. 17, 1878.

Fig. 1.

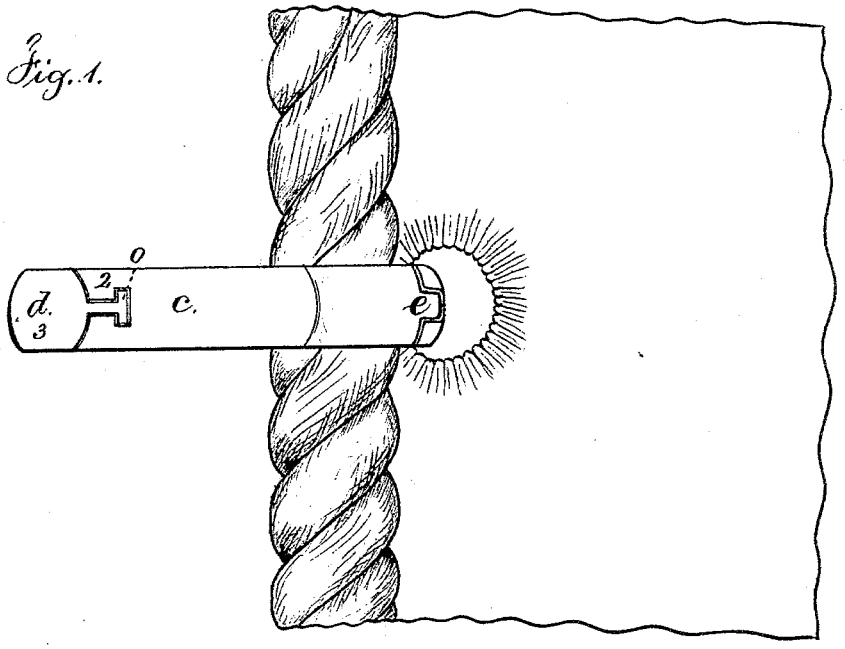


Fig. 3

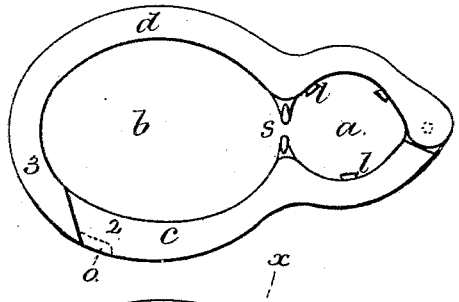


Fig. 2.

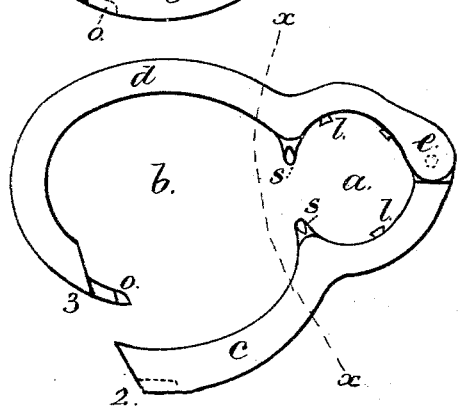
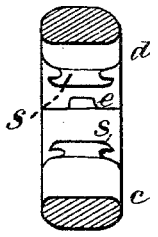


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

CARL A. MATHIESEN, OF NEW YORK, N. Y.

IMPROVEMENT IN SAIL-HANKS.

Specification forming part of Letters Patent No. **210,951**, dated December 17, 1878; application filed May 24, 1878.

To all whom it may concern:

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

Sail-hanks have been made to open for passing the eye over the stay or for disconnecting the sail and removing the same. In these hanks a latch or catch is employed which is liable to become injured in use and is costly to manufacture.

My invention relates to a two-part sail-hank that is jointed at one side of the eye that receives the leech-rope, and is provided with an interlocking clasp in the stay-eye of the hank, such clasp closing outwardly, so that the expansion of the leech-rope and the strain of the sail tend to tighten the clasp. It may, however, be forcibly pressed inwardly, and the hank opened for removal from the stay or from the sail, or both.

In the drawing, Figure 1 is an edge view of the sail-hank as in use. Fig. 2 is a side view of the hank as open, and Fig. 3 is a similar view as closed. Fig. 4 is a section at the line *x x*.

The hank is made with two eyes, *a b*, the eye *a* being of a size to receive and tightly fit around the leech-rope, and the eye *b* to slide on the stay or upon the rod or spar.

The side *c* of the hank is connected to the side *d* by a hinge or other suitable joint, *e*, that is at one side of the eye *a*, and such joint is not made as a tight knuckle-joint, but it is sufficiently loose to allow the moving end 2 of the side *c* to be passed at one side of the hooked end 3 of the side *d*, so as to come within the hooked end and close against the same outwardly.

It will now be understood that the hank is to be opened and threaded through the eye in the sail, and then closed around the leech-rope, and as said leech-rope is of a size to fill the eye *a*, the swinging side *c* cannot be passed at the side of and within the hooked end 3 without compressing said rope, and that the expansion of the rope causes the end 2 to set firmly within the hooked end 3.

As an additional security for connecting the ends 2 and 3, a headed projection or T-ended tongue, *o*, is provided at the end 3, and a similar-shaped recess in the surface of the part 2 of the hank, near the end thereof. These parts interlock when the hank is put in place, and strengthen the hank and render it impossible to misplace the same accidentally when properly applied.

I remark that these hanks are to be applied to the leech-rope and hooked around the stay in putting the sail in place, and the inner surfaces of the hank that slide upon the stay are made rounding and smooth.

There may be studs or projections at *l* within the eye *a* to press into the rope or between the strands, or there may be inclined ribs for the same purpose, so as to cause the hank to grasp the leech-rope firmly; and there may also be T-ended lugs *s* at the junction of the eyes *a b*, upon which a strip of leather or india-rubber may be hooked to form a lining for the eye *a* in case it may be too large for the leech-rope.

By this construction the shipping and unshipping of sails are greatly facilitated, and the sail-hank is retained at right angles, or nearly so, to the edge of the sail, without risk of injuring such sail or leech-rope, and it will slide freely upon the stay, rod, or spar without wearing the same.

This hank cannot stretch or distend under strain, and hence the sail will always be kept close to the stay.

I am aware that sail-hanks have been made of two parts, hinged together, and having two eyes, and these have been provided with catches, clamps, or screws. In my hank, the joint being in the smallest eye, both eyes are opened at the same time, and hence on closing the hank the leech-rope is compressed by leverage, and the expansion of the leech-rope prevents the hank opening. Furthermore, in the hanks before made the parts opened outwardly, and hence had to be held together against the internal strain. In my hank the parts are disconnected by an inward compression, and the ordinary circumstances of use tend to keep the parts locked together.

I claim as my invention—

1. The sail-hank made with the two parts *c* and *d*, hinged together at *e*, and provided with

the interlocking ends that close together in an outward direction, and are separated by pressing the moving end inwardly before opening the hanks, substantially as set forth.

2. The parts *c* and *d* of the sail-hank, hinged and interlocking together substantially as set forth, in combination with the projections *s* near the junction of the eyes *a b*, substantially as and for the purposes set forth.

Signed by me this 18th day of May, A. D. 1878.

CARL A. MATHIESEN.

Witnesses:
GEO. T. PINCKNEY,
CHAS. H. SMITH.