Dec. 23, 1969 H. E. BRETT 3,485,197

SAILBOAT RIGGING

Filed Sept. 17, 1968

FIG. 1

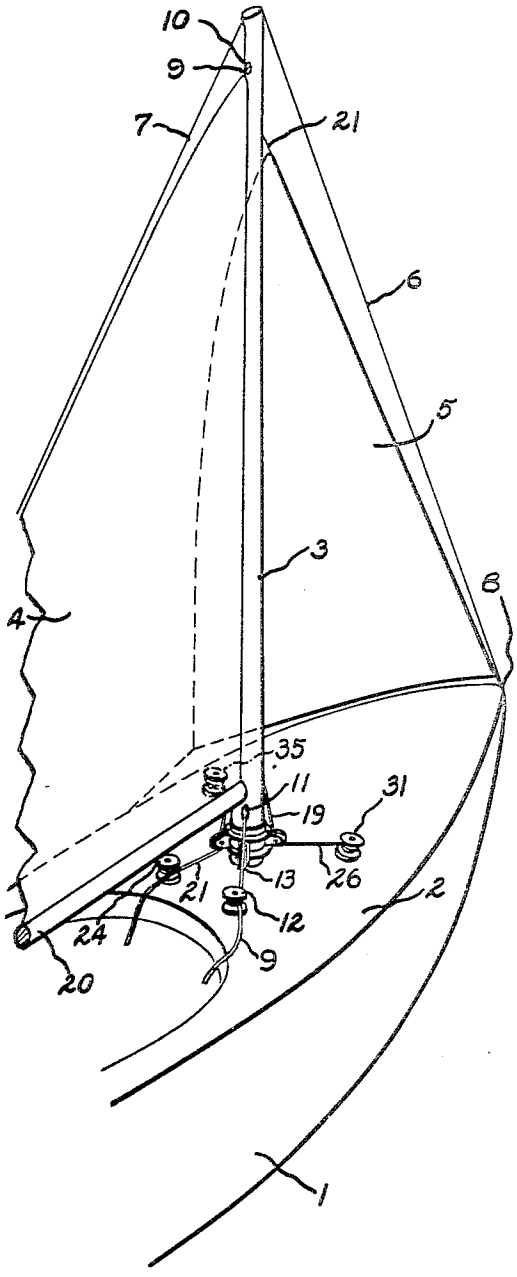


FIG. 2

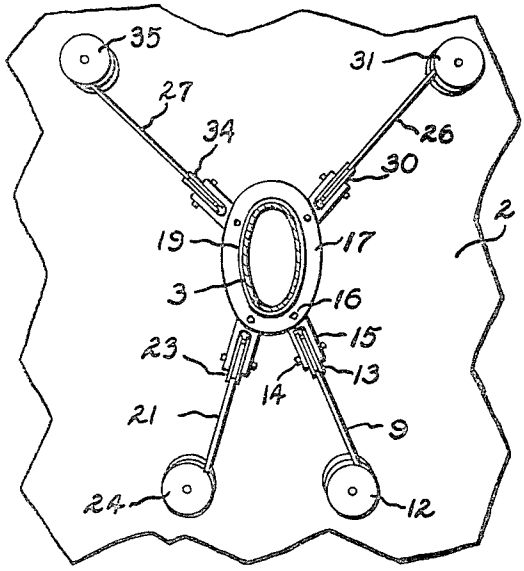
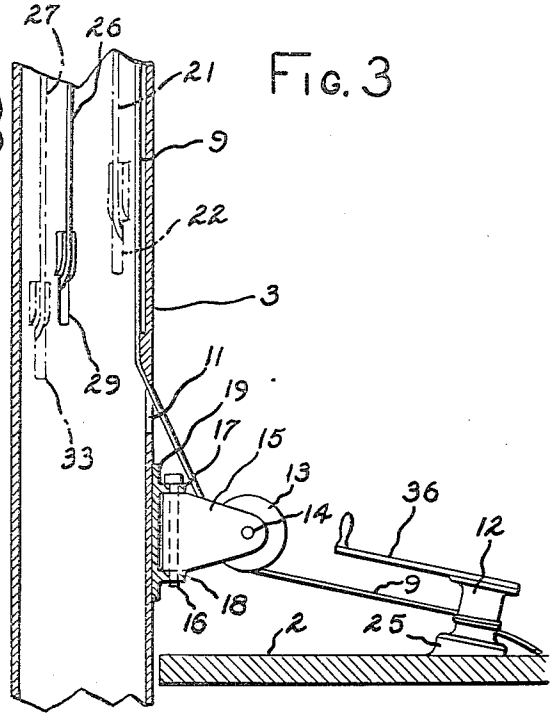


