

1

3,553,751

AUTOMATIC MARKER BUOYS

Gerald F. Lewis, 1850 Columbia,
Berkley, Mich. 48072

Filed Dec. 2, 1968, Ser. No. 780,365
Int. Cl. B63b 21/52

U.S. Cl. 9—9

1 Claim

ABSTRACT OF THE DISCLOSURE

An automatic marker buoy for locating and retrieving items lost overboard from boats, docks and the like consisting of a preferably cylindrical float of an extremely buoyant material having a retriever line storage groove therearound, a retriever line anchored at the base of said line storage groove and wound therein, said float having a thimble with a reentrant cavity therein fixed in said float adjacent said line storage groove and formed to receive and releasably engage a resilient spring clip tied to the said retriever line near the free end thereof, the free end of said retriever line being securable to an item to be retrieved that may accidentally fall into a body of water, the said spring clip on said retriever line being of such form and resiliency as to become released from said thimble responsive to the buoyancy of the said marker buoy when an item to which the free end of the retriever line of said marker buoy is secured and is lost overboard from a boat, dock or the like, the said retriever line readily unwinding from the retriever line storage groove of the float as the said item sinks in the said body of water.

The primary object of this invention is to provide an improved, compact and simplified automatic marker buoy which is economical to produce, is positive in operation, and which may be manufactured in selected sizes to function reliably in the various circumstances in which marker buoys for lost-overboard items are expected to perform.

A further object of the instant invention is to provide an automatic marker buoy consisting of a preferably cylindrical float formed of an extremely buoyant material, such as molded closed cell plastic or the like, having a retriever line storage groove formed therearound, and a retriever line anchored at the base of said groove and wound therein, said float having a thimble with a reentrant cavity therein formed to receive and releasably retain a resilient spring clip tied to the said retriever line near the free end thereof, the free end of said retriever line being securable to an item to be retrieved should it accidentally fall into a body of water, the said spring clip on said retriever line being of such resiliency as to release from said thimble responsive to the buoyance of the said marker buoy when an item to which the free end of said retriever line of said marker buoy is secured sinks in said body of water, the retriever line unwinding freely from said cylindrical float as said float rotates on the surface of the water during the sinking of the lost-overboard item.

Other objects of the invention will become apparent by reference to the following detailed description taken in connection with the accompanying drawing, in which:

FIG. 1 is a more or less diagrammatic view of an automatic marker buoy of the invention shown connected to a sunken item, the marker buoy having had its float released as the item to which it is connected by the retriever line thereof sinks, the said float serving as a marker buoy by floating on top of a body of water.

FIG. 2 is an end elevation view of an automatic marker buoy of the invention ready for use.

FIG. 3 is a side elevational view of the marker buoy shown in FIG. 2.

2

FIG. 4 is a vertical sectional view taken on the line 4—4 of FIG. 2.

FIG. 5 is an enlarged exploded sectional view through the resilient anchorage means employed in buoyant spool type float of the automatic marker buoy of the invention, the resilient spring clip type retriever line anchor being shown in dot and dash lines in its anchored position within the retainer thimble provided in said float therefor and in full lines withdrawn therefrom.

Referring now to the drawing wherein like reference characters refer to like and corresponding parts throughout the several views, the automatic marker buoy 10 illustrative of the invention disclosed and described herein preferably comprises a cylindrical spool type float 11 molded of an extremely light and buoyant material such as a closed cell expandable polyurethane. The said cylindrical float 11 has a retriever line storage groove 12 molded around the longitudinal center thereof which accommodates a suitable length of retriever line 13 preferably of the fish line type. The said retriever line 13 has one end thereof secured to the float 11 at the bottom of the said retriever line storage groove 12 therein.

A preferably hollow cylindrical thimble 14 is formed of a rust resistant material and is molded into the said spool type float 11, which cylindrical thimble has an opening 140 in one end thereof and is preferably radially disposed within the said spool type float 11 with the opening 140 in said one end thereof located at a suitable small depression 110 in the said float 11 adjacent the retriever line storage groove 12 therearound. The opening 140 in the said one end of the hollow cylindrical thimble 14 is somewhat smaller than the internal diameter of the said hollow cylinder 14, thereby providing an annular anchorage shoulder 141 around the inner periphery of the open end of the said thimble 14.

A resilient generally hairpin shaped releasable retainer line retainer clip 16 preferably formed of a suitable spring stainless steel wire having a loop 160 at one end thereof and a pair of bowed legs 161 at the opposite end thereof is tied at its loop end 160 to the retriever line 13 near the free end thereof. The bowed legs 161 of the said releasable anchorage line retainer clip are bowed inwardly toward each other whereby to permit them to be manually flexed inwardly to snap in place within the cavity 142 of the hollow cylindrical thimble 14 inwardly of the annular anchorage shoulder 141 thereof. The said resilient line retainer clip 16 is shown in its normal unsprung disengaged position by full lines in FIG. 5, and in its inwardly spring anchor position by the dot and dash lines in FIG. 5.

The free end of the retriever line 13 may be tied to the item 17 to which it is secured; however, a convenient snap-hook 15 may be employed at the free end of the said retainer line for convenience in securing an automatic marker buoy 10 to any item 17 desired to be protected thereby, which item 17 has been illustrated in the drawing as a fisherman's tackle box.

For larger marker buoys for use with larger overboard items where the body of water is extremely deep, the float may be made of metal and a rope-type line may be employed. In each size automatic marker buoy of the invention, it is important that the float should be sufficiently large and buoyant to accommodate the weight of the retriever line wound thereon and that the retriever line retainer clip be of sufficient resiliency to release itself from the float with the retainer line wound thereon when the item to which the retainer line is secured is lost overboard.

I claim:

1. An automatic marker buoy for items lost overboard from boats and the like comprising a float,

3

a retriever line storage groove formed in the periphery of said float,
a retriever line anchored to said float at the base of said line storage groove and wound thereon,
a thimble carried by said float having a reentrant cavity therein communicating with the surface of said float located adjacent said line storage groove, 5
a generally hairpin shaped resilient spring retriever line anchorage clip having a loop at one end thereof to which the free end of said retriever line is tied and a pair of spaced bowed legs at the other end portion thereof formed to be manually inserted and releasably retained in said thimble, 10
the other end of said retriever line being secured to an item that may be lost overboard,
the buoyancy of said float, the weight of the item that may be lost overboard and the resiliency of the said retriever line anchorage clip being such as to

4

permit said anchorage clip to become automatically released from said thimble when said item is lost overboard whereby to permit said anchorage clip to become automatically released from said thimble when said item is lost overboard whereby to permit said retriever line to pay out from said float as said item sinks.

References Cited

UNITED STATES PATENTS

3,068,497	12/1962	Coleman	9—9
3,091,781	6/1963	Wisbrod	9—24
3,425,390	2/1969	Salmi	9—9
3,441,962	5/1969	Williams	9—9

15 MILTON BUCHLER, Primary Examiner
S. W. WEINRIEB, Assistant Examiner