

No. 859,786.

PATENTED JULY 9, 1907.

H. STEENERSON.
SWIMMING MASK.
APPLICATION FILED JULY 20, 1906.

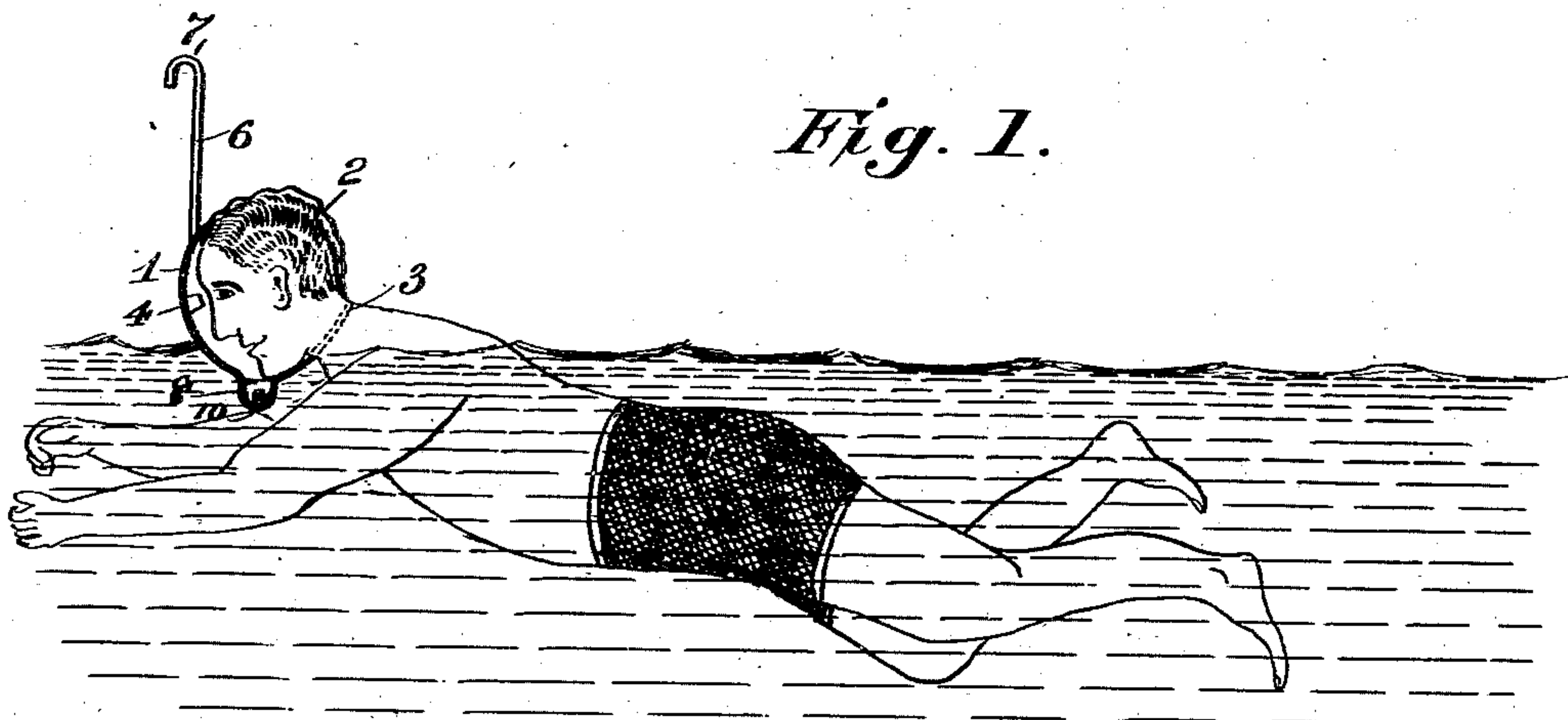


Fig. 1.