FIG. 3



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SAILBOAT RIGGING

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ABSTRACT OF THE DISCLOSURE

A combination of winches on the deck of a sailboat for handling the halyards associated with the raising and lowering of sails, spinnaker poles and struts; the halyards running along the deck to sheaves on a collar about the mast at a position adjacent the deck and thence upward through openings in the mast to the interior thereof.

BACKGROUND OF THE INVENTION

Field of the invention

My invention relates to the running rigging of sailboats and more particularly to a combination of sheaves and winches about a lower portion of the mast and the deck of a sailboat for handling the sail-raising and spinnaker pole support halyards thereof.

Related prior sailboat rigging

In all but the smallest size sailboats, the lower runs of the sail-raising and spinnaker pole support halyards extend along the sides of the lower portion of the mast and are handled by means of winches mounted upon the masts at a convenient height above the deck. Such combinations of rigging are entirely practical but are objectionable because the weight of the winches and the wind resistance thereof is such a great distance above the water level as to appreciably effect the balance and trim of the sailboat. Also, the concentration of halyards and winches, particularly in sailboats with complex sail rigging, is such as to make it impossible to have all halyards and topping lifts at convenient positions and suitably separated to avoid confusion and permit quick handling. Ready manipulation of selected and multiple halyards and winches is often paramount to the proper raising, lowering and adjustment of sails during maneuvering of the sailboat and may result in loss of a race or serious to total loss of the sailboat if improperly performed.

SUMMARY OF THE INVENTION

One object of my invention is to provide a sailboat rigging having the halyard winches mounted away from the mast at positions both closer to the waterline of the sailboat and more conveniently than heretofore. In accord with this object, the winches are mounted on the deck at spaced positions about the mast and the halyards associated therewith are directed to the winches by sheaves mounted upon a portion of the mast immediately above the surface of the deck.

Another object of my invention is to provide rigging for a sailboat having a hollow mast, wherein the rigging provides for the sail raising halyards to run inside the mast and to be handled by winches located on the deck in the immediate area of the mast. Such combinations of rigging present the problem of allowing the halyards to pass through openings in the mast without producing an excessively weakened area therein. This object is attained by passing the halyards through vertically spaced openings in the mast at some distance above the level of the deck of the sailboat and redirecting the halyards to the winches by sheaves mounted on the mast just above the level of the deck.

The difficulties and advantages of reaching these objectives is best understood when it is realized that the running rigging related to the invention comprises 4 to 7 or more halyards for raising the various sails, spinnaker poles and other mast supported rigging of the sailboat. Other advantages result from the quicker and better handling of the halyards of the sailboat by the crew because of the separated and more convenient arrangement of the halyards and winches about the deck or roof of the cabin near the mast.

DESCRIPTION OF VIEWS IN DRAWING

Still further advantages and features of the running rigging of my invention will appear in the more detailed description which follows of the sailboat shown in the accompanying drawing wherein:

FIG. 1 is a diagrammatic perspective view of the forward portion of a sailboat having a main mast projecting thereabove, a deck and the running rigging including a mainsail, a jibsail and the sail raising means of my invention.

