No. 661,410. Patented Nov. 6, 1900.

G. A. LINDBERG.

LIFE BUOY.

(Application filed June 23, 1900.)

(No Model.)

Fig. 2.

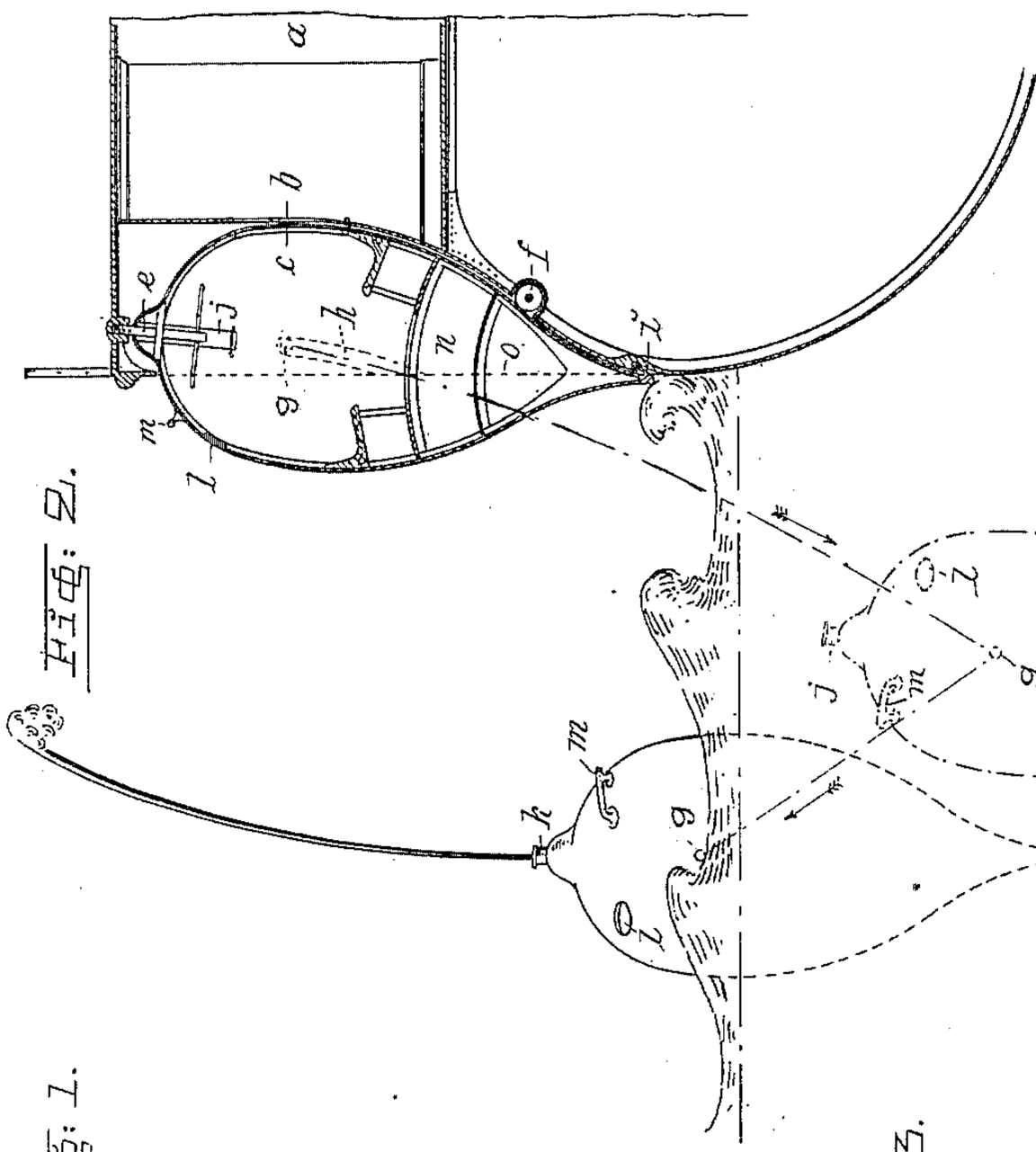
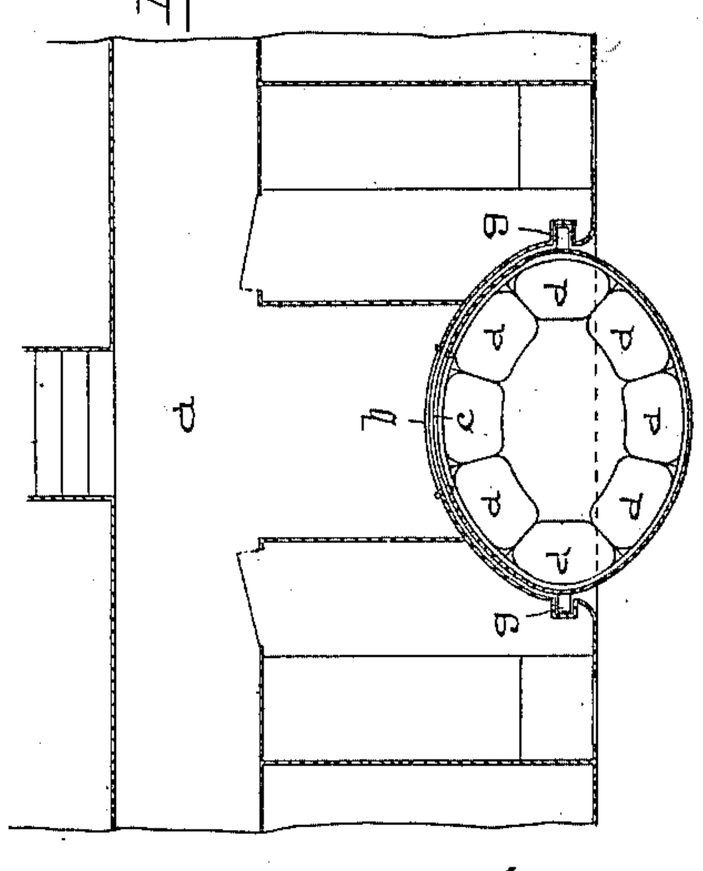