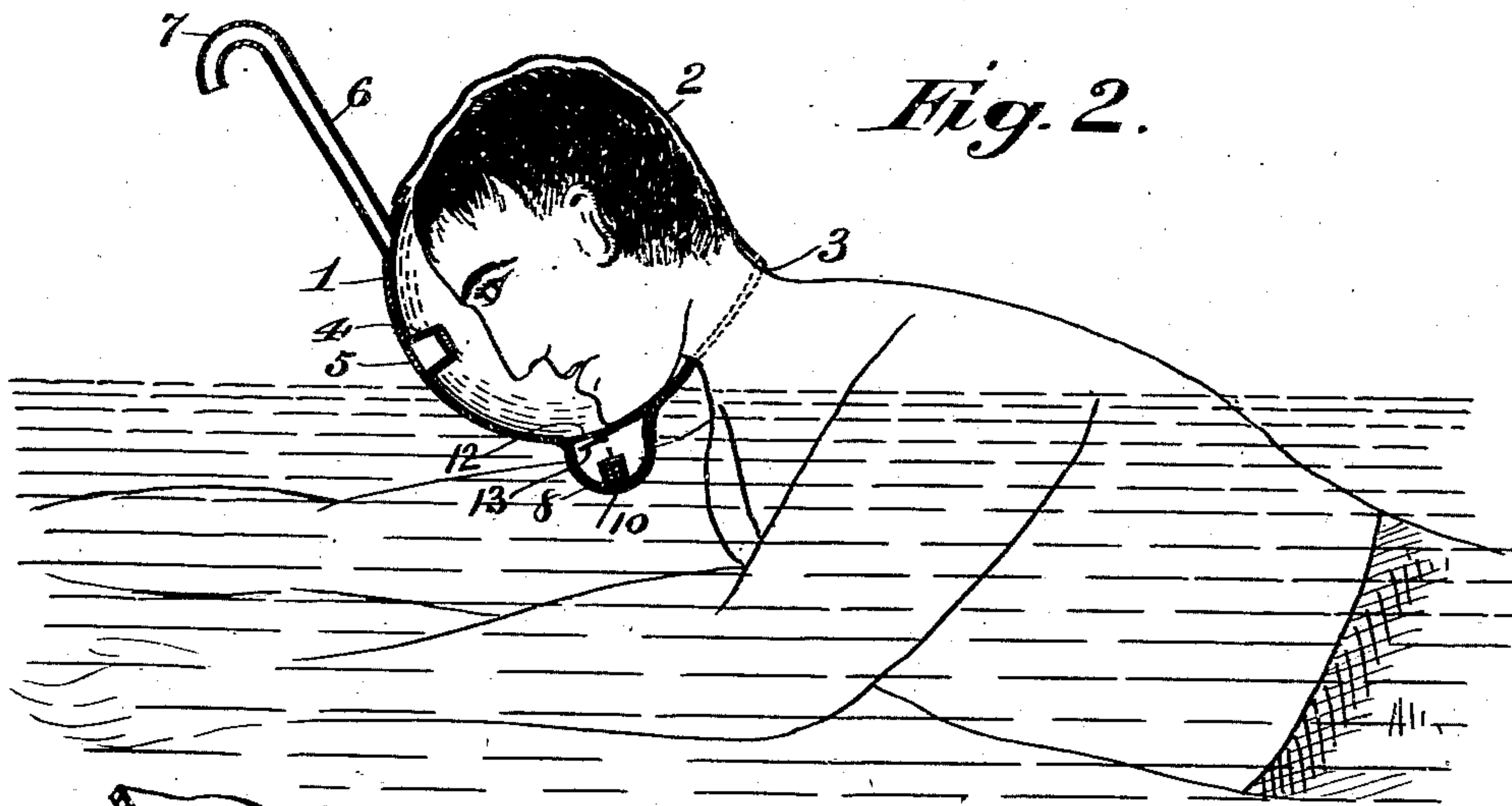


Fig. 2.

