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MARKER BUOY FOR SUNKEN OBJECTS

Filed Nov. 17, 1958

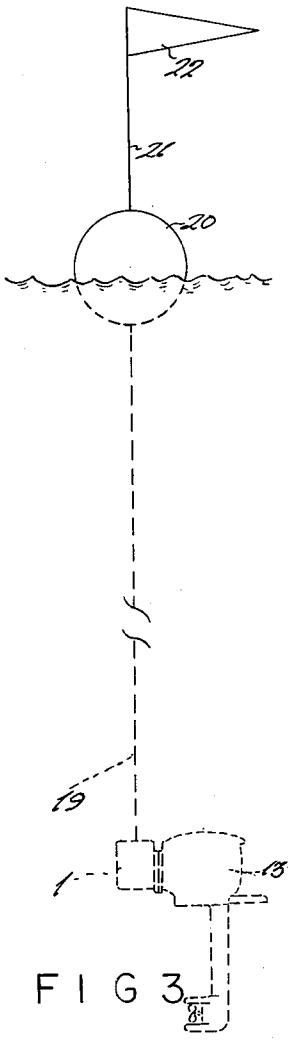


FIG 3

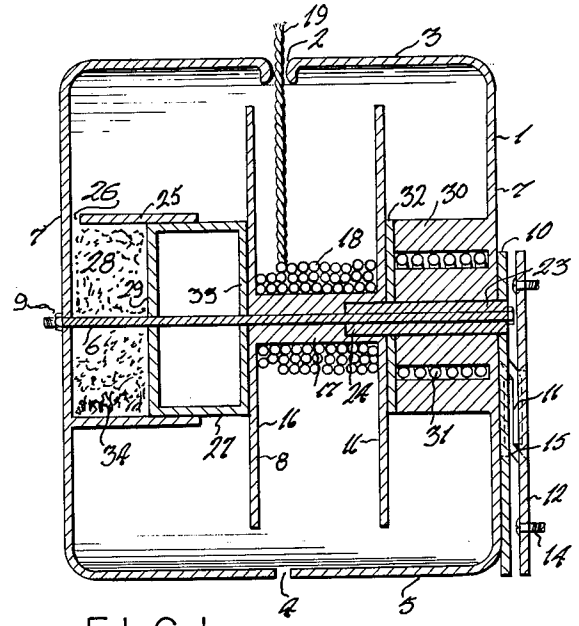


FIG 1

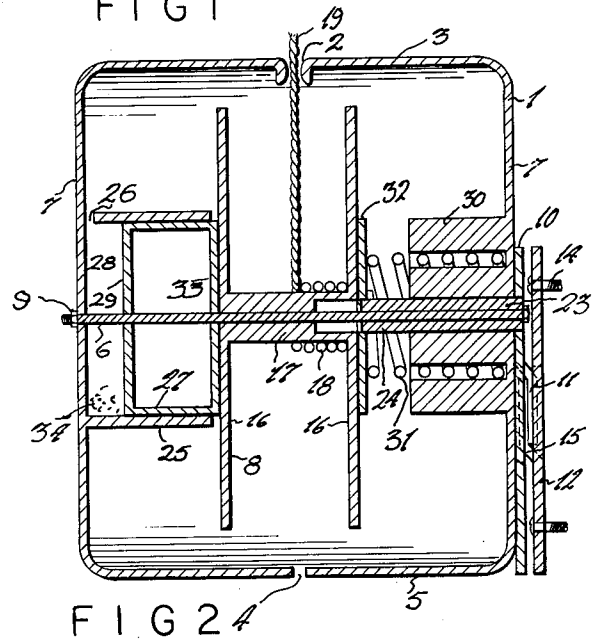


FIG 2

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MARKER BUOY FOR SUNKEN OBJECTS

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My invention relates to new and useful improvements in marker buoys for sunken objects objects, and the device is particularly adaptable for use with outboard motors and the like which often come displaced from a boat and are normally non-recoverable.

Several attempts have been made to provide means whereby a sunken device such as an outboard motor may be located for subsequent recovery and these normally take the form of a float and line attached to the motor. However, these are relatively inconvenient inasmuch as there is nothing to prevent the float from becoming displaced while the motor is in normal use and as they are extremely difficult to rewind, the device becomes somewhat of a nuisance.

I have overcome these disadvantages by providing a float which cannot be disengaged from the device unless the device is submerged in water whereupon a water soluble substance dissolves and enables the spool carrying the line to move from a non-rotatable to a rotatable position.

The principal object and essence of my invention is therefore to provide a device of the character herewithin described which can be attached to a device such as an outboard motor and which cannot operate until submersion has taken place whereupon the float is released to rise to the surface, thereby marking the location of the sunken device.

Another object of my invention is to provide a device of the character herewithin described which is readily reusable.

A yet further object of my invention is to provide a device of the character herewithin described which is extremely compact, simple in construction and otherwise well suited to the purpose for which it is designed.