Fig. 1.

Fig. 3.



Witnesses:
Fenton & Pelt,
Geo. P. Kingsbury.

Inventor.
Gustaf A. Lindberg
by
Mason Fenwick & Lawrence
his Attys.

UNITED STATES PATENT OFFICE.

GUSTAF ADOLF LINDBERG, OF MALM, RUSSIA.

LIFE-BUOY.

SPECIFICATION forming part of Letters Patent No. 661,410, dated November 6, 1900.

Application filed June 23, 1900. Serial No. 21,315. (No model.)

To all whom it may concern:

Be it known that I, GUSTAF ADOLF LINDBERG, architect, a citizen of Finland, residing at Malm, Russia, have invented certain new and useful Improvements in Life-Buoys; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a life-buoy intended as a substitute for the life-boats in ships and furnishing in its interior a refuge for passengers and crew for some length of time. The buoy consists chiefly of a hollow downwardly-pointed shell provided partly with a door closing air-tight and giving access to its interior and partly in its upper part with one or more apertures which may be closed by valves or the like and through which fresh air may be introduced and vitiated air removed, said apertures also being of use for signaling. The buoy, moreover, is provided with a fastening device adapted to be released from within, by means of which it can be retained at the vessel until the time of launching.

In the accompanying drawings, Figure 1 is a side elevation of a section of a vessel with buoy attached. Fig. 2 represents a transverse section of same buoy, together with a portion of the vessel, and illustrates also the position of the buoy immediately after being dropped into the water and after floating up out of it. Fig. 3 is a sectional plan view of the buoy, together with adjacent parts of the vessel.