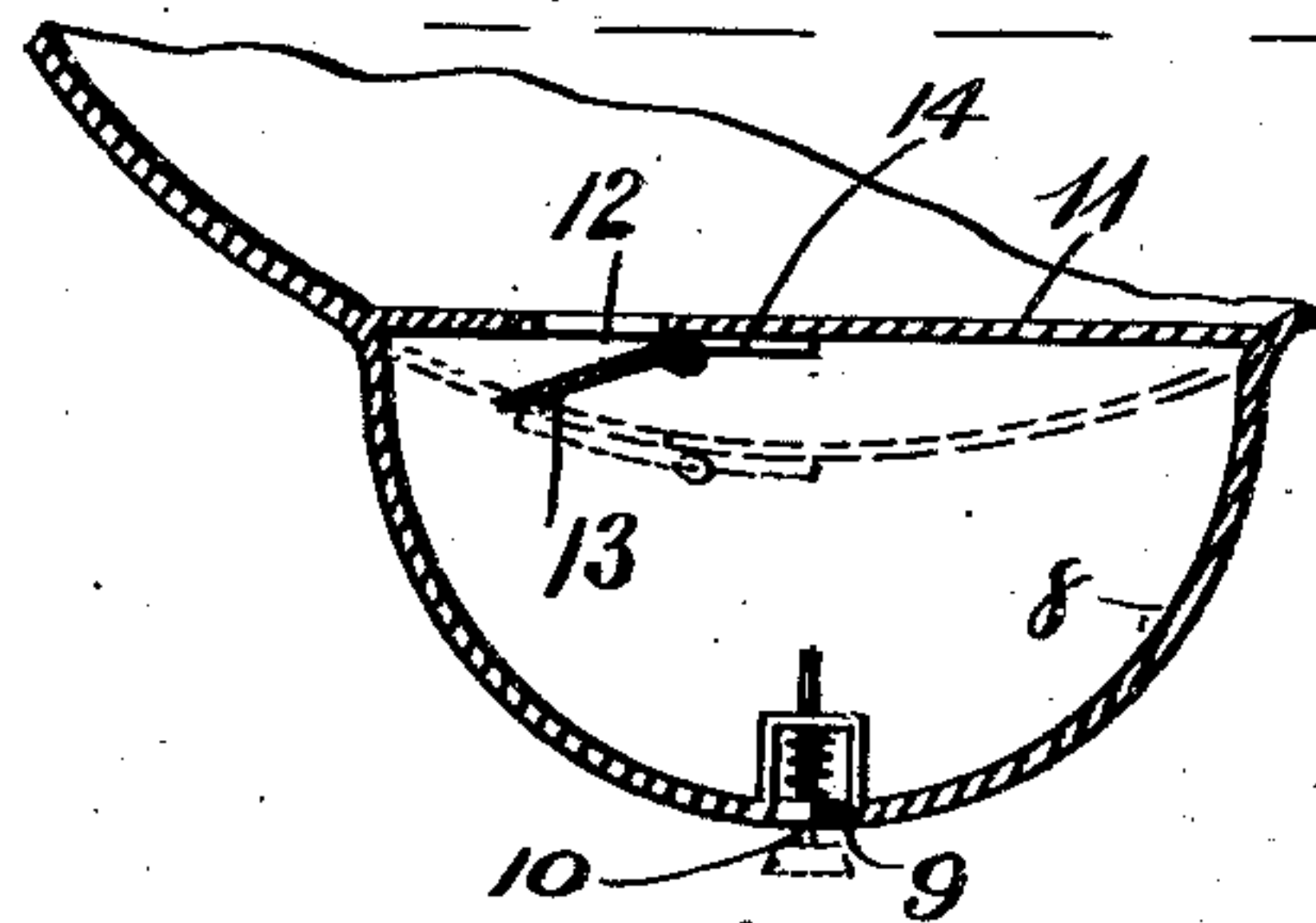


Fig. 3.

