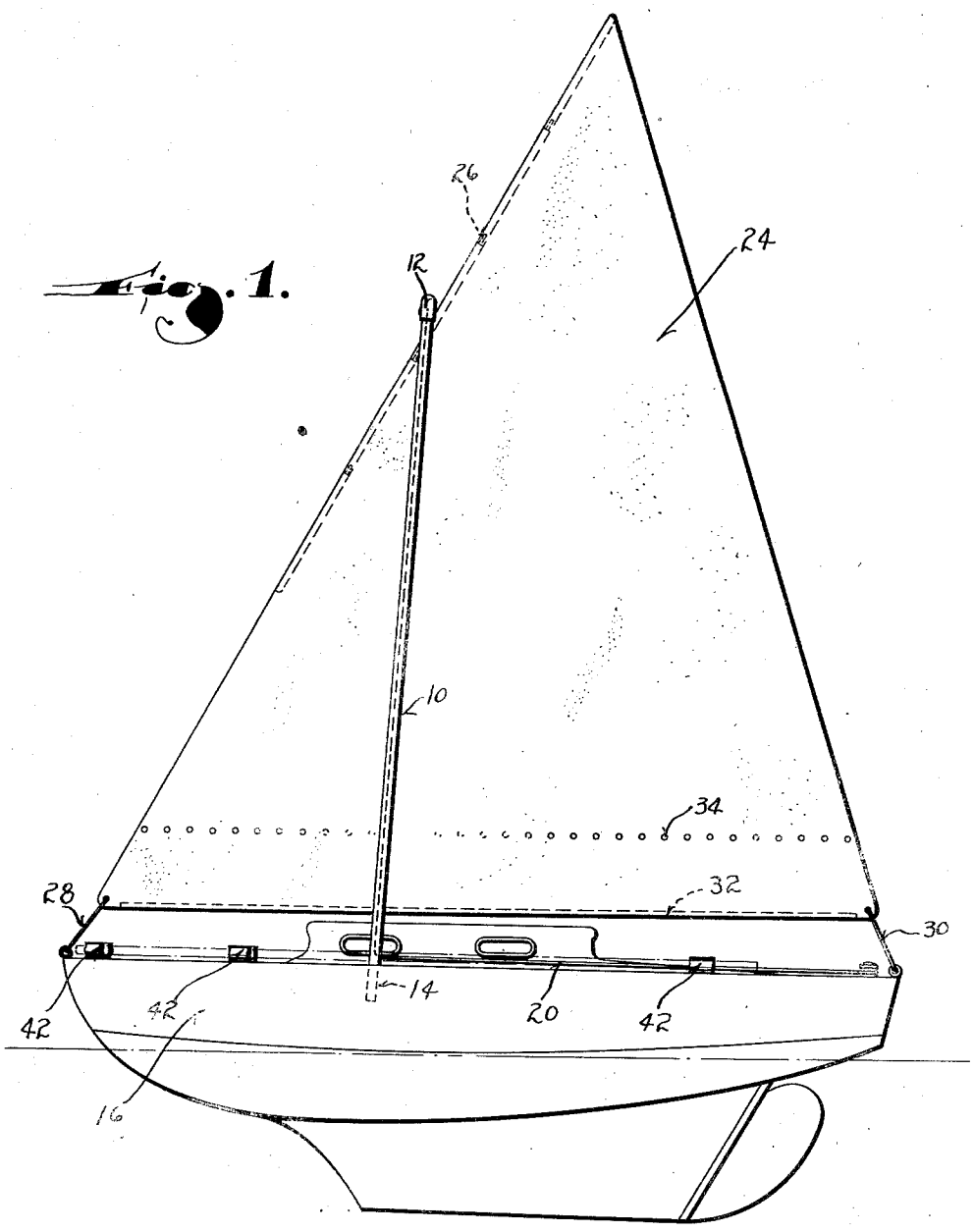
Dec. 5, 1944. L. A. WILKIE 2,364,578

SAILBOAT

Filed May 17, 1943 2 Sheets-Sheet 1

Fig. 1.




Inventor
Leighton A. Wilkie
By Dodge, Hilton & Jones
Attorneys

Dec. 5, 1944. L. A. WILKIE 2,364,578

SAILBOAT

Filed May 17, 1943 2 Sheets-Sheet 2

Fig. 2.

