B. Ricketson.

Sails & Rigging

No. 36,483. Patented Sept. 16, 1862

Fig: 1.

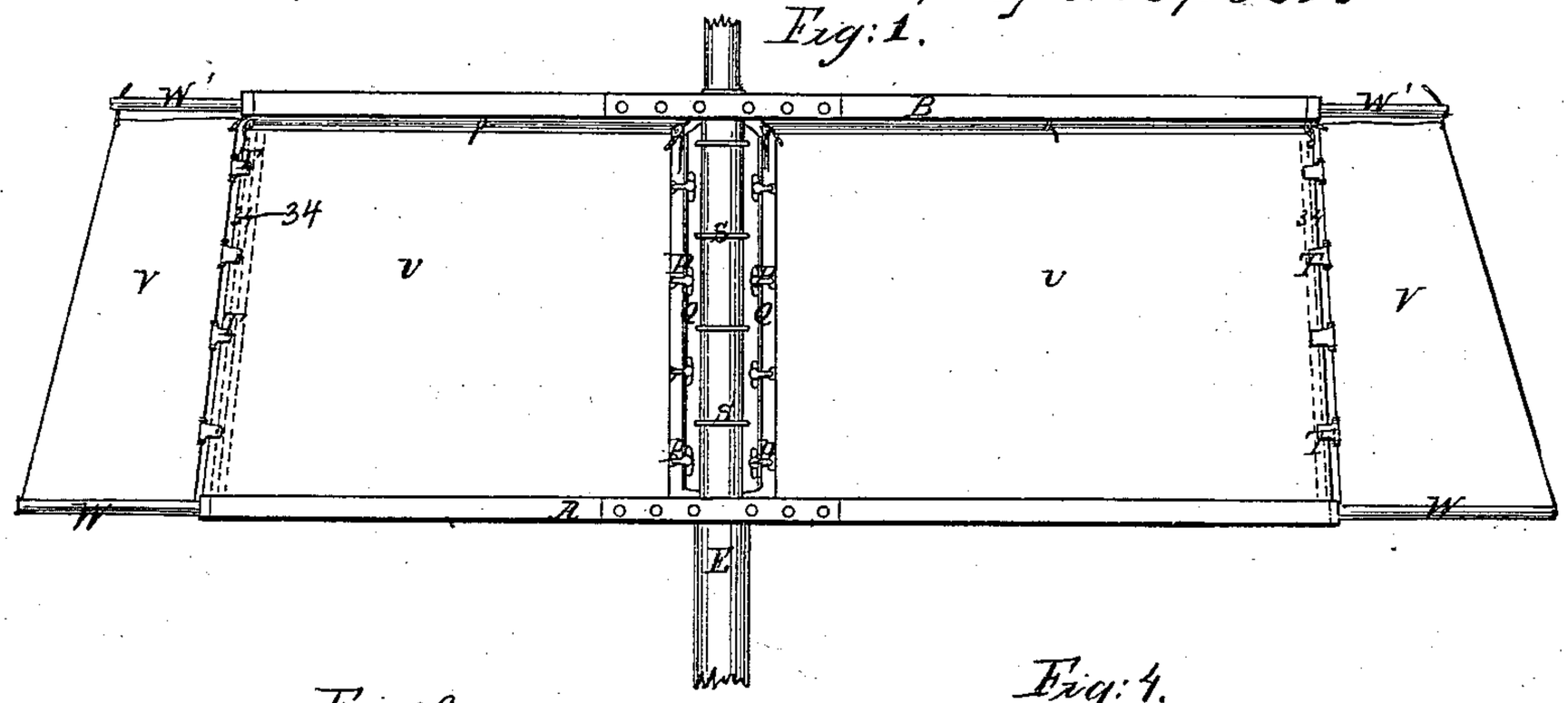


Fig: 2.

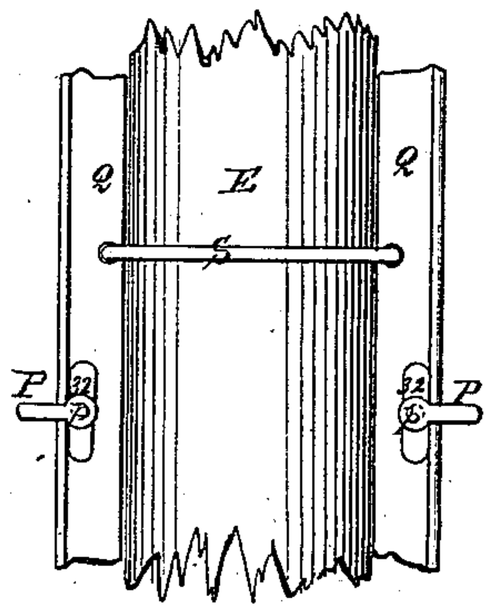


Fig: 3.