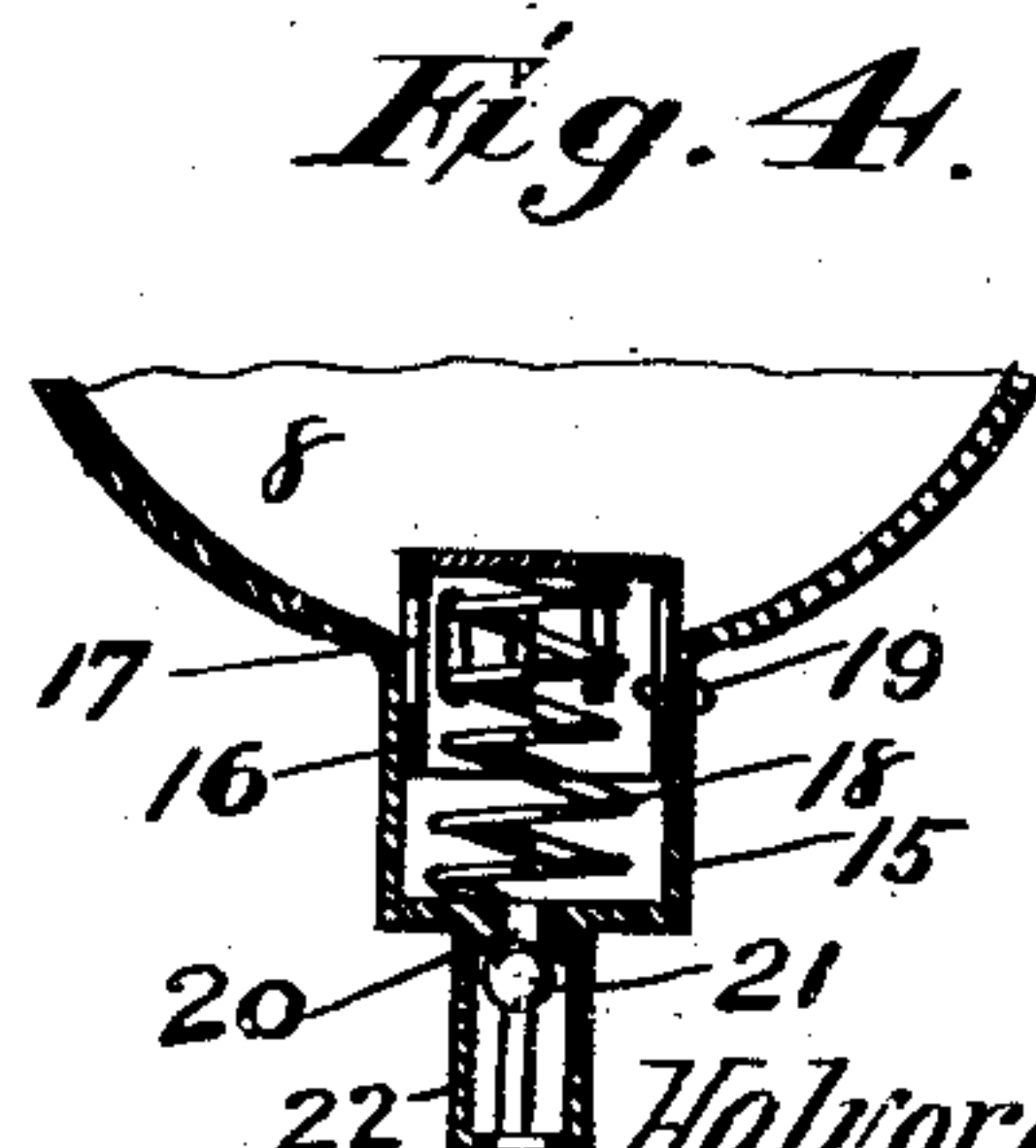


Fig. 4.

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SWIMMING-MASK.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HALVOR STEENERSON, a citizen of the United States, residing at Crookston, in the county of Polk and State of Minnesota, have invented certain new and useful Improvements in Swimming-Masks, of which the following is a specification.

This invention relates to what may be termed a swimming mask and it has for its object to provide a device in the nature of a mask and head covering which may be usefully employed by swimmers and bathers for the purpose of protecting the face from the water and to prevent it from saturating the hair and from entering the eyes, ears, nostrils and mouth which, especially in the case of salt water is unpleasant and often times dangerous.

A further object of the invention is to present a device adapted to be worn by swimmers and bathers, without inconvenience and discomfort, and which will serve to protect the head and face and at the same time admit an ample quantity of fresh air for the respiration of the person wearing the apparatus.

A further object of the invention is to provide an apparatus of the class described which shall be provided with means whereby water that may leak into the apparatus may be forcibly expelled at any time by the movement of the lower jaw of the person wearing the apparatus.

Further objects of the invention are to simplify and improve the construction and operation of this class of devices.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement of parts which will be herein-after fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being however understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be made when desired.

In the drawings: Figure 1 is a perspective view of a swimmer wearing the improved mask, the latter being shown in section. Fig. 2 is a similar view, on a larger scale, showing only a portion of the body of the swimmer whose head occupies a slightly different position. Fig. 3 is a sectional view enlarged, of the lower portion of the mask, showing the cup shaped receptacle for the leakage water and the valve means for the expulsion of the same. Fig. 4 is a sectional detail view illustrating a modified form of leakage receptacle and valve means for the expulsion of the leakage water.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved device comprises a face or front por-

tion 1 which is preferably made of nonflexible waterproof material, such as hard rubber, celluloid, sheet metal or any other suitable material or combination of materials, and a back portion 2 of flexible waterproof material, such as soft rubber; the two being suitably shaped, and connected along the edges so as to form a complete covering into which the head may be inserted through an opening 3 which is adapted to fit around the neck of the wearer. When the back portion 2 is constructed of soft rubber or similar elastic material, the elasticity thereof may be depended upon to cause the apparatus to fit sufficiently close upon the neck of the wearer to practically prevent leakage; the back portion 2 might however, within the scope of the invention be constructed of such material as oil silk, in which event a draw string or other similar well known device would have to be employed to tighten the same sufficiently upon the neck of the wearer to practically prevent leakage. It will also be understood that the said back portion 2 may be made to fit the scalp tightly, or it may be made sufficiently loose to accommodate a heavy growth of hair, as the case may be.

