Dec. 12, 1967 L. H. IVY 3,357,663

ANTENNA SUPPORT CLAMP ASSEMBLY

Filed Oct. 11, 1965

Fig. 1

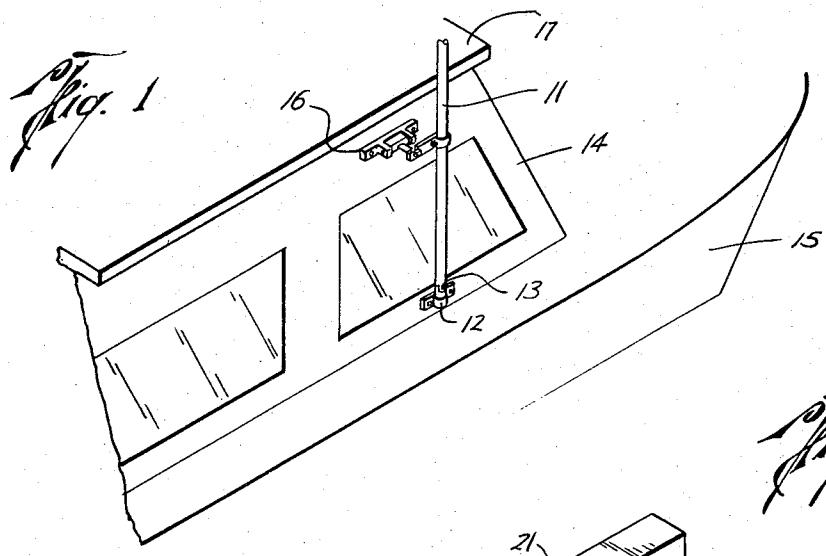


Fig. 2

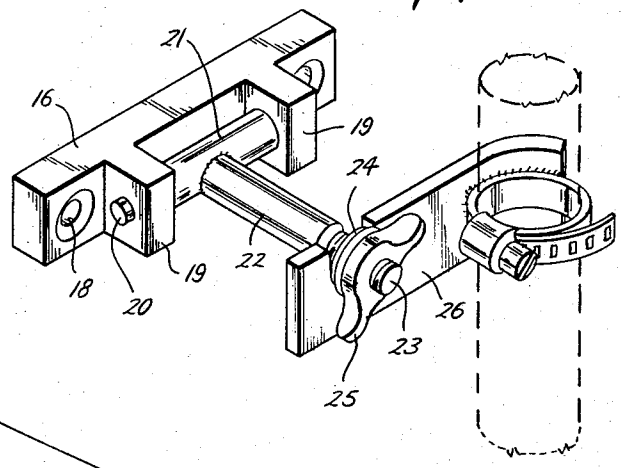
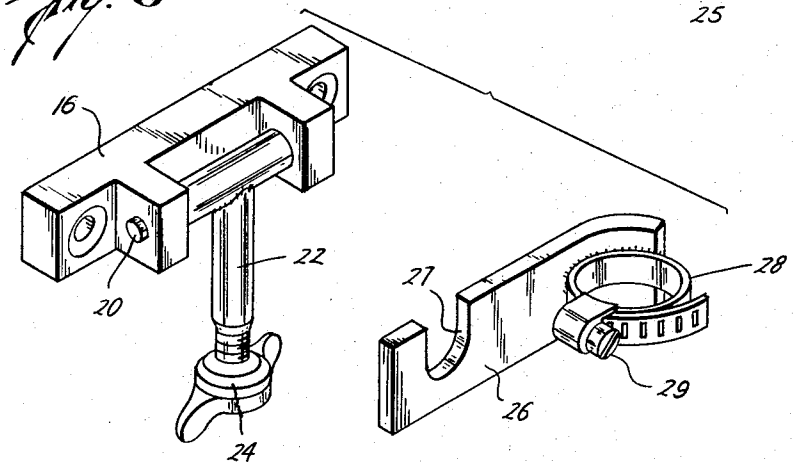


Fig. 3



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ANTENNA SUPPORT CLAMP ASSEMBLY

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ABSTRACT OF THE DISCLOSURE

A clamp assembly for supporting a lay-down type boat antenna, including an insulator base having swivel means thereon carrying clamp means for attachment to the antenna.