With the foregoing objects in view, and such other objects and advantages as will become apparent to those skilled in the art to which this invention relates as this specification proceeds, my invention consists essentially in the arrangement and construction of parts all as hereinafter more particularly described, reference being had to the accompanying drawings in which:

FIGURE 1 is a sectional elevation of my device shown in the non-operating position.

FIGURE 2 is a view similar to FIGURE 1 but with the spool in the release or rotatable position.

FIGURE 3 is a schematic view of my device in operation showing the float at the surface and having being released due to submersion.

In the drawings like characters of reference indicate corresponding parts in the different figures.

Proceeding therefore to describe my invention in detail, reference should be made to the accompanying drawing in which I have illustrated an enclosure **1** having an aperture **2** upon the upper side **3** thereof and a water inlet aperture **4** formed in the lower side **5** thereof. A spindle **6** spans the side walls **7** of the device and carries a spool **8** thereupon. Said spindle, which is secured by means of nuts **9**, also secures a tamping plate **10** upon one side **7** of the device, said tamping plate having an extending tongue **11** formed thereon.

A further plate **12** is adapted to be secured to outboard motor **13** by means of screws **14**, said plate having upturned complementary flange **15** thereon adapted to be engaged by the flange **11**. The inherent resiliency of the material therefore enables the device to be secured firmly

on the plate **12** thus maintaining the device in a convenient position upon the outboard motor **13**.

The spool **8**, includes a side plate **16** and a hub **17** around which is wound a line **18**, it being understood that one end of said line (not illustrated) is secured to the hub to prevent displacement therefrom.

The other end **19** of the line exits through the aforementioned aperture **2** and is secured to a spherical float **20** carrying a staff **21** and an indicator flag **22** thereupon.

In the position shown in FIGURE 1, means are provided to prevent the spool rotating and these means take the form of an extending locking sleeve **23** secured to the spindle **6**, the ends of which engage a corresponding recess **24** formed in one side of the hub **17**. A cylinder **25** extends from the side **7** of the enclosure opposite to the locking sleeve **23**, said cylinder having a water inlet aperture **26** formed in the wall thereof. A piston **27**, freely surrounds spindle **6** and is slidable within the cylinder **25**. However, with the device shown in the FIGURE 1, the space **28** between the piston head **29** and the side wall **7** of the enclosure is normally filled with a water soluble material such as for example common salt, thereby preventing endwise movement of the piston **27**.

A spring carrying flange **30** is formed concentrically with the spindle **6** upon the wall **7** of the enclosure, said flange carrying a coil spring **31** therewithin which reacts between the wall **7** and a friction disc **32** surrounding the spindle **6** and engaging one flange **16** of the spool. It will be observed that the other flange **16** of the spool engages the underside **33** of the aforementioned piston **27**.

While in this position, the spring **31** is endeavouring to move the spool endwise upon the spindle but is prevented from so doing by the presence of the water soluble material **34** within the space **28**.

However, if the outboard motor becomes disengaged from the boat and sinks to the bottom, water enters the aperture **4**, fills the enclosure, and enters the area **28** through aperture **26** within the cylinder wall. This water dissolves the material **34** within the area **28** thus permitting spring **31** to move the spool and piston leftwardly with respect to the drawings so that it takes up the position shown in FIGURE 2. In this figure it will be observed that the recess **24** on the spool has now become disengaged from the locking sleeve **23** on the spindle thus permitting the float **20** to rise to the surface and unwind the line **18** due to the fact that the spool can now rotate freely. The device therefore takes up the position shown in FIGURE 3 and clearly indicates the position of the sunken device.

Since various modifications can be made in my invention as hereinabove described, and many apparently widely different embodiments of same made within the spirit and scope of the claims without departing from such spirit and scope, it is intended that all matter contained in the accompanying specification shall be interpreted as illustrative only and not in a limiting sense.

What I claim as my invention is:

1. A marker buoy for devices such as outboard motors and the like comprising in combination an enclosure securable to said device, a spool in said enclosure, means spanning said enclosure adapted to support said spool for selective rotation, a line on said spool and fastened by one end thereof to said spool, said line passing through said enclosure, float means on the end of said line outside of said enclosure, means in said enclosure normally to maintain said spool in a non-rotating position, and further means adapted to release said spool to rotatable position when said enclosure is immersed in water, said further means including a cylinder in said enclosure axially aligned with said means in said enclosure supporting said

spool for selective rotation, a piston in said cylinder and on said last mentioned means, said piston being engageable by one side of said spool, water soluble material in said cylinder between said piston and said enclosure, and spring means in said enclosure engaging the other side of said spool adapted to urge said means supporting said spool for selective rotation, endwise towards said piston when said water soluble material dissolves.

2. The device according to claim 1 in which said means adapted to support said spool comprises a spindle spanning said enclosure.

3. The device according to claim 2 in which said means to maintain said spool in a non-rotatable position includes a locking sleeve on said spindle, and a mating recess in one side of said spool engageable by said locking sleeve.

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