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APPARATUS FOR RELEASABLY CONNECTING A BOAT HULL FITTING WITH A SOURCE OF FLUSHING WATER

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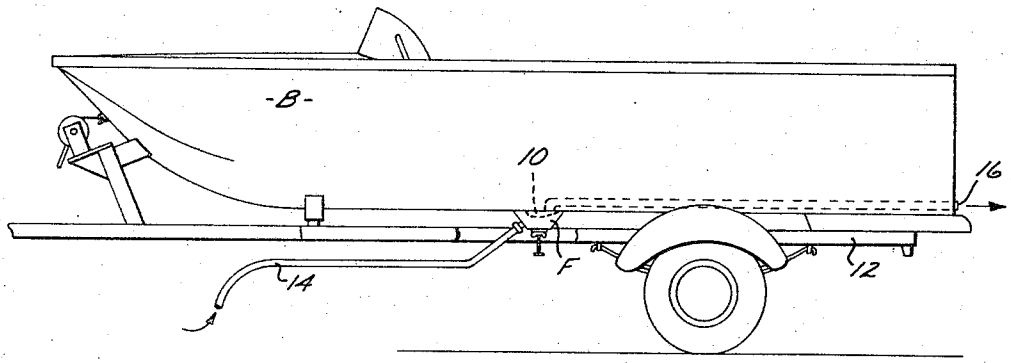

FIG. 1

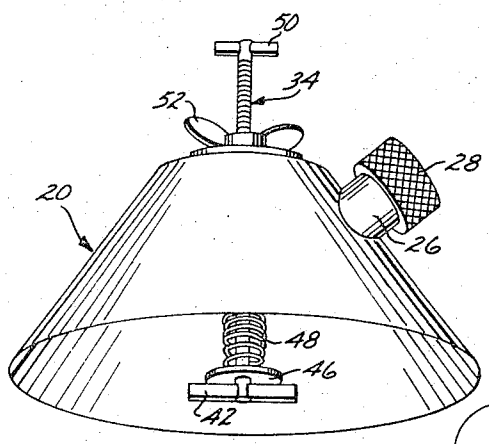

FIG. 2

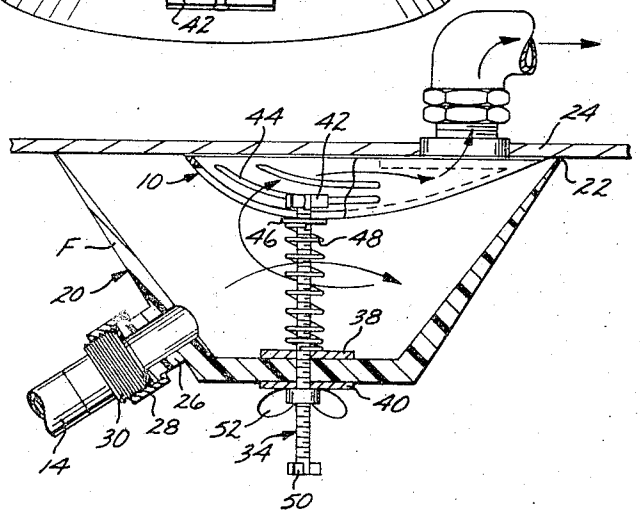

FIG. 3

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ABSTRACT OF THE DISCLOSURE

A removable inverted suction cup which is attachable to a slotted boat hull fitting to direct flushing water through the fitting. The suction cup is connectible to a water hose whereby water is directed into the confines of the suction cup. An upstanding threaded mounting post is vertically slidably supported on the suction cup, with the upper end of the post being formed with a T-head that is greater in length than the width of the slot so that the head may be aligned with and then forced through a slot whereafter it is rotated 90 degrees to lie athwart the slot. The lower end of the mounting post is formed with a horizontal finger that is parallel with the T-head so as to provide an indexing means for the T-head. A coil spring is carried by the mounting post between the T-head and the interior of the suction cup and a lock nut is threaded upon the mounting post exteriorly of the suction cup so as to removably retain the suction cup in position for flushing out the boat hull fitting.

The present invention relates generally to boating and more particularly to apparatus for releasibly connecting a boat hull fitting with a source of flushing water.

If the water cooling passages of a motorboat's internal combustion engine are not flushed with fresh water after use in salt water the salt water remaining in the passages and lines will evaporate leaving salt deposits. These salt deposits not only corrode metals, but also gradually accumulate to thereby reduce the interior dimensions of the water passages restricting water flow therethrough. The same is true with the bait tank lines of boats operated in salt water. Generally, water cooling passages and bait tank lines are flushed with fresh water by means of a conventional garden hose, such hose being manually supported against the hull inlet fittings leading to the engine or to the bait tank. This conventional operation is tedious, and moreover, considerable water leakage takes place with this arrangement.

It is a major object of the present invention to provide apparatus readily attachable to and detachable from a boat hull fitting to direct flushing water through such fitting.

Another object of the present invention is to provide apparatus of the aforedescribed nature which may be connected to and detached from a boat hull fitting in a minimum period of time and without requiring the use of any tools.

A further object of the present invention is to provide apparatus of the aforedescribed nature which positively remains in position on the hull fitting without any manual support.

It is yet a further object of the present invention to provide apparatus of the aforedescribed nature that is economical of construction, simple in design and extremely compact.

