

United States Patent

Lindqvist

[15] 3,676,882

[45] July 18, 1972

[54] LIFE SAVING IMPLEMENTS

[72] Inventor: **Lars-Hakan Lindqvist**, Solstigen 1, Salt-sjobaden, Sweden

[22] Filed: **June 16, 1970**

[21] Appl. No.: **46,669**

[30] Foreign Application Priority Data

June 18, 1969 Sweden.....8726/69

[52] U.S. Cl.....9/14

[51] Int. Cl.....B63g 9/26

[58] Field of Search.....9/14

[56]

References Cited

FOREIGN PATENTS OR APPLICATIONS

1,123,878	2/1962	Germany.....	9/14
903,198	8/1962	Great Britain.....	9/14
302,898	11/1968	Sweden.....	9/14

Primary Examiner—Trygve M. Blix

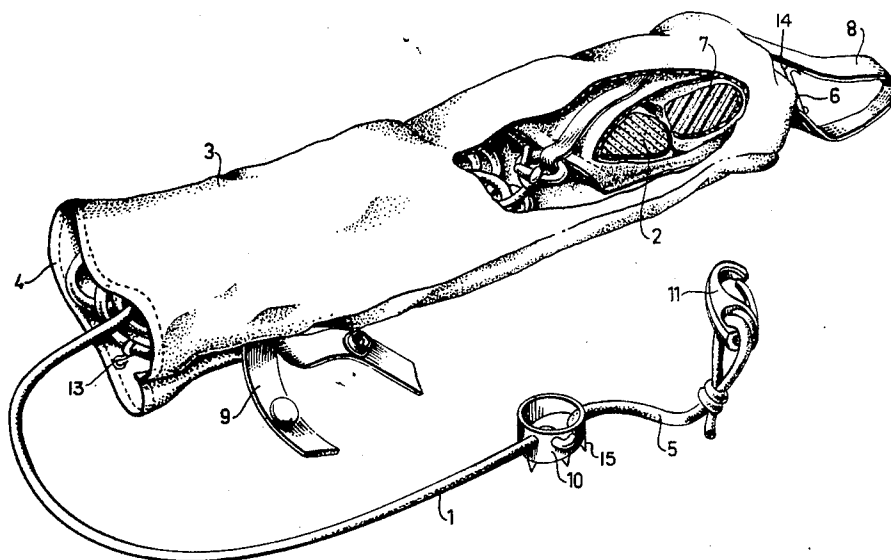
Attorney—Sughrue, Rothwell, Mion, Zinn & Macpeak