FIG. 2 is a plan view of the deck area of the sailboat immediate to and from a section through the lower part of the mast and comprising the running rigging of my invention.

And FIG. 3 is a vertical section through a lowermost portion of the mast and the immediate deck area of a sailboat, the section being adjacent to one of the winches and a sheave for handling the mainsail halyard in accord with my invention.

DESCRIPTION OF PREFERRED EMBODIMENT

The sailboat illustrated in the drawing comprises a hull **1** having a deck **2** over the forward portion thereof and a main mast **3** extending upward above the deck **2** for support of the mainsail **4** and jibsail **5**. The many parts of the standing rigging for the mast **3** is herein represented only by the forestay **6** and the backstay **7** extending from the top of the mast **3** to the stemhead **8** and the stern (not shown), respectively. The running gear of the sailboat comprises the halyard **9** shown attached to the top of the mainsail **4** near the mast **3** and running upward over a sheave (not shown) in the upper part of the mast **3** and thence through an upper opening **10** therein and downward in a conventional manner. The continuing portion of the halyard **9** passes downward through the hollow interior of the mast **3** to a lower opening **11** opposite the starboard winch **12**. As shown in FIG. 3, this halyard **9** emerges from the hollow interior of the mast **3** through the lower opening **11** without interference because of the relatively long vertical extent thereof and passes around the sheave **13** and thence in a near horizontal direction to the winch **12**. The sheave **13** is mounted for rotation about a pin **14** extending between flanges of a block **15**, in turn, mounted upon a vertical pin **16** extending between top and bottom flanges **17** and **18** respectively of a collar **19** surrounding and firmly attached to a near-deck lower portion of the mast **3**. The block **15** is free to swivel about the pin **16** in a manner prescribed by the fall of the halyard **9** between the lower opening **11** in mast **3** and the winch **12**. The mainsail **4** is also attached at the forward edge to a track (not shown) extending almost the full length of the mast **3** and is fastened at the foot to a boom **20** extending sternward from a gooseneck attachment (not shown) on the mast **3**.

The halyard **21** for lifting and control of the jibsail **5** passes upward over a sheave (not shown) and thence through an upper opening (not shown) in the mast **3** and downward through the hollow interior thereof (in much the same manner as halyard **9**). The halyard **21** emerges from the interior of the mast **3** through a lower

opening 22 (shown in dot-dash) in FIG. 3 at a greater distance above the deck 2 than the opening 11 for the mainsail halyard 9 and passes around a second sheave 23 on a block attached to the collar 19 before running in a near horizontal direction to a winch 24 attached to the port side of the deck 2. Both the mainsail winch 12 and the jibsail winch 24 are mounted on tapered blocks 25 directly attached to the deck 2 so that the vertical axes of the winches are tilted from the perpendicular and the near horizontal runs of the halyards 9 and 21, respectively, feed properly thereto.

Two other halyards 26 and 27 (FIGS. 2 and 3) comprise the running rigging of the sailboat shown, although the spinnaker and the spinnaker pole, respectively, associated therewith and normally used in sailing are not shown in the drawing. The spinnaker halyard 26 is, during none use, attached to a fitting (not shown) at the bow and runs upward to a sheave on the head of the mast 3, through an upper opening therein and thence downward inside the mast 3 and outward through a lower opening 29 (FIG. 3). The further extent of the spinnaker halyard 26 passes under a third sheave 30 (FIG. 2) on the collar 19, in the manner the mainsail halyard 9 passes under the sheave 13, and thence passes to the winch 31 on a further forward part of the starboard side of the deck 2. The spinnaker pole halyard (topping lift) 27 is attached to a fitting (not shown) on the lower portion of the mast 3 when not in use and extends upward over a sheave (not shown) and through an upper opening (not shown) in the mast to the interior thereof. The downward extent of the spinnaker pole halyard 27 emerges from the lower opening 33 (FIG. 3) and extends under the sheave 34 (FIG. 2) and thence generally in a horizontal direction to the winch 35 on the forward port side of the deck 2.