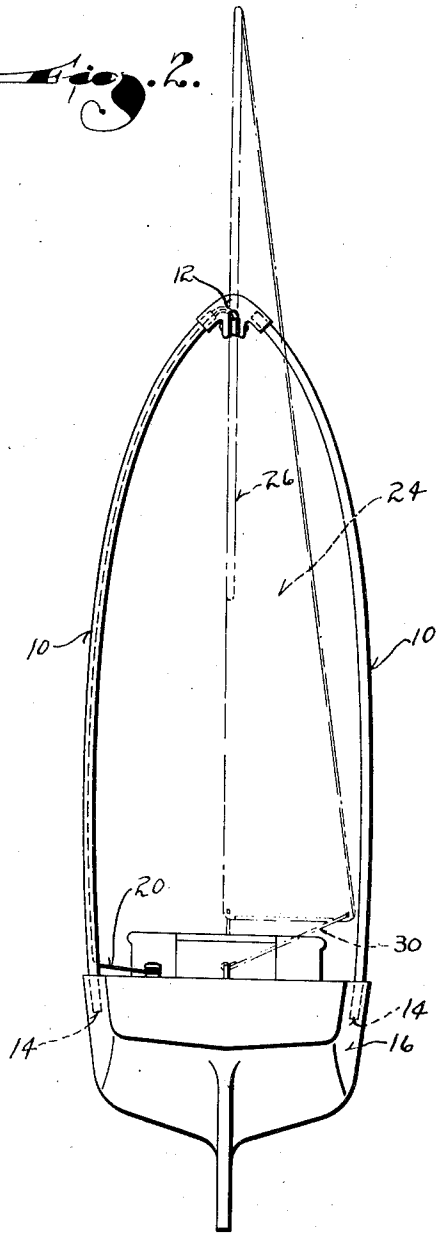



Fig. 3.

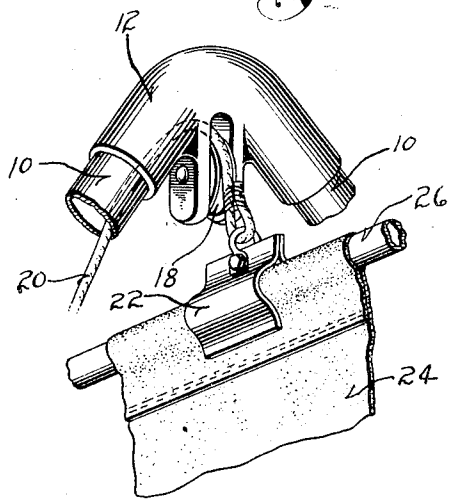
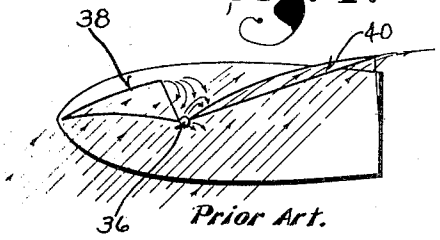
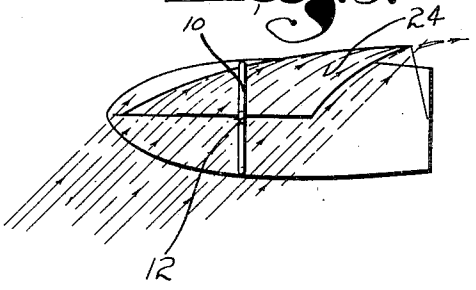



Fig. 4.




Prior Art.

Fig. 5.




Inventor

Leighton A. Wilkie

By Sidney Hutton Jones

Attorney

Patented Dec. 5, 1944

2,364,578

# UNITED STATES PATENT OFFICE

2,364,578

## SAILBOAT

Leighton A. Wilkie, Des Plaines, Ill.

Application May 17, 1943, Serial No. 487,300

2 Claims. (Cl. 114—90)

This invention relates to wind propelled craft such as sailboats, ice boats and the like and more particularly the invention relates to an improved sail structure and supporting means therefore.

The common type of sailboat employing a single mast with a mainsail and a jib or foresail is subject to a number of disadvantages. The single center mast which is of considerable height requires numerous supporting cables and guy wires to enable it to withstand the wind pressure.

Furthermore sailing vessels of this type require a heavy boom along the bottom of the mainsail which swings from side to side as the direction of the boat is changed and constitutes a hazard to those in the boat.

Additionally, block and tackle are required in handling the "sheet ropes" for manipulating the jib and the end of the boom.

It is known to those skilled in the art of sailing that the gap between the mainsail and the jib intercepts the air, and because of the mast sets up eddy currents which greatly reduce the sailing efficiency.

In the conventional sailboat structure, removal of the mainsail from the mast and boom requires considerable dexterity and removal of the mast itself from the boat is not easily accomplished.

The present invention is designed to obviate these disadvantages. To this end a single sail, supported in a novel manner is employed. Single sails have been used heretofore, such as the "dipping lug" sail widely used in the Mediterranean and Red Sea area. Such a sail is provided with a boom across the top of the sail but since the sail is supported from a center mast it is necessary to dip the boom, i. e., pull down its front end when the tack is changed and the boom must be moved to the opposite side of the mast. To do this the entire front end of the sail must be loosened and again refastened.

The principal object of the present invention is to provide a sailing craft which retains all of the basic advantageous principles of known sailing vessels while avoiding the disadvantages to which reference has been made.

It is another object of this invention to provide a sail structure and supporting means therefor which is easily controlled and removed.

It is still another object of this invention to provide a sail structure which incorporates the jib and mainsail in a one piece triangular sail.

More specifically, it is an object of this invention to provide a one piece sail structure and a "wishbone" mast so constructed as to support the sail between its legs.