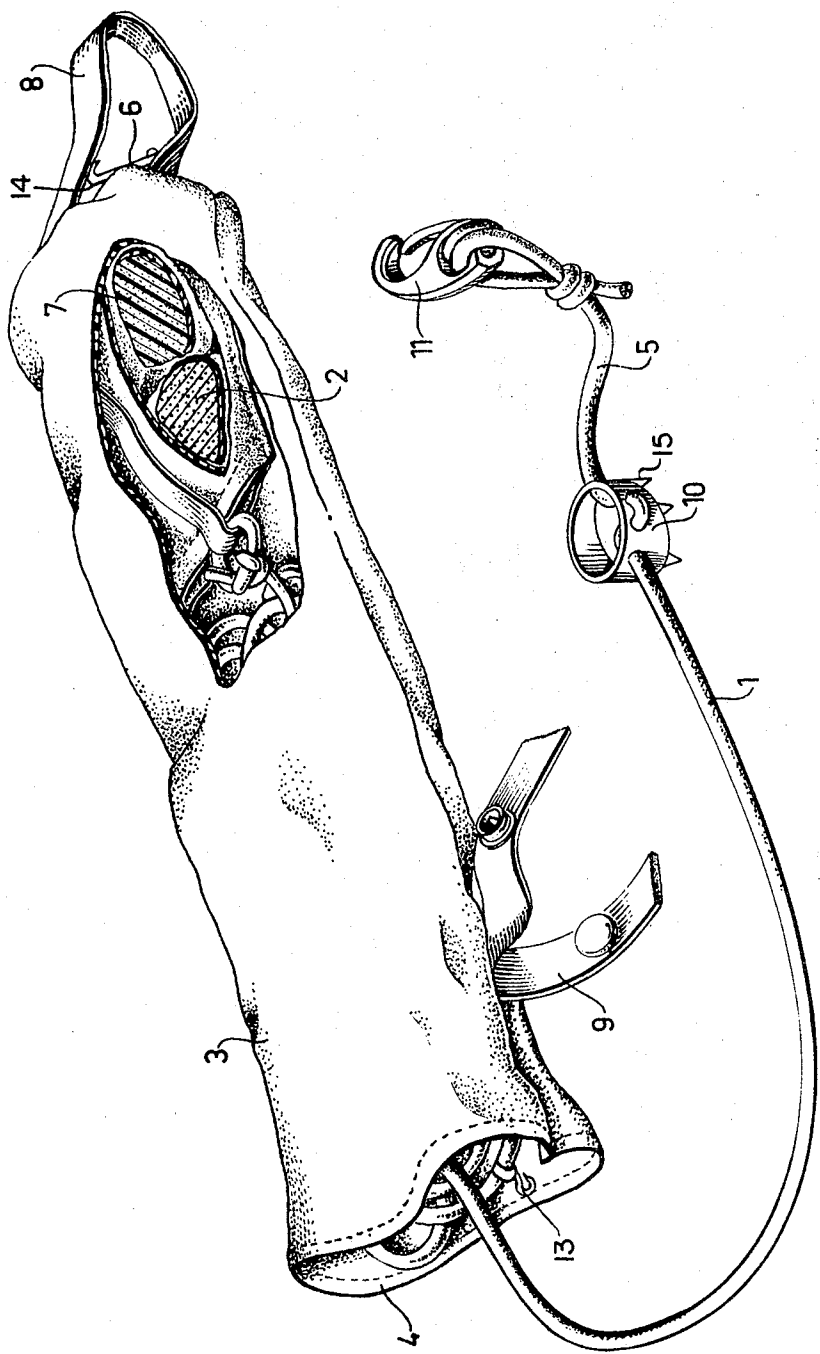
[57]

ABSTRACT

Implement for life saving purposes including a line securely fixed to the bottom of a narrow elongated bag open at one end and containing a weight and being intended to enclose the line and to accompany the line when it is thrown and being adapted to run from the bag, the free end of the line being held, for example, by the thrower.

15 Claims, 1 Drawing Figure





LIFE SAVING IMPLEMENTS

The invention relates to an implement for assisting and life saving purposes, including a line and a storage and handling means securely attached to one end thereof.

Life buoys provided with an appropriate length of line are often used for rescue purposes. When using a rescue device of this nature the life buoy is thrown towards the distressed subject in the water, whereafter the distressed subject is hauled into land or on board a boat by means of the line. Under other circumstances, casting lines having a weight secured to one end thereof can be used, for example, in wintertime, in connection with ice sports to rescue a distressed subject from a hole in the ice or, in summertime, to transfer a line from boats to a jetty or to another boat, for example for the purpose of towing the same. In the latter instances, the line is thrown weighted with a weight to the bridge or to the distressed boat, whereafter a heavier line is transferred to said boat by means of the throwing line.

Life buoys and throwing lines are cast by gathering the line in loops of suitable size, whereafter the life buoy or weight is thrown in the intended direction, pulling out the line as it travels through the air. The cast of looping the line and throwing it to the distressed subject takes a considerable length of time and requires a special technique, if the desired length of throw is to be achieved and if the line is to run out smoothly. A well practiced technique is required, especially when casting from small boats, if the line is to be prevented from fastening in one of the many stays, sheets, spars and the like distributed around a boat, while the line runs out. It is normally necessary to make several casts before the life buoy or weight reaches the intended target. Since, however, maneuvers on board ships must normally be made very rapidly an unsuccessful cast may have undesirable consequences. Furthermore, a renewed cast is more difficult to effect than the first one, since the line is normally wetted on the first cast. An unsuccessful cast in wintertime has an added disadvantage, since a wet line readily freezes during the continued handling of the line.

The object of the present invention is to provide a life saving implement which can be manipulated with a minimum of technique. This object is achieved in accordance with the invention in that arranged on one end of the line is a narrow elongated bag open at one end and containing a weight and being adapted to enclose the line and follow the same during a cast while the line runs out of the bag, the free end of the line being held, for example, by the thrower.

