

E. A. Sawyer
Sail Clutch.

Patented Jun. 6, 1865.

No. 48,103.

Fig. 1.

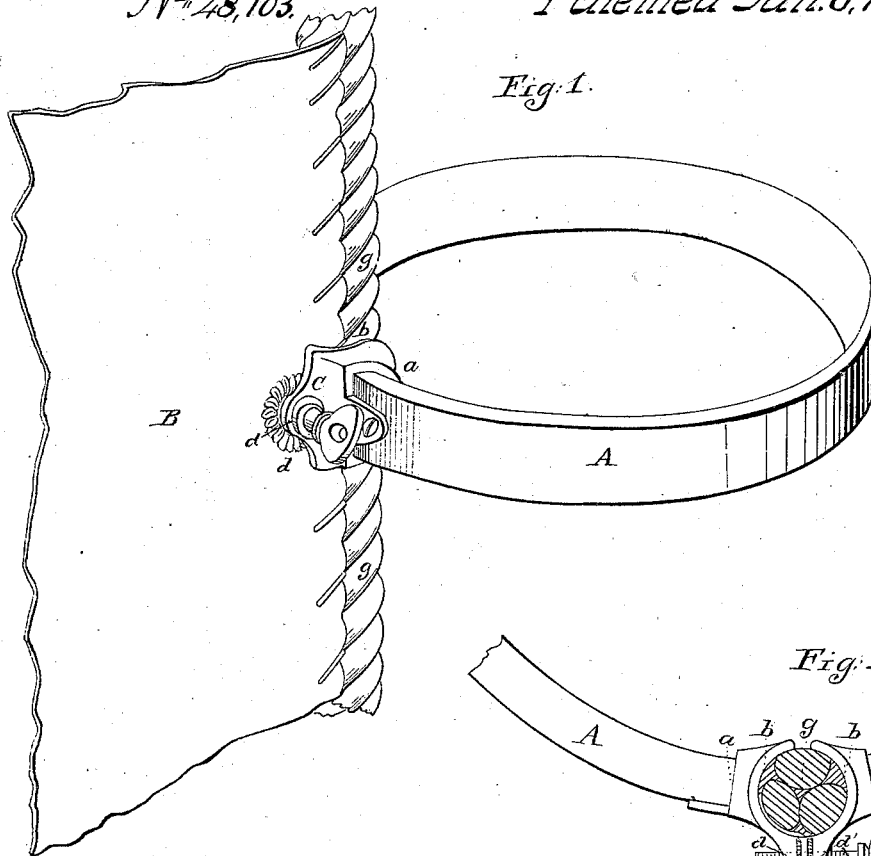


Fig. 2.

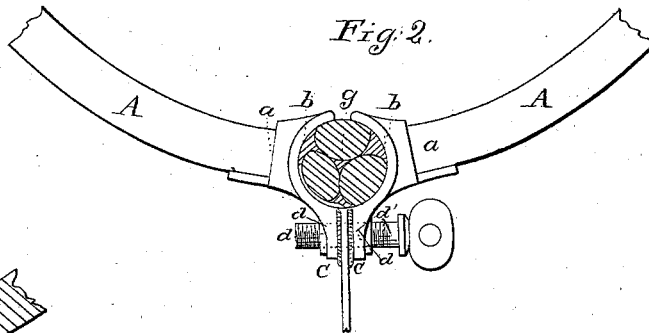


Fig. 4.

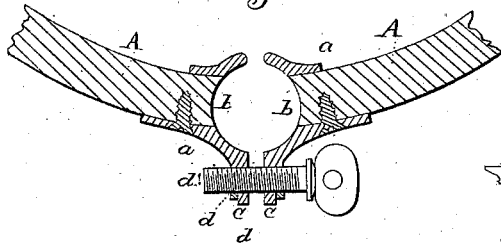
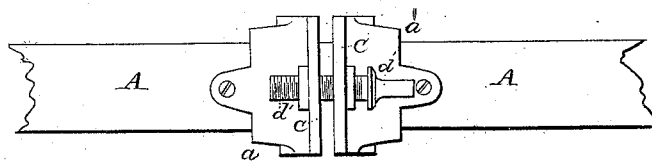


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

E. A. SAWYER, OF PORTLAND, MAINE.

IMPROVED SAIL-CLUTCH.