This invention relates to an antenna support clamp assembly. More particularly, this invention relates to an antenna support clamp assembly for supporting a lay-down type boat antenna in a generally upright position when the antenna is supported on a lay-down mount.

Marine antennas are commonly mounted on boats for the purpose of maintaining communication between boats and land based points. In order to have proper communication it is necessary that the antenna be extended vertically above the boat cabin a considerable distance. At the same time it is often desirable to have the antenna so mounted that it may be lowered along side the cabin during non-use or during periods when the boat is in storage. Hence, lay-down type supports were developed for supporting the lower end of the antennas such that the antenna could be pivoted from an upright position to a lay-down position without disconnection from its base mount or support. At the same time, however, it was often necessary to have an additional supporting means spaced upwardly from the base mount such that the antenna could be supported in two places.

The present invention relates to an antenna support clamp assembly which is generally spaced apart from and generally upwardly from the lay-down base mount. The prior art includes certain support clamps which are designed to accomplish this function but do so in a very poor manner. For example, support clamps of the prior art are generally rigid, thereby projecting outwardly from the place of attachment and thereby presenting a hazardous obstacle which may be contacted by individuals moving about the boat to thereby cause injury.

It is therefore an object of the present invention to provide an antenna support clamp assembly which solves the foregoing problems and which is adapted for movement to a safe position during non-usage thereof.

Briefly stated, the present invention includes an insulator base member which has means for attaching to a support such as a bulkhead at a point spaced apart from the lay-down mount. Swivel means are connected to the base member and adapted for pivotal movement thereon. There is also provided adjustable friction means attached near the end of the swivel means. Latch means are also connected to the antenna which latch means has means for engagement with the friction means whereby the antenna may be detachably supported in an upright position by engagement of the friction means with the latch means.

Reference to the drawings will further explain the invention wherein like numerals refer to like parts and in which:

FIG. 1 is a perspective view showing the entire antenna, base mount and upper support assembly.

FIG. 2 is an enlarged perspective view showing the antenna support clamp assembly of the instant invention in greater detail and in the supporting position.

FIG. 3 is a view similar to FIG. 2 but showing the antenna support clamp assembly of the instant invention in the non-supporting position.

Referring now to FIG. 1, it will be observed that antenna **11** is mounted on its lower end to bulkhead lay-down mount **12** and antenna **11** is provided with a universal joint **13** immediately thereabove. It is to be understood that mount **12** is attached to the side of cabin **14** of boat **15**.

The antenna support clamp assembly of the present invention is spaced upwardly from universal joint **13** and is comprised of base member **16** which is supported near the top of cabin **14** and just below cabin roof **17**. It is to be understood that base member **16** acts as an insulator and is made of an insulation material such as nylon, Lucite or other plastic material.

Referring now to FIGS. 2 and 3, it will be observed that base member **16** is generally rectangular in side elevation view and is provided with a pair of recessed attaching screw holes **18** on each end thereof for attachment to the side of cabin **14** or a bulkhead by appropriate screws or the like. Base member **16** is also provided with a pair of spaced apart brackets **19** which extend outwardly from base member **16**.

Brackets **19** have passing horizontally therethrough and supported therein a pivot pin **20** which has mounted thereon swivel means as will now be explained.

The swivel means referred to conveniently takes the form of a T-shaped swivel comprising a cross member **21** of tubular construction through which pin **20** passes for supporting the swivel thereon, and a center leg **22** also of tubular construction which is connected to the center of cross member **21** as by welding.

The lower or outward end of leg **22** is provided with a threaded stud **23** of a smaller diameter and which is adapted for supporting thereon friction means in the form of rubber washer **24** held thereon by wing nut **25**. It is to be understood that washer **24** could be of any resilient type material and may conveniently have the forward side thereof beveled so as to provide a controlled amount of frictional engagement with adjacent elements. Hence, it may be stated that the swivel means is provided with adjustable friction means attached near the end thereof.