The weight is suitably arranged on the bottom of the bag and, in order to prevent the bag from sinking when thrown to a distressed subject in the sea, it is suggested in accordance to the invention that the bag be provided with a buoyant member. The buoyant member is suitably arranged between the bottom of the bag and the weight, whereby the bag floats in the water with the bottom upwards. The buoyant member suitably consists of a cellular plastic material, the further advantage being gained that the weight is prevented from damaging the subject with a successful cast, since the soft cellular plastic material serves to dampen the impact.

In order that an implement constructed in accordance with the invention is able to serve effectively as a life saving line, it is suggested that the bag be constructed in a manner whereby a distressed subject can easily take hold of the same, to which ends the bag can expediently be provided at the bottom thereof with a band or strap in the form of an eye which can be grasped by the distressed subject. By means of a suitably mounted spring or some other resilient means, the eye when in an unloaded condition can be brought to take a position in which the distressed subject can readily pass a hand therethrough, while on the other hand, the eye is drawn around the wrist of the distressed subject when a load is applied to the eye. As will be described hereinafter, the bag is also provided with means for closing the open end and the line is provided with stop means which are adjustable to different positions along said line, preventing the line from sliding from the bag when the bag is closed. The line is also provided with hooks and like objects to facilitate storage and handling of the same.

With a life saving implement constructed in accordance with the invention the line, when the implement is stored in a position of readiness, is well protected against any unfavorable action of rain, sunlight and the like simultaneously as the same can be easily handled both in the position of readiness and while in use. The life saving implement according to the present invention can also replace both life buoys and conventional casting lines. The implement can be thrown extremely easily, even against the wind, whereas life buoys, for example, are readily caught by the wind. The bag, as opposed to the weight of a casting line, does not sink in the water nor does it float away from a distressed subject in rough weather, as would a life buoy.

An embodiment of the invention will now be described in more detail with reference to the accompanying drawing, additional characteristic features of the invention and advantages associated therewith being disclosed in conjunction with the description.

The drawing illustrates a line 1 according to the invention, the line suitably being made of an artificial fiber having a density which permits it to float in water. One end of the line 1 is securely mounted in the bottom of a bag 3, which is suitably made of a plastic treated fabric and given a glaring color which is visible from long distances. Arranged in the bottom of the bag 3 is a weight 2 and buoyant element 7, the buoyant element 7 being arranged nearest the bottom of the bag. At the bottom of the bag is also arranged a strap 8, intended to serve as a gripping means for a person in distress during life saving operations. The belt is suitably arranged in a manner whereby it passes through the bottom of the bag and secured to one end of the line 1. The strap 8 is held in an open position during an unloaded condition by spring means 14 arranged at the attachment points of the strap 8 to the bag 3.

When the implement is held in readiness, the line 1 is stored within the bag 3 and the bag is closed by means of a strap 9 arranged at its open end 4. A portion 5 of the free end of the line projects out of the bag and the line is prevented from being drawn from the bag 3 by means of a stop member 10 arranged on the line 1 and adjustable to different positions along the line. The life saving implement of the invention further presents two hooks arranged on the line, of which hooks one 11 is secured to the free end of the line 1, while the other hook 13 is secured some distance from the end of the line secured in the bag. The first mentioned hook 11 then can be used, for example, by an ice skater, where the life saving implement is carried in readiness around the waist of the skater or over one shoulder. In this case, the hook 11 is connected to the strap 8. Owing to the fact that the cast stop member 10 can be adjusted in different positions along the line 1, the eye formed by the bag 3 and the free end of the line 1 can easily be regulated to the desired size. The other hook 13 can be used in a similar manner during life saving operations, whereby a distressed subject passes a portion of the line around its waist and connects the hook to the strap 8.

When a life saving implement in accordance with the invention is to be made ready, the line 1 is inserted into the bag 3 length by length, wherewith the line can be inserted into the bag without twisting the line. This is of extreme importance to the functioning of the implement and constitutes a considerable difference with regard to a line attached to life saving buoys or throwing weights. When these latter lines are to be looped prior to a cast being made the line must be twisted through approximately one revolution around its longitudinal axis, so that the loops can be placed adjacent each other without the different loops becoming twisted in relation to each other or engaging with each other. Such twisting of the line about its longitudinal axis, however, is raised to a disadvantage when casting the line, in that kinks are readily formed therein. In order to obviate the necessity of twisting the line according to the invention when inserting it into the bag it is important, however, that the width of the bag is not too great. The width of the bag should not therefore exceed approximately 25 times the diameter of the line.