Specification forming part of Letters Patent No. 48,103, dated June 6, 1865.

To all whom it may concern:

Be it known that I, E. A. SAWYER, of Portland, in the county of Cumberland and State of Maine, have invented a new Sail-Clutch; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view, showing the new mode of securing a sail to its mast hoops or hanks. Fig. 2 is a top view of the clutch. Fig. 3 is an edge view of the clutch, and Fig. 4 is a horizontal section through the same.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new mode of attaching sails to mast-hoops, so that a very secure and rigid fastening may be made which will admit of the hoops or "hanks" being readily attached to or detached from the sails at pleasure. By the old mode of "bending sails" the hoops or hanks are attached to the sail by means of spun-yarn passed around, lapped, and riveted, or notched and crossed hoops or hanks, and then inserted through eyes which are made in the sail near its bending or bolt rope; but this mode of attachment is very impermanent, and the spun-yarn seizin soon wears out by chafing, and requires renewal, usually, two or three times a year. After this seizin has been used a short time it becomes slack and allows the hoops or hanks to sag down and catch on the mast or stay, so as to impede the hoisting and lowering of the sail.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A represents one of the mast-hoops, and B a portion of a sail which is attached to this hoop. This hoop is constructed in the usual manner, with the exception that its ends are not reduced, nor are they connected together. On each end of the hoop is secured a ferrule, *a*, which is constructed with a concave end, *b*, adapted to re-

ceive any size of rope, and also with a lip, *c*, through which a hole, *d*, is made to receive a male screw, *d'*, having a thumb-button on its end. The ferrules are both constructed alike, with the exception that one of the holes *d* has a thread cut in it to receive the threads of the screw. This screw passes loosely through the other hole. I also form ears on the ferrules for receiving screws by which the ferrules are secured permanently to the hoops. When two such ferrules are brought together about a rope, their concave surfaces will embrace it, and by the use of the screw *d'* the two ferrules are made to clutch or clamp the rope very firmly. The sail B is attached to its bolt-rope *g* in the usual manner, and this sail is also provided with metal eyes; or, simply holes may be made through it in the usual manner, and through these holes or eyes the screws *d'* of the clutch pass, and the lips *c* of the ferrules also form clamps and bind on the sail as well as on the sail bolt-rope when the screw is set up tightly. By means of this screw-fastening for the ferrules they may be adjusted for any-sized rope and hold the hoop or hank firmly in its place, so that it will not cant on the mast or stay. The strain of the sail will all come on the bolt-rope by my invention, instead of on the grommets, as by the old mode.

In bending the sail which has my invention applied to it, it is only necessary to loosen and remove the screw-bolts of the clutches and spring the hoop open to receive the bolt-rope. Then the screw-bolts are replaced and set up tight, and the sail is secure.

By my invention I not only dispense with the necessity of lashing the hoops or hanks to the sail, and all the inconveniences attending this mode of attachment, but I can so construct those portions of the ferrules which come in contact with the bolt-rope that they will protect the rope and also stiffen the hoops which are attached to it.

It is obvious that the details of construction and form of my invention may be somewhat modified without changing its character or plan of operation.

The invention is applicable to all kinds of sails that hoist and lower on mast or stay, and all kinds of hoops and hanks.

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

1. Providing on each end of a sail hank or hoop a ferrule, which is constructed substantially as described.

2. Locking the loop or hank and clasp-

the rope and the sail by means of a clutch or clasp, constructed substantially as described.

3. The two-part clasp, constructed substantially in the manner and for the purpose described.

E. A. SAWYER.

Witnesses:

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