The clamp includes a latch means connectible to antenna **11** which latch means conveniently takes the form of latch arm **26** which is provided with a recess in the form of upwardly facing U-slot **27** near one end thereof. The other end of latch arm **26** is provided with an adjustable antenna clamp ring **28** which fits about and is adapted for securing the latch arm **26** to antenna **11**. Ring **28** is adjustable by means of adjusting screw **29** whereby the circumference of ring **28** may be adjusted thereby to fit different size antennas.

In use the latch means will be mounted as shown in FIG. 2 such that latch arm **26** is fixedly secured to antenna **11** at a suitable point to engage the free end of center leg **22** of the swivel when the antenna has been raised to its upright position. U-slot **27** will be positioned to receive stud **23** and wing nut **25** will then be tightened sufficiently to cause washer **24** to frictionally engage and securely hold latch arm **26**. Thus it will be seen that the antenna is then held in a generally upright position.

When it becomes desirable to place antenna **11** in the lay-down position wing nut **25** may be loosened to thereby disengage latch arm **26**, allowing swivel leg **22** to be removed from latch **26** and releasing antenna **11** for return to the down position. Release of leg **22** from latch arm **26** will allow the latch to fall to the generally vertical position shown in FIG. 3 which may be described as the non-supporting position. In the supporting position shown in FIG. 2 it may be stated that leg **22** is generally held in the horizontal position. Hence, it is important that the swivel means be pivotally mounted on the base member such that it can pivot from a generally hori-

zontal supporting position to a generally vertical non-supporting position.

In the non-supporting position shown in FIG. 3 it will be observed that the support is placed in a non-projecting position such that it does not present a hazard to crew, nor an obstruction to people who are fishing from the boat or the like.

It will be observed that the art had been provided with a new and useful antenna support clamp assembly which overcomes certain shortcomings of the prior art and which is of relatively simple construction and easy operation.

Modifications may be made in the invention as particularly described without departing from the scope of the invention. Accordingly, the foregoing description is to be construed illustratively only and is not to be construed as a limitation upon the invention as defined in the following claims.

What is claimed is:

1. An antenna support clamp assembly for supporting a lay-down type antenna mounted on a lay-down mount, said assembly comprising:

an insulator base member having means for attaching to a support at a point spaced apart from said lay-down mount;

swivel means connected to said base member for pivotal movement thereon;

said swivel being generally T-shaped having a cross member and a central leg member, said cross member being pivotally connected to said base member for swinging said swivel between a generally horizontal supporting position and a generally vertical non-supporting position;

adjustable friction lock means attached near the end of said swivel means; and

separable latch means attachable to an antenna for latching engagement with said swivel means and having means for engagement with said friction lock means whereby said antenna may be detachably supported in a generally upright position by engagement of said friction lock means and said latch means, said latch means including a latch arm having a slot near one end thereof for receiving therein the free end of said leg member and adjustable clamp means near the other end thereof for securing said arm to an antenna.

2. The clamp assembly as claimed in claim 1 wherein:

said friction means includes a resilient washer mounted on said leg member and means for urging said washer into frictional engagement with said latch means in the supporting position.

3. An antenna support clamp assembly for supporting a lay-down type boat antenna in a generally upright position when said antenna is mounted on a lay-down mount, said assembly comprising:

an insulator base member having means for attaching to a bulkhead at a point spaced apart from a lay-down mount;

a T-shaped swivel having a cross member and a central leg member, said cross member being pivotally connected to said base member for pivotal movement between a generally horizontal supporting position and a generally vertical non-supporting position;

adjustable friction lock means attached near the free end of said leg member and including a resilient washer mounted thereon and having means for urging said washer axially on said leg member; and

a latch arm having a slot near one end thereof for receiving the free end of said leg member in frictional engagement with said lock means and adjustable clamp means near the other end thereof for attaching said arm to an antenna.

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