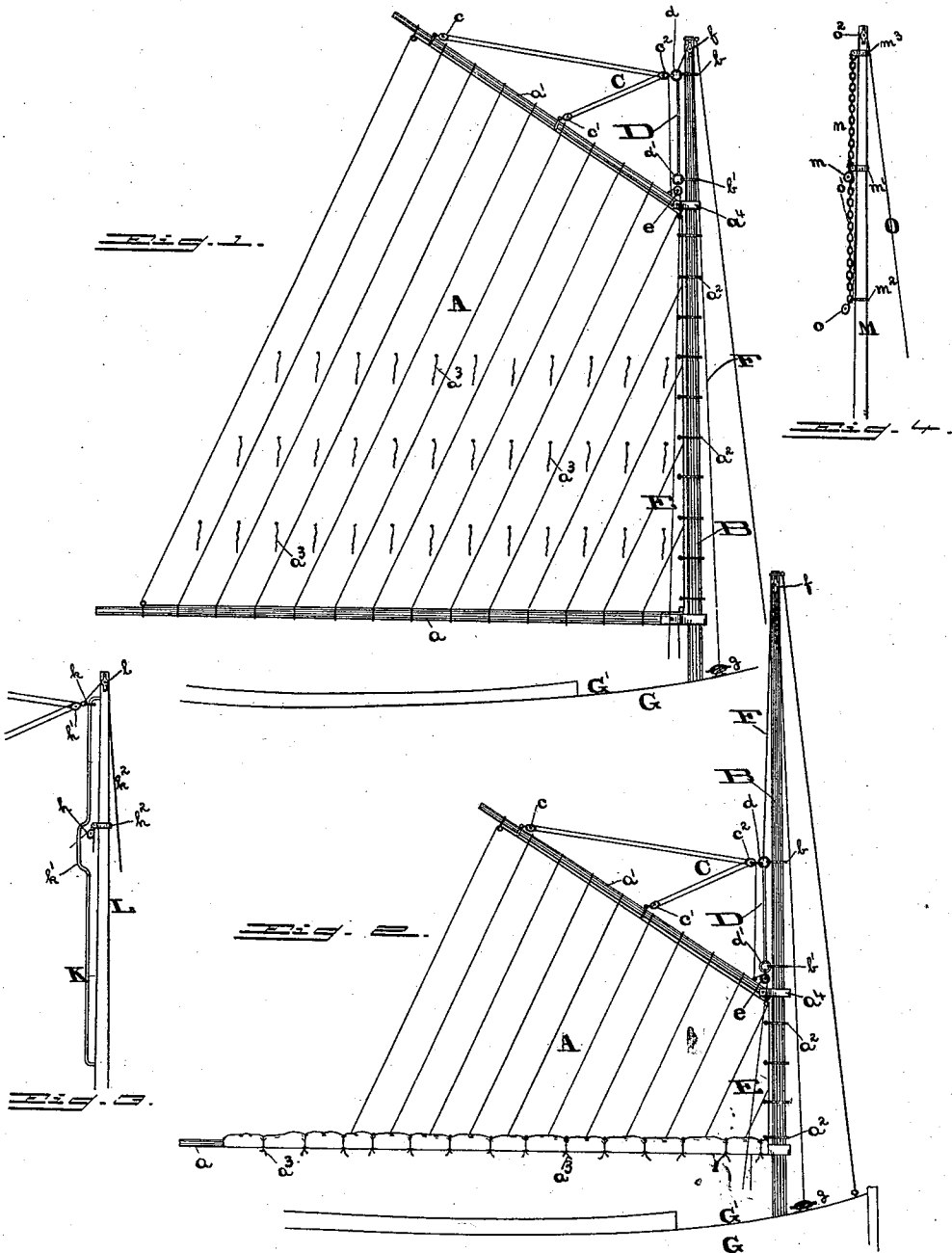


(No Model.)