The front portion 1 is provided with a sight aperture 4 which may be covered with a sheet or pane 5 of glass, transparent celluloid or the like; said front portion is also provided with one or more tubes 6, which when the wearer occupies a normal swimming position, as in Fig. 1 of the drawings, extend vertically in an upward direction but which, when the head is bent down, as in Fig. 2, will naturally deviate from the perpendicular. The upper ends of the tubes 6 have downward terminal curves or goosenecks 7 so that the terminal apertures shall face downwardly; by this construction there will be little liability of water leaking in through said tubes inasmuch as, even if the head of the wearer becomes submerged, the pressure of air within the mask would prevent the admission of large quantities of water.

The front portion 1 of the apparatus is provided with a cavity or depression which is formed in the lower portion thereof, directly beneath the chin of the wearer, said cavity constituting a receptacle for such water as may accidentally leak into the device. This cavity as seen in Figs. 1, 2 and 3 of the drawings may be cup shaped, and provided in the bottom thereof with an aperture 9 constituting a seat for an outwardly opening spring actuated valve 10 of any suitable construction. The cavity 8 has been illustrated as being provided with a flexible diaphragm 11 having an aperture 12 through which the leakage water may pass into the receptacle. The flexible diaphragm 11 carries a downwardly opening and normally open valve 13 having a stem 14 which normally lies in contact with the underside of the diaphragm 11. This diaphragm, it will be seen, is disposed directly beneath the chin of the wearer who, by simply working the

lower jaw, may flex the diaphragm downwardly, as will be seen in dotted lines in Fig. 3. When the diaphragm is flexed downwardly, the pressure upon the stem 14 will operate the valve 13 to close the aperture 12, and the water within the receptacle or cavity 8 will consequently be expelled through the aperture 9 which is normally closed by the downwardly opening valve 10; the resiliency of the diaphragm 11 restores the latter to normal position when not subject to pressure.

Under the modified construction illustrated in Fig. 4 of the drawings the depression or cavity, here designated 15, is of cylindrical shape; it accommodates a spring actuated piston 16 which normally occupies the raised position shown in the drawing and which is provided with slots 17 for the passage of leakage water into the receptacle 15; to prevent upward displacement of the piston by its actuating spring 18 one or more pins as 19 may be employed, the same engaging the slots 17. The cylindrical receptacle 15 has an exit aperture 20 constituting a seat for an outwardly opening valve, here illustrated as a ball valve 21 which is confined within the cage 22 and is normally closed by the external water pressure; said valve being in the nature of a float. It will be seen that the wearer of the device, by working his jaw, may operate the piston 16 to expel leakage water that has accumulated in the cavity or receptacle 15.

From the foregoing description taken in connection with the drawings herewith annexed the operation and advantages of this invention will be readily understood. The device may be constructed at a very moderate expense, and in such a manner as to be neither heavy nor cumbersome, but easily applied and worn without the least discomfort. It not only constitutes an effective protection for the hair and the organs of the head, but it constitutes a very effi-

cient safety device, because a person equipped therewith, even if the head should become submerged, is still enabled to breathe the air entering through the tube or tubes 6 which latter, of course, may be of any desired length. The buoyancy of the apparatus moreover, will so support the head of the wearer that complete submergence is not likely to occur. The improved device constitutes a safe-guard against the danger and discomfort attendant upon bathing at the seashore.

Having thus described the invention what is claimed is:

1. A swimming mask or protecting device having a non-flexible face portion formed with a cavity constituting a leakage receptacle disposed beneath the chin of the wearer, a ported flexible diaphragm in said cavity, and a valve opening outwardly from the latter. 50
2. A protecting device for bathers and swimmers consisting of a head covering having a neck engaging aperture, and means operable by the jaw of the wearer for expelling leakage water from said head covering. 55
3. A protecting device for bathers and swimmers consisting of a head covering having a neck engaging aperture and provided with a breathing tube, in combination with mechanical means operable by the jaw of the wearer for expelling leakage water from said head covering. 60
4. A protecting device for bathers and swimmers consisting of a head covering having a neck engaging aperture and a non flexible face portion provided with a recess or cavity constituting a leakage receptacle, and means operable by the jaw of the wearer for expelling leakage water from the receptacle. 65
5. A protecting device for bathers and swimmers consisting of a head covering having a leakage receptacle provided with an outwardly opening valve, and means operable by the jaw of the wearer for expelling the contents of the receptacle through the valve port. 70

In testimony whereof I affix my signature in presence of two witnesses. 75

HALVOR STEENERSON.

Witnesses:

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