The buoy illustrated in the drawings is intended to be located in niches or recesses in the sides of the vessel, so that passengers from the main deck *a* may enter the buoy through a door *b* in the side of the vessel and the door *c* of the buoy. The buoy, which in its interior is provided with seats *d*, is suspended from the deck by means of a screw *e*, on the release of which the buoy, guided by the pins *g*, running in guides *h* and supported by the rollers *f*, attached to the side of the vessel, slides into the water, to be subsequently lifted to the surface owing to its own buoyancy, Fig. 2. *i* is a bent or folded edge at the bottom end of the buoy, which edge when the buoy is in position at the side of the vessel engages with a corresponding hooked edge or channel on the latter, thereby securing the buoy firmly in position. *j* and *k* are the apertures in the upper part of the buoy (shown in the shape of tubes in the drawings) through one of which the fresh air is introduced, (by the aid of a suction-pump,) while the vitiated air passes off through the other, but which may at the same time be employed for signaling—for instance, for sending up rockets, Fig. 2. These apertures or tubes should preferably be provided with valves closing inward, and thus preventing the entrance of water into the buoy when the latter dives below the surface on being dropped into the water. *l* are skylights at the upper portion of the buoy, and *m* a loop by the aid of which the buoy can be hoisted out of the water. The compartment *n* is intended for provisions and water, and the compartment *o* for ballast.

Such life-buoys may of course also be located on deck, though by their application at the sides of the vessel, as described, the difficulty of launching is greatly reduced, while at the same time the launching can take place much more quietly.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A life-buoy comprising a casing adapted to fit in a downwardly-opening recess in the side of a vessel, and means for detachably securing the buoy inside the recess, whereby it may be dropped from the same into the water when desired, substantially as described.

2. A life-buoy adapted to be swung upon the side of a vessel comprising a casing adapted to be tightly closed, an attaching bolt or screw operable from the inside and extending through the top of the buoy and engaging an overhanging portion of the vessel whereby the buoy may be released and the same permitted to drop into the water.

3. A life-buoy, comprising a casing adapted to be tightly closed, a screw-bolt extending through the top thereof and engaging a socket in the overhanging portion of a vessel, a handle inside the buoy for turning the said screw, whereby it may be loosened by the occupants

of the buoy to permit the same to drop into the water, and a hook or projection at the lower end of the buoy engaging a recess in the side of the vessel for further holding the same in position, substantially as described.

4. A life-buoy adapted to be carried in a recess in the side of a vessel, means for holding the same in position in the said recess, and means for guiding it when released, so as to drop into the water, comprising laterally-projecting pins or lugs on the sides of the buoy adapted to engage grooves or guideways formed in the side of the vessel, and antifriction-rollers, substantially as described.

5. A life-buoy adapted to be suspended in a recess formed in the side of a vessel, comprising an approximately oval casing having an entrance-door adapted to coincide with a door in the side of the vessel, a suspending screw or bolt, an auxiliary attaching-hook, pins for engaging guide-grooves to direct the movement of the buoy, skylights in the said buoy, a handhold for facilitating the hoisting of the buoy into place, and ventilating-tubes extending through the top of the buoy and provided with safety-valves, whereby the atmosphere in the buoy may be changed and yet water cannot enter through the said tubes, substantially as described.

6. A buoy, comprising an approximately oval casing, means for attaching it to a vessel, an entrance-door adapted to be tightly closed, ventilating means comprising two or more tubes extending through the top of the buoy, valves guarding the said tubes against the entrance of water, seats arranged within the buoy, a floor, a subfloor arranged in the buoy, whereby the ballast-chamber is formed at the bottom and a chamber for holding provisions is arranged between the floors, substantially as described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

GUSTAF ADOLF LINDBERG.

Witnesses:
H. SURNINOUS,
OSCAR LAURIN.