

[54] SAILING RIG FOR SAILING BOATS

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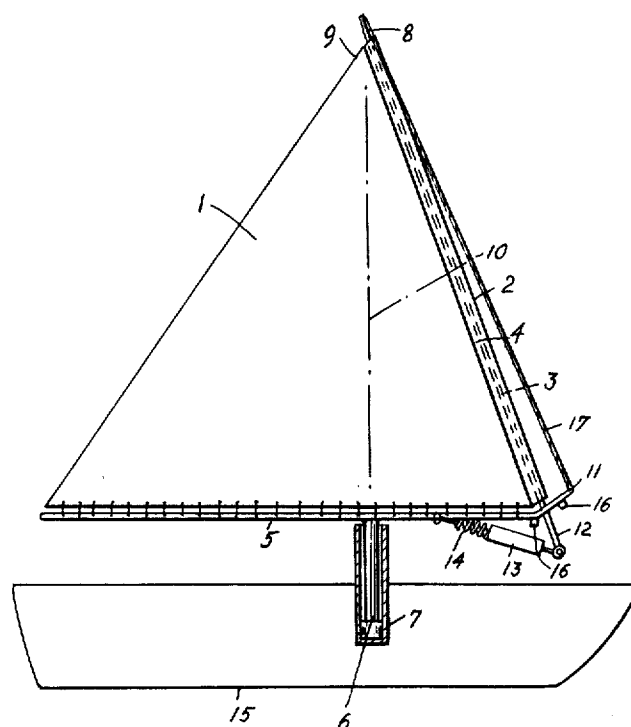
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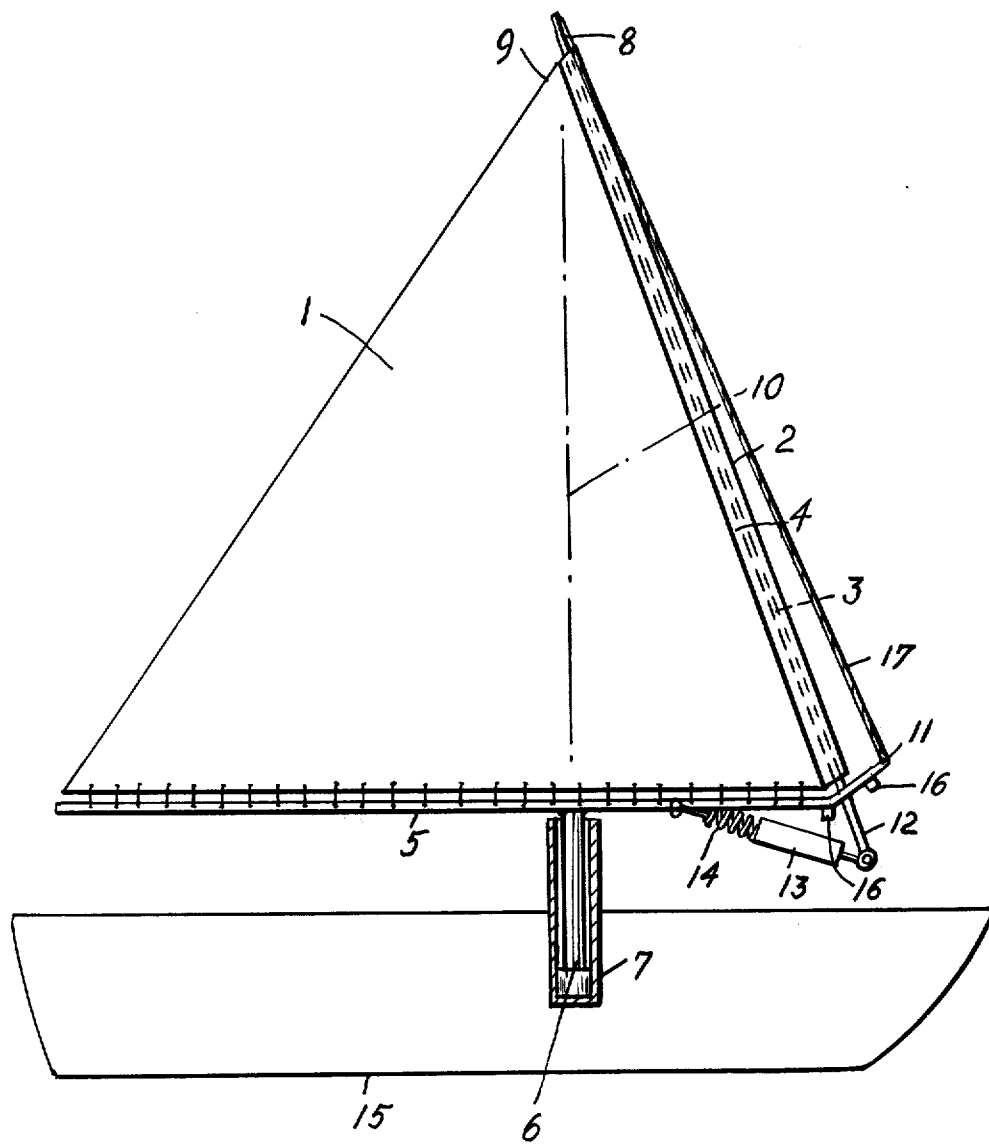
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[57] ABSTRACT

A sailing rig for sailing boats comprises a main boom and a mast taken out of its socket. The foresail and the main sail are combined to form a single triangular sail and a sloping mast is provided at the leading edge of said combined said and connected thereto independently of the hull of the boat. The substantially horizontal main boom is rotatably mounted to swing about a vertical axis in the socket for the mast in the hull and the forward end of the main boom terminates in a fork-shaped swing joint embracing the bottom end of the mast which extends through the fork-shaped swing joint downwards to below the sweep of the main boom, where its free end is connected by block and tackle and a spring to the fore part of the main boom.