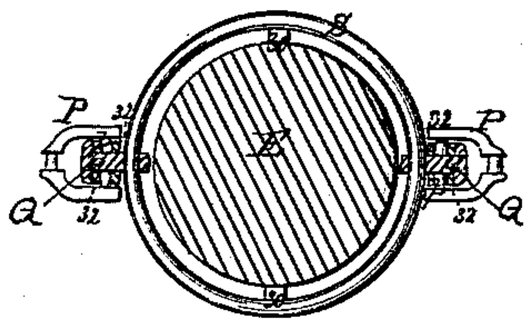
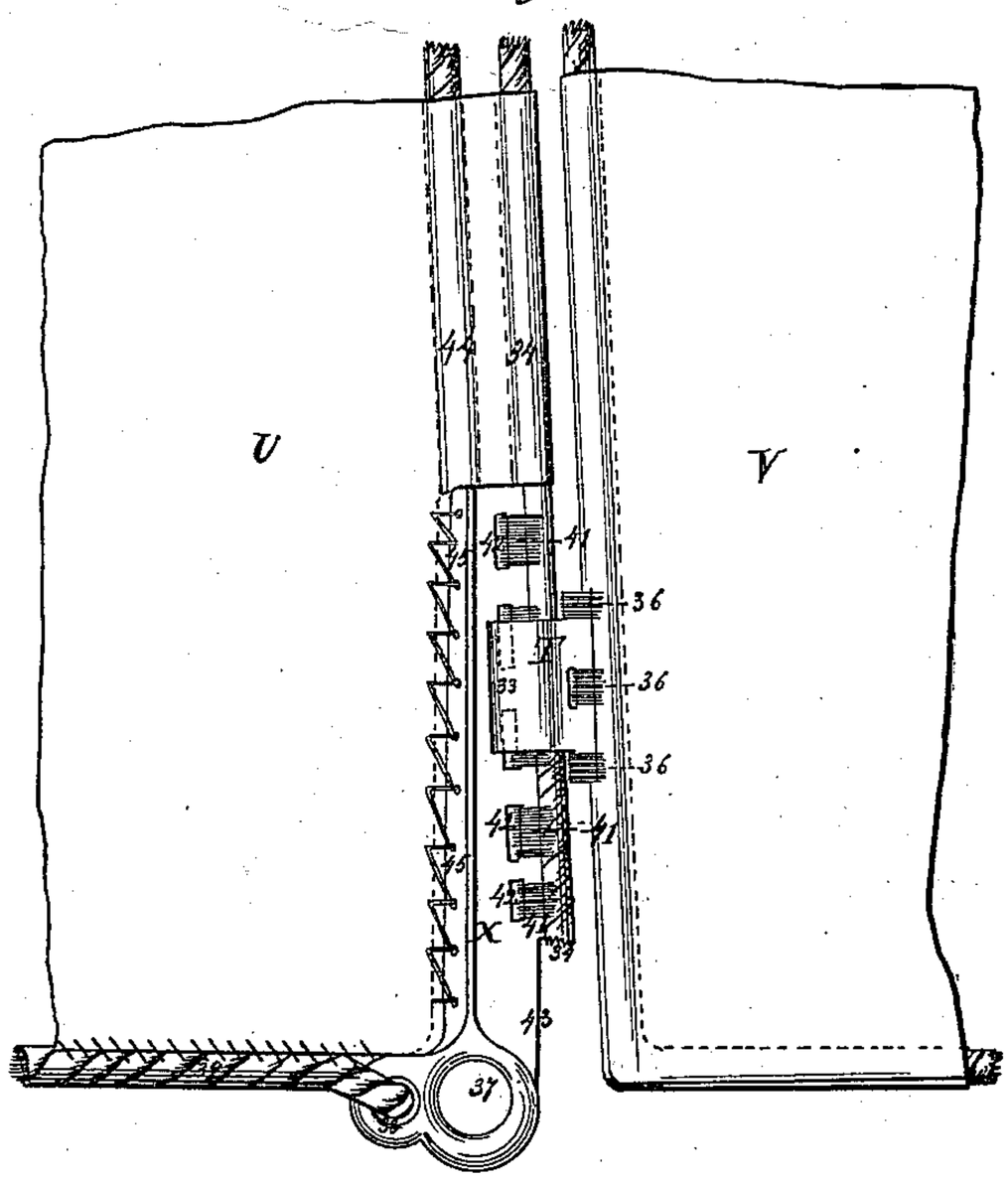


Fig: 4.



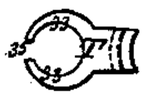
Witnesses.

Chas A. Fiske

G. W. Reed

Fig: 6.

Fig: 5.



Inventor.

B Ricketson

Per Munn & Co Attys

UNITED STATES PATENT OFFICE.

BARTON RICKETSON, OF NEW BEDFORD, MASSACHUSETTS.

IMPROVED SAILS FOR SHIPS AND OTHER NAVIGABLE VESSELS.

Specification forming part of Letters Patent No. **36,483,** dated September 16, 1862.