OPERATION

Operation of the running rigging of my invention is effected in the same manner as prior running rigging by wrapping turns of the halyards about the winches provided for specific halyards and by the manual rotation of the winch by a hand crank 36 (FIG. 3) readily attached thereto. The normal ratchet and pawl stop (not shown) and brake (not shown) are also included in the winch to permit the halyards to be played out at will so as to effect the lowering and the adjustment of the sails.

For instance, the mainsail 4 is raised by wrapping the lower free end of the halyard 9 about the winch 12 and then, after attachment of the crank in the normal manner, manually swinging the crank 36 about the center of the winch 12 so that the halyard 9 is pulled onto the drum thereof. The excess halyard 9 not required to maintain the purchase on the winch 12 can be laid off in the usual manner. The mainsail 4 is held in place by setting the pawl and ratchet or other stop of the winch 12 so that the halyard 9 is not allowed to run back around the drum thereof. The mainsail 4 can be lowered by allowing the halyard 9 to run back about the drum under control of a manual drag on the free end of the halyard 9 after several turns of the halyard 9 have been removed from the drum. Also, the halyard 9 can be played out in a manner to lower the mainsail 4 by momentarily releasing the ratchet and pawl stop (not shown) and the manual manipulation of the brake (not shown) in association with the winch 12. The distribution of the weight afforded by locating winch 12 on the deck contributes to the better trim of the sailboat as this weight is closer to the waterline of the sailboat than in prior instances where the winch was mounted on the mast 3. A single winch 12 may weight from 5 to 100 pounds and accordingly is a major contributor to stability. The windage of winch 12 is also obviously less than if it is mounted on the mast 3.

The handling of the halyards 21, 26 and 27 to raise and adjust the jibsail 5, the spinnaker and the spinnaker pole, respectively, can be performed in the same manner as described in connection with the halyard 9 and the mainsail 4. Although all four halyards 9, 21, 26 and 27 of the sailboat shown in the drawing run for the majority of their vertical extent inside the mast 3, the running rigging of my invention is equally adaptable to sailboats having halyards extending down outside a solid or even hollow mast thence running below the sheaves 13, 23, 30 and 34 respectively, on the collar 19. Also, my running rigging is equally applicable to sailboats having both more complex and larger sails and halyard combinations as the number of sheaves located about the deck area of the mast and the winches distributed about the mast in accordance with the teachings of my invention are not limited and could be more or less than that shown. Since in some sailboats the area around the base of the mast is the roof of a cabin thereof, I wish it to be understood such a roof area is a deck area within the meaning of my invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A running rigging for a sailboat having a deck and mast extending upward therefrom comprising; sails, halyards running alongside the mast immediately above the level of the deck for raising and lowering the sails, winches mounted on the deck at spaced locations about the mast for pulling in and releasing the halyards, and sheaves mounted on the mast immediately above the deck for redirecting a lower extent of the halyards in substantially a horizontal direction to respective winches.

2. A running rigging as set forth in claim 1 wherein; the mast has a flange extending horizontally from the lower part adjacent the deck, the sheaves are mounted in blocks, and the blocks are attached to the flange on the mast by vertical pins allowing the blocks and sheaves to swing horizontally and therefore fall into alignment with the horizontal extent of the halyards.

3. A running rigging as set forth in claim 1 wherein; a collar surrounds and is attached to the mast immediately above the deck and the sheaves are mounted on the collar.

4. A running rigging as set forth in claim 1 wherein; a collar surrounds and is attached to the mast immediately above the deck and has spaced upper and lower flanges extending therefrom, the sheaves are mounted for rotation about horizontal pins in blocks, the blocks are located about the mast and between the flanges of the collar and vertically extending pins pass through the flanges of the collar and respective blocks so that the blocks and sheaves are free to swing into the fall of the horizontal extent of the respective halyards.

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