W. M. BRISBEN.
RIGGING FOR SAILING VESSELS.

No. 469,076.

Patented Feb. 16, 1892.



WITNESSES

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RIGGING FOR SAILING-VESSELS.

SPECIFICATION forming part of Letters Patent No. 469,076, dated February 16, 1892.

Application filed July 22, 1891. Serial No. 400,314. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. BRISBEN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Rigging for Sailing-Vessels, of which the following is a specification.

My invention has relation to sailing-vessels, and has for its object the provision of certain improvements in the rigging thereof, the same being designed and adapted for use, particularly in reefing or shortening sail.

Heretofore vessels of the character above mentioned have had the peak-blocks permanently secured at the top of the mast to which the sail is attached. The effect of this, as is well known, is that when the vessel is sailing on the wind the leverage exerted on the mast resulting from the force of the wind on the peak of the sail causes the vessel to heel, necessitating, when the wind is high, the shortening of the sail or reefing. While this latter operation reduces the amount of sail area which is opposed to the wind, it does not effect a reduction in the leverage of the mast, because of the location of the peak-block being as aforesaid, such leverage being communicated to the mast-head through the peak-halyards.

My invention consists in securing the peak-block in position in such manner that it will be capable of being shifted on or along the mast correspondingly with the gaff of the sail in reefing the latter, such block occupying a position relatively to the mast-head governed by the number of reefs in the sail and the consequent distance of said gaff from said head, thus reducing by just that much the leverage on the mast and the tendency toward heeling, enabling a vessel so rigged to carry a greater amount of sail in a gale than ordinarily, or, in other words, reducing the amount of leverage on the mast proportionately with the reduction in the amount of sail area.

My invention further consists in the details of construction and the combinations of parts, as hereinafter fully described, and as shown in the accompanying drawings, wherein—

Figure 1 is a side elevation of my improve-

ments in position for use, showing the sail full; and Fig. 2 is a similar view illustrating the sail reefed and the improved rigging in its changed position. Figs. 3 and 4 are side elevations of modifications of my invention.

In said drawings, A represents the sail attached to the boom *a* and the gaff *a'* and secured to the mast B by the hoops or rings *a*².

C is the peak-halyard passing through the blocks *c c'*, said blocks being secured to the gaff and said halyard passing through the peak-block *c*² and being secured in the usual manner at its lower end. The block *c*² is secured to the eye *d* of the metallic rod D, which rod has a similar eye *d'* at its lower end, to which latter eye is secured the throat-block *e*. Said rod is secured in close and parallel relation with the mast B through the medium of the rings or hoops *b b'*, the latter encircling said mast and passing through the eyes *d d'*.

E represents the throat-halyard, secured at one end of the gaff *a'* near the jaw *a*⁴ thereof, said halyard passing through the block *e* and being secured at its lower end in any convenient or the ordinary manner.

F is the reefing-halyard, which is secured to the eye *d* of the rod D, passes over the sheave *f*, which sheave is secured to the mast-head or may be secured therein, and is secured at its free end to the cleat *g* on the deck *G'* of the hull G of the vessel.

Obviously, as the halyard F is slackened, the peak-block *c*², by reason of its being secured to the rod D, will drop correspondingly, as will also the gaff *a'*, producing a slack in the sail A and permitting of its being shortened, as shown in Fig. 2, through the medium of the nettles *a*³, in which condition of the sail the halyards C and E, having also slackened through the dropping of the gaff *a'*, are tautened, bringing the peak to its original position. Thus the peak-block *c*², which is the medium through which all the strain on the mast-head is exerted by the peak-halyards, is caused to assume a position below such mast-head and between the latter and the deck of the vessel, reducing the amount of leverage on said mast and the tendency toward breaking of the same correspondingly with the distance that said block has been dropped and the amount of reduction effected in the sail

area, permitting of a vessel sailing on a more even keel and carrying a greater amount of sail in a wind of equal force than with the ordinary rigging, such vessel being easier to
 5 steer when sailing on the wind, free or before the wind by reason of the reduction in the leverage on the mast and the consequent tendency toward veering and being enabled to carry a lighter spar.