A more particular object of the present invention is to provide apparatus of the aforedescribed nature that includes a resilient inverted suction cup the upper periphery of which is sealingly engageable with the portion of a boat hull adjacent the hull fitting that is to receive flushing water. The suction cup vertically slidably carries an upstanding threaded mounting post, the upper end of the post being formed with a T-head, that is removably insertable within the slot of a hull fitting when such head is aligned with the slot. A coil spring carried by the post between the underside of the T-head and the upper portion of the suction cup constantly biases the post away from the boat hull fitting. A nut is threaded upon the post exteriorly of the suction cup, with tightening of such nut after the T-head has been rotated to a position transverse to the direction of the slot serving to temporarily but securely lock the suction cup in place upon the boat hull.

These and other objects and advantages of the present invention will become apparent from the following detailed description, when taken in conjunction with the appended drawings herein:

FIG. 1 is a side elevational view of a boat provided with a preferred form of apparatus embodying the present invention, such apparatus being arranged in operative position upon a hull fitting of said boat;

FIG. 2 is a perspective view of said apparatus in enlarged scale; and

FIG. 3 is a further enlarged centrally vertical sectional view of said apparatus arranged in operative position upon a boat hull.

Referring to the drawings and particularly FIGURE 1 thereof, a preferred form of flushing apparatus F embodying the present invention is shown secured to the hull fitting **10** of a boat B, such boat being carried upon a conventional boat trailer **12**. The flushing apparatus F is adapted to connect a fresh water flushing hose **14** with the hull fitting **10**. The hull fitting **10** may be in communication with an internal combustion engine (not shown) mounted within the boat B, or alternatively such fitting may be connected to a bait tank (not shown) carried by the boat B. With the flushing apparatus F connected to hull fitting **10** fresh water will flow from the hose **14** through the hull fitting **10** to the water passages of the internal combustion engine or to the bait tank in communication with the hull fitting and then out a discharge pipe **16** carried by the boat B in the manner indicated by the directional arrows in FIG. 1.

More particularly and with additional reference to FIGS. 2 and 3 the flushing apparatus F includes a suction cup, generally designated **20**, formed of a resilient material such as natural or synthetic rubber. The suction cup **20** is adapted to be arranged in an inverted position with its upper periphery **22** sealingly engaged with the portion of the boat hull **24** adjacent the hull fitting **10**. The interior of the suction cup **20** is formed at one of its sides with an integral depending neck **26**. The lower end of the neck **26** is provided with a conventional female fitting **38** that is removably engageable with a conventional male fitting **30** secured to one end of the hose **14**.

The mid portion of the suction cup **20** is formed with a vertical bore **32** that vertically slidably receives an upstanding externally threaded mounting post generally designated **34**. The shank **36** of the mounting post **34** extends through a pair of vertically aligned inner and outer washers **38** and **40**, respectively, disposed on opposite sides of the central portion of the suction cup **20**. The upper end of the mounting post **34** is integrally formed with an elongated T-head **42**. The width of the head **42** should be less than the width of the slots **44** formed in the hull fitting **10**. Slidably disposed upon the mounting post **34** below the T-head **42** is an upper washer **46**. A coil compression spring **48** encircles the mounting post **34** between the underside of the upper washer **46** and the inner washer **38**.

Preferably, the lower end of the mounting post **34** is formed with a horizontal fixed indexing finger **50** which is vertically aligned with the T-head **42** to indicate the position of the T-head. Alternative indexing means may

also be employed. A wing nut **52** is threaded upon the mounting post **34** below the outer washer **40**.

In the operation of the aforedescribed apparatus, the suction cup **20** is secured to the boat hull portion **24** by first aligning the T-head **42** with one of the slots **44** of the hull fitting **10**. Thereafter, the mounting post **34** is rotated approximately 90 degrees so as to position the T-head **42** transverse to the direction of hull fitting slot **44** and thereby restrain the mounting post **34** from movement away from the hull fitting **10**. Finally, the wing nut **52** is tightened to partially compress spring **48** and thereby maintain T-head **42** tightly engaged with the inside surface of hull fitting **10**. In this manner the suction cup **20** and its parts will be positively secured in place upon the boat hull. The position of the T-head **42** relative to the direction of the slot **44** may be readily detected by means of the indexing finger **50**.

With the fresh water hose **14** connected to the lower end of the neck **26** fresh water from the hose will flow upwardly through the interior of the suction cup **20** and then through the slots of the hull fitting **10**. To remove the suction cup **20** from the side of the boat hull B it is merely necessary to back off the wing nut **52**. Thereafter, the F head **42** is rotated into alignment with the direction of the hull fitting slot **44** to align this head with the slot. The suction cup **20** then may be easily removed from the boat hull.

It will be readily apparent that the aforedescribed flushing apparatus F is easily and quickly attachable to and detachable from the hull fitting **10**, and when so applied the suction cup **20** will remain in position without further attention. It will also be apparent that water may be introduced through the hull fitting **10** without any water leakage. The flushing apparatus F makes it possible for a boat engine to be operated for testing purposes, or while the boat is being stored out of the water.

Various modifications and changes may be made with respect to the foregoing detailed description without departing from the spirit of the invention or the scope of the following claims.

I claim:

1. Apparatus attachable to a slotted boat hull fitting to direct flushing water through said fitting, comprising:

a resilient inverted suction cup, the upper periphery of which is sealingly engageable with the portion of said boat hull adjacent said hull fitting;

means on said suction cup engageable with a source of flushing water;

an upstanding threaded mounting post vertically slidably supported on said suction cup, the upper end of said post being formed with a T-head removably insertable within a slot of said fitting, the length of said head being greater than the width of said slot;

a coil spring carried by said post between said T-head and the interior of said suction cup;

a nut threaded upon said post exteriorly of said suction cup; and

indexing means formed on the lower end of said mounting post that indicate the position of said T-head.

2. Apparatus as set forth in claim **1** wherein said indexing means is a horizontal finger.

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