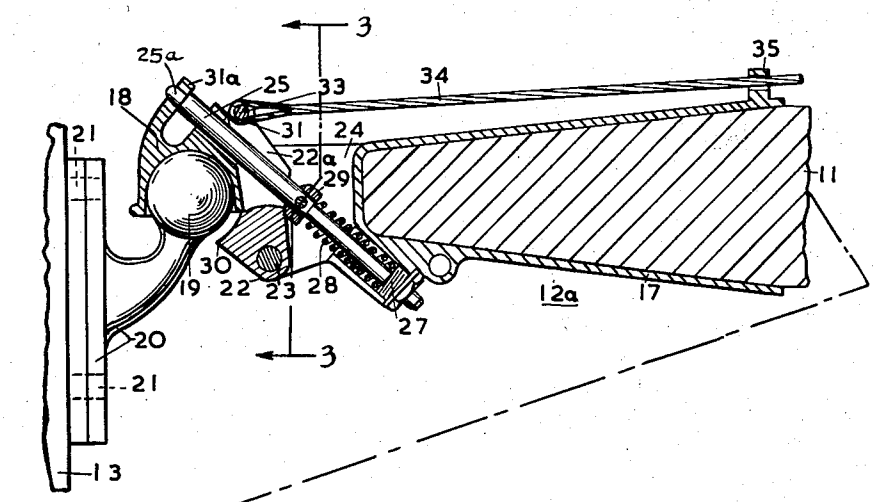
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BOOM END FITTING FOR SAILBOATS

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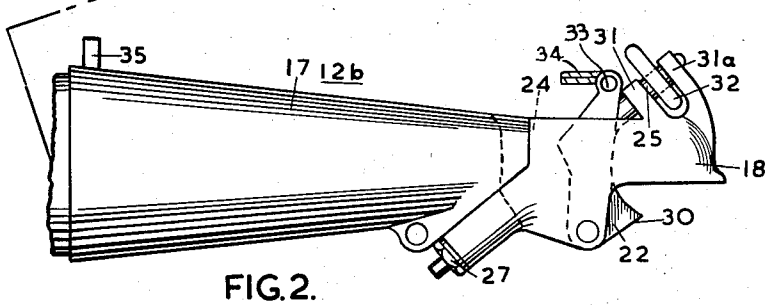


FIG. 2.

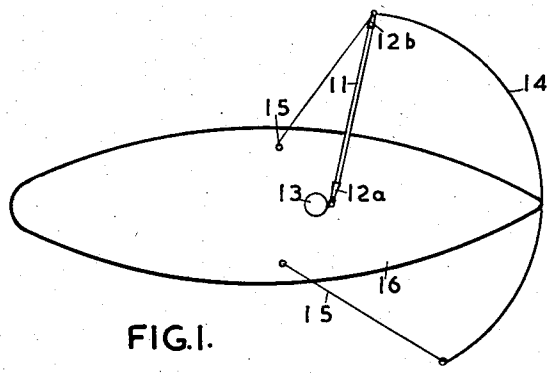


FIG. 1.