10 While I have illustrated in Figs. 1 and 2 of the drawings and hereinbefore described the peak-block and throat-block as being adjustable, such arrangement is not wholly necessary. In practice the block last mentioned
 15 may be secured permanently in the proper position to the mast, as shown in Fig. 3, there being no strain exerted by the throat-halyard because of the end of the same being secured to the gaff at a point close to the mast. In
 20 such figure the throat-block e is sustained by the strap h^2 , secured to the mast B, while the peak-block c^2 is secured to the ring k , said ring being free to slide on and encircling the rod K, the latter being secured to the mast and
 25 having therein an offset k' , which permits of the unobstructed passage of the ring k around the throat-block h , so that as the peak-halyard c^2 , which passes over the sheave f and is secured to the ring k , is slackened the
 30 peak-block c^2 will drop, allowing the peak to do likewise, attaining the end desired. This idea of having the peak-block movable and the throat-block stationary may be carried out in the manner illustrated in Fig.
 35 4, wherein the throat-block m is secured to the strap e' on the mast B and the peak-block c^2 is secured to a ring which has liberty of vertical movement on the chain o' , the latter being retained at its lower end by
 40 the ring m^2 , which encircles the mast and may be provided with a hook for reception of the peak-block in the lowermost position of the latter, said chain being suspended on the strap m^3 , secured at the mast-head, the peak-
 45 halyard C in this case passing over the sheave f , and is then secured to the block c^2 , affording means for raising and lowering the same, the ring m^2 sliding on the mast in response to the movements of the gaff of the sail through
 50 contact of the throat of said gaff therewith.

What I claim as my invention is as follows:

1. In a sailing-vessel, the combination of the mast, the peak of the sail, and the peak-block, the latter being adjustably sustained and ca-

pable of being raised or lowered in accordance with the height of said peak, for the purpose specified. 55

2. In a sailing-vessel, the combination of the mast, the peak of the sail, the peak-block, a halyard supporting the latter, and a sheave or block permanently secured to the mast for the passage of the halyard, said peak-block being raised or lowered in accordance with the height of said peak through the medium of said halyard, for the purpose specified. 60 65

3. In a sailing-vessel, the combination of the mast, the peak of the sail, the peak-block, a ring or retainer secured to the latter, and a slideway for the ring or retainer, said peak-block being capable of being raised or lowered in accordance with the height of said peak, for the purpose specified. 70

4. In a sailing-vessel, the combination of the mast, the peak of the sail, the peak-block, a ring or retainer secured to the latter, a slideway for said ring or retainer, a halyard supporting the peak-block, and a sheave or block permanently secured to the mast for the passage of the halyard, said peak-block being raised or lowered in accordance with the
 80 height of said peak through the medium of said halyard, for the purpose specified. 75

5. In a sailing-vessel, the combination of the mast, the peak of the sail, the peak-block, a ring or retainer secured to the latter, and a vertical rod secured to the mast encircled by said ring or retainer, said peak-block being capable of being raised or lowered in accordance with the height of said peak, for the purpose specified. 85 90

6. In a sailing-vessel, the combination of the mast, the peak of the sail, the peak-block, a ring or retainer secured to the latter, a vertical rod secured to the mast encircled by said ring or retainer, a halyard supporting the peak-block, and a sheave or block permanently secured to the mast for the passage of the halyard, said peak-block being raised or lowered in accordance with the height of said peak through the medium of said halyard, for the purpose specified. 95 100

In testimony whereof I have hereunto set my hand this 20th day of July, A. D. 1891.

WILLIAM M. BRISBEN.

Witnesses:

THEO. C. WARNER,
 WM. H. POWELL.