5 Claims, 1 Drawing Figure





SAILING RIG FOR SAILING BOATS BACKGROUND OF THE INVENTION

This invention relates to a sailing rig for sailing boats comprising a main boom and a mast taken out of its socket.

Sports sailing boats usually have a main sail and a foresail and each of these sails is generally separately handled.

In a gale or in very gusty weather there is always a risk of the mast being broken and the boat being capsized because the foresail and the main sail are both on the same side of the boat and, by creating a unilateral load, produce a very strong heeling moment.

For the purpose of reducing the heeling moment is has already been proposed to stay the mast resiliently against athwartship strains to permit it to yield elastically. The adjustment of the springs in the stays is nevertheless difficult. Moreover, the stays restrict movement on deck. Lateral spars have also been provided to improve the support afforded the mast, but this is an added complication.

SUMMARY OF THE INVENTION

It is the object of the invention to eliminate the shortcomings of conventional rigs and to provide a sailing rig which enables the sail area to be more evenly utilized and the effort needed for handling the said to be lessened.

According to the present invention this is achieved by combining the foresail and main sail in a single triangular sheet, by providing a sloping mast at the leading edge of the combined sail and connecting said mast to the sail independently of the hull of the boat, the substantially horizontal main boom being rotatably mounted to swing about a vertical axis in the socket for the mast in the hull, and the forward end having a fork-shaped extremity embracing the bottom end of the sloping mast which extends through the fork downwards to below the sweep of the main boom, where its free end is connected by block and tackle and a spring to the fore part of the main boom.

These features enable the sail area to be evenly used and the pull of the sail in the forward region to be partly balanced by the pull of the sail on the aft main sail side since the swing axis of the main boom in the socket divides the sail in a manner which has a two-armed lever effect. A foresail crewman can therefore be dispensed with.

BRIEF DESCRIPTION OF THE DRAWING

An embodiment of the invention will now be described by way of example and with reference to the accompanying schematic drawing, in which the only FIGURE is a side view of a boat provided with a sailing rig according to the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In the drawing, the foresail and the main sail are combined and form one single triangular sail 1. A sloping mast 3 is located at the leading edge 2 of the sail 1 and attached to the same independently of the hull 15 of the boat. The connection between mast and sail is by means of a pocket 4 formed in the leading edge 2 of the sail. Insertion of the mast 3 into the pocket is easy to accomplish. Moreover, such a pocket 4 aerodynami-

cally also adapts itself well to the incident wind and no eddies form.

The bottom edge of the sail is tied to the main boom 5. The center portion of the main boom 5 is provided with a pivot pin 6 which is rotatable in the socket 7 of a conventional sailing boat mast. The top 8 of the mast and the top of the sail 9 are in the produced vertical center line 10 of the socket 7.

The bottom end of the mast 3 is held in a fork-shaped swing joint 11 of the main boom 5. About one-tenth of the length of the mast extends through the swing joint 11 to below the sweep of the main boom. This part 12 of the mast 3 is connected by block and tackle 13 and an adjustable spring 14 to the fore part of the main boom.

This rig enables the mast 3 to perform a nodding motion under different wind loads. The adjustable spring 14 permits allowance to be made for the strength of the wind. In a sharp wind the spring 14 is relaxed, whereas a weak wind calls for the spring 14 to be tightened.

With a sailing rig according to the invention the sail can be evenly utilized. The pull of the sheet is largely directly compensated and transmitted through the pivot pin 6 to the main boom socket 7. Only the forces due to the uncompensated sail area must be overcome when manipulating the sail, but the effort needed is relatively small because most of the area is compensated and can be easily provided by one crewman.

In order to limit the movements of the mast 3 the swing joint 11 is provided with stops 16 which may be adjustably fitted. For steadying the mast 3 a stay 17 may extend from the swing joint 11 to the top of the mast 8.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The embodiment is therefore to be considered in all respects as illustrative and not restrictive.

What is claimed is:

1. A sailing rig for sailing boats comprising a substantially horizontal main boom, a sail combined from a foresail and a main sail to form a single triangular sail and a sloping mast provided at the leading edge of said combined sail and connected thereto independently of the hull of the boat, the substantially horizontal main boom being rotatably mounted to swing about a vertical axis in a socket in the boat hull and the forward end of the main boom terminating in a fork-shaped swing joint embracing the bottom end of the mast which extends through the fork-shaped swing joint downwards to below the sweep of the main boom, where its free end is connected by block and tackle and a spring to the fore part of the main boom.

2. A sailing rig as defined in claim 1, wherein the top of said sail and the top of said mast are located in the produced vertical axis of said socket in the hull of the boat.

3. A sailing rig as defined in claim 1, wherein said spring is adjustable.

4. A sailing rig as defined in claim 1, wherein said mast is contained in a pocket in the leading edge of said sail.

5. A sailing rig as defined in claim 1, wherein adjustable stops are provided on said fork-shaped swing joint of said main boom to limit the freedom of motion of said mast.

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