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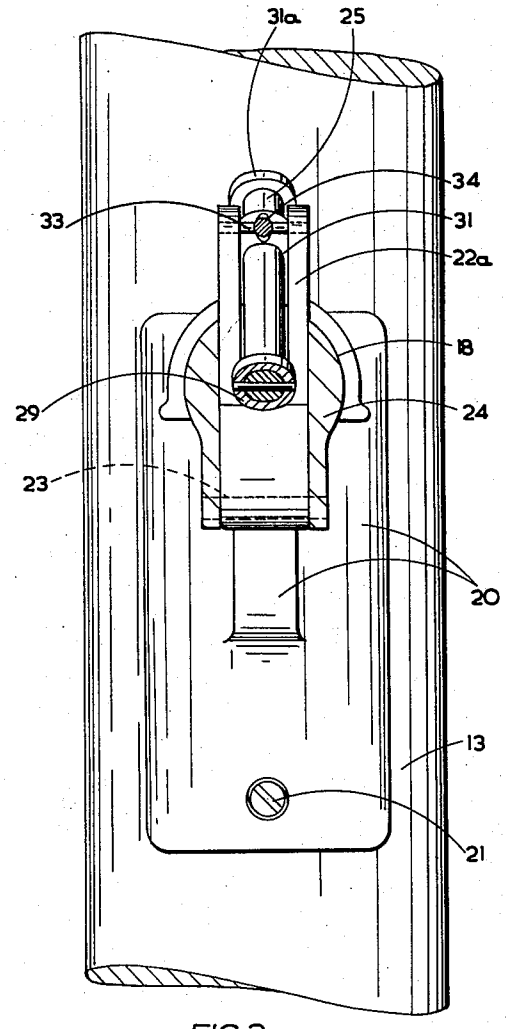


FIG.3.

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2,879,736

BOOM END FITTING FOR SAILBOATS

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Claims priority, application Great Britain June 10, 1955

3 Claims. (Cl. 114—98)

The invention relates to a boom end fitting such as is used in sailing boats, for example, for spinnaker sails where it is desirable that the fitting for attaching one end of the boom to the mast shall be the same as that on the other end of the boom for attaching the sail to the latter.

According to the invention the fitting includes one element of a spherical type joint, for releasable engagement with a coacting element fast with the mast, and a means for attaching the sail to the boom, the joint and the sail-attachment means being operable to their releasing positions by the action of a single latch, or of a latch and withdrawable plunger respectively.

Preferably the joint element of the fitting is a cup, associated with a latch arrangement, for releasable engagement with a coacting ball fast with the mast, and the sail-attachment means includes a withdrawable plunger to bridge a gap between a pair of jaws for holding an eye fast with the sail.

Preferably, also, the latch arrangement of the fitting is biassed into its engaging position, and also acts on the associated plunger for the bias to urge the said plunger into its bridging position.

In the case where there is one of the fittings at each end of a boom, each latch arrangement can be connected to be acted upon by a single, manual control which simultaneously operates the latch arrangement to its disengaging position and the associated plunger to its non-bridging position (although, of course, there may only be a need to operate the latch arrangement at one end of the boom to disengaged position, and the plunger at the other end of the boom to its non-bridging position).

In the accompanying drawings:

Figure 1 is a diagrammatic plan view of a yacht hull showing the bottom edge of a spinnaker sail, set with the boom extending over the port side;

Figure 2 is an elevation, partly in section and with a central portion broken away, of a spinnaker boom according to the invention, and a fragment of an associated mast; and

Figure 3 is a section on line 3—3 of Figure 2.

Referring to Figure 1, the spinnaker boom **11** has identical end fittings **12***a*, **12***b* of which the inboard one (i.e., **12***a* in the example shown) is supported from the mast **13** and the outboard one is attached to the port bottom corner of the sail **14**, the bottom corners being sheeted at **15**, **15** to the hull **16** of the yacht. When it is desired to gybe, the end **12***a* of the boom is detached from the mast and connected to the starboard bottom corner of the sail, while the end **12***b* of the boom is detached from the port bottom corner of the sail and connected to the mast.

The end fittings **12***a* and **12***b* are identical and, in the construction shown in Figure 2, each includes a tapered socket **17** fitting over a correspondingly tapered end of the main portion **11** of the boom and suitably secured in position thereon. Integral with each socket **17** is an

inverted spherical type or cup-like portion **18** which is to fit over a ball **19** fast with a bracket **20** secured at **21**, **21** to the mast **13**. Adjacent the cup portion **18** is a substantially Y-shaped latch-plate **22** which has its central limb pivoted at **23** in a housing formed by a transverse slot **24** in the region between the socket **17** and the portion **18**. This latch-plate has a forked upper end between the limbs **22***a* of which extends a plunger **25** which is guided at one end by a screw plug **27** engaged in a bore of the fitting, and a spring **28** reacts between the plug **27** and an abutment **29** on the plunger **25**. This abutment bears on the latch-plate for urging a nose **30** of the latter into a position to obstruct the withdrawal of the cup **18** from the ball **19**, but not, in the particular construction shown, to contact the ball **19**.