Consequent to inserting the line into the bag and closing the bag by means of the strap 9, the implement can be subjected to heavy handling without disturbing its position of readiness. This is not the case with conventional lines for similar purposes, with which the arranged loops readily tangle with one another subsequent to having been stored for some period of time, which necessitates removing such lines periodically and recoiling the same to retain the condition of readiness.

When casting an implement constructed according to the invention it is only necessary to release the strap 9 which closes the opening for the bag 3, whereafter the thrower takes the bag by the free end thereof and with a pendular movement of the throwing arm, and thereby also of the bag, throws the bag in the intended direction while retaining the hold on the free end 5 of the line. In this way, the line is prevented from running out over the stationary objects in the vicinity of the thrower but serves, to a certain extent, as a throwing weight while it runs out of the bag.

The stop 10 may comprise a knot on the line or, for certain purposes, may be in the form of a spike like member, for example to facilitate life saving operations on ice. In this connection the stop means, subsequent to a successful cast, can be placed on the ice, whereafter the person manipulating the implement can use the stop member as a spike when the distressed subject is to be hauled from a hole therein. The person manipulating the implement places one foot on the stop member, thus obtaining a good grip in the ice with the spikes 15.

It is particularly suitable to design the stop member in the form of a ring of certain width in a manner whereby the width is varied from a smallest width to a largest one situated diametrically opposite the smallest width. This design prevents the stop member, when located within the bag, from hooking in the line and causing kinks therein or damage the bag.

An implement constructed in accordance with the invention is thus easy to handle, both when occupying its conditional readiness and when being used for assisting people in distress. It has a particularly wide field of use.

Although the invention has been described with reference to one embodiment thereof it can be varied within the scope of the accompanying claims.

What I claim is:

1. A device to assist in manually throwing a line for life saving and the like comprising:
 - an elongated bag, having an opening, made of a flexible material;
 - a length of line capable of being stored in short loops within the bag adjacent the bag opening, and fastened at the bottom of the bag;
 - a weighted member relatively heavier than the bag being arranged close to the bottom of the bag to assist in the throwing balance of the bag, and
 - a soft buoyant member interposed between the bottom of the bag and the weight whereby the bag is thrown so that the weighted end is foremost in the direction of travel and the open end is rearmost so that the line is sequentially unlooped and leaves the bag during the motion.

2. A device as in claim 1, further including a fastener attached to the bag adjacent the open end for closing the bag for storage.

3. A device as in claim 1, further including gripping means positioned externally on the bag adjacent the weighted end.

4. A device as in claim 1, further including a hook on the free end of the line.

5. A device as in claim 2, further including a stop device on the line to prevent the line from leaving the bag when the fastener closes the bag.

6. A device as in claim 3, further including a hook on the line at a set distance from the weight and adapted to be connected to the gripping means to form a loop whereby a person in distress can secure himself by forming the loop about his body.

7. A device as in claim 3, where the gripping means includes a strap member and a spring for maintaining the strap member in an open loop position for easy grabbing.

8. A device as in claim 5, where the stop device is a ring.

9. A device as in claim 5, where the stop device has at least one spike member.

10. A device to assist in manually throwing a line for life saving and the like comprising:

- an elongated bag, having an opening, made of a flexible material;
- a length of line capable of being stored in short loops within the bag adjacent the bag opening, and fastened at the bottom of the bag;
- a weighted member relatively heavier than the bag being arranged close to the bottom of the bag to assist in the throwing balance of the bag;
- a fastener adapted to close the bag;
- a stop member attached to the line and capable of preventing the line from being withdrawn when the bag is closed by the fastener, and
- a soft buoyant member interposed between the bottom of the bag and the weight, the opening dimension of the bag being no larger than 25 times the line diameter, whereby the bag is thrown so that the weighted end is foremost in the direction of travel and the open end is rearmost so that the line is sequentially unlooped and leaves the bag during the motion.

11. A device as in claim 10 where the stop member has at least one spike.

12. A device as in claim 10, further including gripping means positioned externally on the bag adjacent the weighted end.

13. A device as in claim 10, further including a hook on the free end of the line.

14. A device as in claim 12, further including a hook on the line at a set distance from the weight and adapted to be connected to the gripping means to form a loop whereby a person in distress can secure himself by forming the loop about his body.

15. A device as in claim 12, where the gripping means includes a strap member and a spring for maintaining the strap member in an open operative position.

* * * * *