To all whom it may concern:

Be it known that I, BARTON RICKETSON, of New Bedford, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in the Sails of Ships and other Vessels; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

The first part of my invention relates to fore-and-aft sails and to square sails which are divided vertically to allow the yards to be arranged to turn upon the mast with their axes in the same plane with the axis of the mast. It consists in an improved mode of attaching the sail or sails to the mast on one or both sides thereof. This part of the invention is illustrated in Figure 1, which represents a front view of part of a mast having applied to it a vertically-divided square sail with studding-sails; but the details are illustrated on a larger scale in Figs. 2 and 3, which are respectively a front view of a portion of the mast and the appendages for the attachment of the sails and a horizontal section of the same. In carrying out this part of my invention the inner vertical edges of the sail or sails U U—that is to say, the edge or edges nearest to the mast—have attached to them at suitable intervals traveling bows P P, which are capable of running freely up and down upright iron rods Q Q, attached to the mast E by iron hoops S S encircling the latter. The rods Q Q are of T form in their transverse and arranged with the head of the T outward and the web next the mast, and the hoops, which are secured rigidly to the mast on opposite sides, as shown at 30 30 in Fig. 3, pass through holes provided for them in the said web, the said holes being large enough to permit the rods to pass freely upon them half-way round the mast to allow the proper adjustment of the sails. The bows P P have each pivoted to its two jaws, by pivots *p p*, two slide-plates, 32 32, which fit to the sides of the web of its respective bar within the flat head, as shown in Fig. 3, and so permit the bow to travel freely up and down the bar without binding as the sail is raised and lowered. The rods Q Q, instead of being applied to run round the mast on hoops S S, may be hinged to the mast. I propose to use booms at the feet of the courses, and these booms may be attached to the mast by a hook and eye, or by any other means that will permit them to swing with the yards.

The second feature of my invention relates to the attachment of sails to each other, and is applicable to the attachment of studding-sails, and generally in connection with the vertical division of sails. This is illustrated in Fig. 1, and also in Figs. 2 and 3; and it consists in the attachment of studding-sails to the leeches of the inner or principal sails, or in the attachment of any sails or portions of sails to the leeches of other sails or portions of sails arranged nearer to the mast, by means of metal slides fitted to run up and down the leeches. Fig. 4 is a face view of the lower portion of one of the principal sails and of a studding-sail attached to it by the metal slides, and Fig. 5 is a top view of one of the slides. The slides T T are made with two internally-concave jaws, 33 33, to fit easily to the leech 34 of the inner sail, U, and with the mouth or opening 35, between the jaws, just wide enough to pass freely along the cloth of the sail, and are secured firmly to the inner leech of the studding-sail V by sewing, scizings, or lashings, as shown at 36 36 in Fig. 4. The studding-sail is intended to be attached at its foot to a boom, W, sliding into and out from the yard A below it, the arms of the yard or a sufficient portion of them being made hollow for the reception of the said booms, and it is hauled up to the extremity of the yard B above and to a boom, W′, fitted to the said yard by means of halyards applied to its upper corners. I propose generally to use a double leech in this mode of attaching sails, and this is shown in Fig. 4. The inner leech, 44, is arranged at such distance from the outer one, 34, that the lips of the mouth 35 of the slide T will just work between the two leeches.

The third feature of my invention consists in furnishing the lower outer corner of a sail with a metal bar having at its lower end an eye to form the cringle of the sail and another eye for the attachment of the bolt-rope and extending some distance up the side of the sail, where it is provided with a cavity for the reception of the leech of the sail, the object being more especially to protect the lower portion of the sail from the chafing action of the metal slides T T, above mentioned, which, as the outer or studding sail, V, is lowered, all

collect upon that portion of the inner sail. This part of the invention is illustrated in Figs. 4 and 6, in which X represents the bar. 37 is the eye which forms the cringle. 38 is the eye to which the bolt-rope 39 of the sail is attached. The greater portion of the outer edge of the said bar is made concave, as shown at 40 in Fig. 6, for the reception of the leech 34 of the sail, which is secured to it by seizings 41 41, passing through slots 42 42, provided in the said bar; but the lower portion, 43, of the said edge is made thin for the mouths of the slides T T to pass over. The part of the bar inside of the concave portion 40 is made thin for the mouths of the slides to pass over. The inner edge of the bar X is made thin and perforated to sew the sail U to it, as shown at 45 45 in Figs. 4 and 6.

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

1. The attachment of top-sails and courses to masts by means of rods Q Q and metal slide-bows P or slides T T, constructed and applied substantially as herein specified.

2. The attachment of sails or portions of sails to each other by means of slides T T, secured to one and fitted to slide up and down the leech of the other, substantially as and for the purpose herein specified.

3. Fitting the lower and outer portion of a sail with a metal bar, X, constructed substantially as herein specified.

BARTON RICKETSON.

Witnesses:

JAMES LAIRD,

RICHARDSON GAWLEY.