With the above and other objects in view which will appear as the description proceeds, this invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

The accompanying drawings illustrate several complete examples of the physical embodiment of the invention constructed according to the best mode so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a side elevational view of a sailboat embodying the invention;

Figure 2 is a rear end elevational view thereof;

Figure 3 is a detail perspective view of the sail supporting mechanism;

Figure 4 is a diagrammatic plan view of a conventional type of sailboat illustrating the formation of deleterious eddy currents, and

Figure 5 is a similar diagrammatic plan view of a craft constructed in accordance with this invention.

Unlike the conventional sailing craft employing a single centrally disposed vertical mast, the present invention employs a double mast 10 joined at the top by a union member 12. The double mast 10 is generally of "wishbone" shape and is disposed transversely of the boat with its lower ends securely but detachably engaged in sockets 14 in the deck of the boat 16.

Advantageously, the structure making up the double mast 10 and the union member 12 is hollow. The masts proper may be constructed of metal tubing or pipe while the union member 12 is preferably a hollow cast structure.

The union member 12 (see Figure 3) carries a pulley wheel 18 and has an opening therein adjacent to the pulley so that a control rope 20 may pass over the pulley and downwardly through one of the hollow double masts 10 (as indicated in dotted lines in Figures 2 and 3) and thence through an opening to the deck. The upper end of the control rope 20 is secured to a clamping element 22 adapted to be clamped to the sail 24, as clearly shown in Figure 3.

Inasmuch as the entire sail 24 is supported by the double mast 10 it can be raised or lowered by the single control rope 20. The clamp is comprised of two sections bolted together and clamping the sail edge and a boom 26 therebetween.

The sail 24 is in one piece of triangular shape.

The upper portion of its forward edge is provided with a wide hem to receive the boom **26**. Preferably this boom is made of several jointed sections in the manner of a fishing rod, or it may be made with telescoping sections. Such sectional construction facilitates stowing the sail and its appurtenances.

The front corner or jib end of the sail is adapted to be anchored to the bowsprit or stem of the boat by any suitable means such as the rope **28**, and the rear corner is likewise secured to the stern of the boat by a rope **30**.

There is no boom along any portion of the lower edge of the sail but a rope **32** may be secured to the bottom seam. Reef points **34** along the bottom may also be employed in the conventional manner when reefing is desired.

The double mast **10** braces itself so that no guy wires or the like are necessary. The sail in raised position is free to swing from side to side between the span of the double mast. There is no dangerous boom on the lower edge of the sail. The boom **26** along the upper forward edge of the sail gives the advantage of a gaff boom sail plan which results in a greater number of square feet in the mainsail area than if that area were merely three cornered. Unlike the "dipping lug" single center mast sailing vessels referred to, the boom **26** of the present invention does not require dipping the front edge of the sail each time it is brought from one side of center to the other.

With reference to Figure 4, which shows diagrammatically in plan a conventional type of sailboat, it is well known that the center mast **36** thereof causes detrimental eddy currents between the jib sail **38** and mainsail **40**. These eddy currents, indicated by the curved arrows in Figure 4, greatly reduce the sailing efficiency of the craft.

A comparison of this figure with Figure 5 which shows diagrammatically the present invention, shows that the single sail **24** provides a continuous uninterrupted surface. The "wishbone" shaped double mast **10** is so disposed as to avoid the formation of such eddy currents as are set up by the center mast of Figure 4, and the sailing efficiency of the sailboat is increased to a considerable degree.

One of the important advantages of the invention derived from the novel structure and arrangement of the various elements resides in the facility with which the sail, boom, and mast can be taken down and stowed. As previously mentioned the boom **26** is disposed in a hem of the sail and may be made in separable sections. After removing the boom, the sail can be folded or rolled and stowed within the craft which constitutes a considerable advantage over the customary sailboat where the sail in lowered position is bound to the boom and then covered by a protecting canvas or waterproof cover.

Still further the double mast **10** is removable from its sockets **14** and since the outline of the mast conforms to the contour of the boat, the mast can be stowed on the deck itself. Advantageously, for this purpose, the deck may be provided with spring clamps **42** on top of a ledge around the rail of the boat and the tubular mast portions may be nested therein.

What I claim as my invention is:

1. In a sailing craft: a mast comprised of two upright members extending upwardly from opposite sides of the craft, said members being bowed inwardly at their upper ends; a union member securing the upper ends of the upright members together; a sail; a pulley carried by said union member, at least one of said upright members and said union member being hollow; a clamp secured to the upper forward edge of the sail; and a control rope secured to said clamp and passing over said pulley through an opening in the union member and thence through said hollow upright to the deck of the craft.

2. A mast for sailing craft and the like comprising: two tubular members adapted to be secured to opposite sides of the deck of a craft in a manner supporting said members in upright positions, said members being bowed toward each other; a hollow union member joining said tubular members at their ends which are to provide the top of the mast; a pulley supported by said union member; and openings in said union member and in one of said tubular members near its lower end, whereby a control rope may be passed over the pulley and downwardly through said union member, said tubular member and out through the opening therein.

LEIGHTON A. WILKIE.