Fast at the back of the cup **18** is a pair of jaws **31**, **31***a* having aligned holes through which the plunger **25** extends to form a bridge for confining an eye **32** fast with the sail. As shown at **25***a*, the outer end of the plunger **25** is of reduced diameter, and the hole in the jaw **31***a* is of corresponding size, whereby that jaw coacts with the step thus formed on the plunger for limiting outward movement of the latter under the influence of the spring **28**.

Conveniently the limbs **22***a* of each latch-plate are united by a pin **33** to which is secured a lanyard **34** passing through a hole in a bracket **35** fast with the socket **17**. In this way a pull on the lanyard **34** will turn the nose **30** of the latch-plate **22** about a pivot **23** through approximately 20°, thus allowing socket **18** to be moved clear of the ball **19**. The rear of the latch-plate **22** acts on an abutment **29** fast on the pin **25** to move the pin **25** against the bias of spring **28**. The movement of the pin **25**, in this way, unbridges the jaws **31**, **31***a* of cup **18**. It will be understood that with the boom at any one setting the cup of one end fitting will be engaged with the ball **19**, while the jaws **31**, **31***a* and plunger **25** of the other end fitting will hold the sail. In other words the lanyards of both fittings will be operated in turn to effect the respective disengagements.

With the arrangement as shown in the drawings there is an end fitting, embodying the invention, at each end of the boom. The lanyard **34** can be employed to simultaneously release the ball and cup joint and the plunger at each end of the boom. Thus, simultaneously, the boom is released from the mast, at one end of the boom, and the sail is released from the boom, at the other end of the boom, all in one movement.

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

1. A boom end fitting comprising a housing, the housing defining a socket for engagement over an end of a boom and one part of a two-part cup forming one element of a spherical type joint for releasable engagement with a ball member, another part of said cup pivotally mounted on said housing, resilient means biassing said other part of the two-part cup to a ball-engaging position, a pair of jaws on said housing and adapted to receive an eye fast with a sail which is to be used on conjunction with the boom, a withdrawable plunger bridging the gap between the jaws for holding the eye captive, said resilient biassing means also acting on said withdrawable plunger to hold it in a gap-bridging position, and releasing means operatively connected to said other part of said cup and also to said plunger to release the cup from the ball and the plunger from the jaws.

2. The combination of a boom; a fitting at each end of the boom, each fitting comprising a housing, the housing defining a socket receiving the end of the boom, and one part of a two-part cup forming one element of a spherical type joint for releasable engagement with a ball member, another part of said cup pivotally mounted

on said housing, resilient means biassing said other part of the two-part cup to a ball-engaging position, a pair of jaws on said housing and adapted to receive an eye fast with a sail which is to be used in conjunction with the boom, a withdrawable plunger bridging the gap between the jaws for holding the eye captive, said resilient biassing means also acting on said withdrawable plunger to hold it in a gap-bridging position, and releasing means operatively connected to said other part of said cup and also to said plunger to release the cup from the ball and the plunger from the jaws; and an interconnection between the releasing means of the fittings at each end of the boom.

3. A boom end fitting comprising a housing defining a socket for engagement over an end of a boom, a cup on said housing and forming one element of a spherical

type joint for releasable engagement with a ball member, resiliently biased latch means for holding said element releasably engaged with the ball, a pair of jaws on said housing to receive an eye fast with a sail which is to be used in conjunction with the boom, a resiliently biased withdrawable plunger bridging the gap between said jaws and for holding said eye captive, resilient biassing means acting on said latch means and said plunger, and means operatively connected to said latch means and to said plunger for releasing the cup from the ball member and the plunger from the eye.

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