

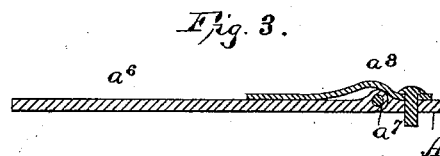
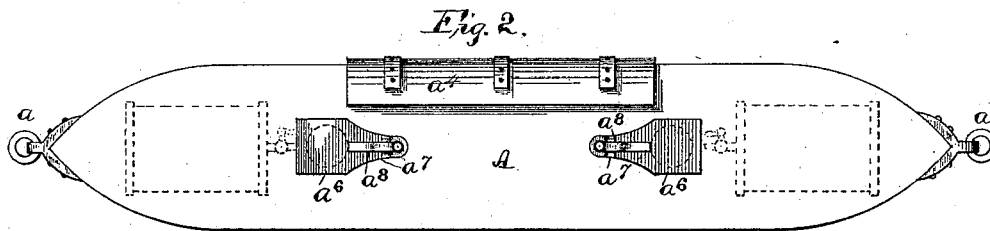
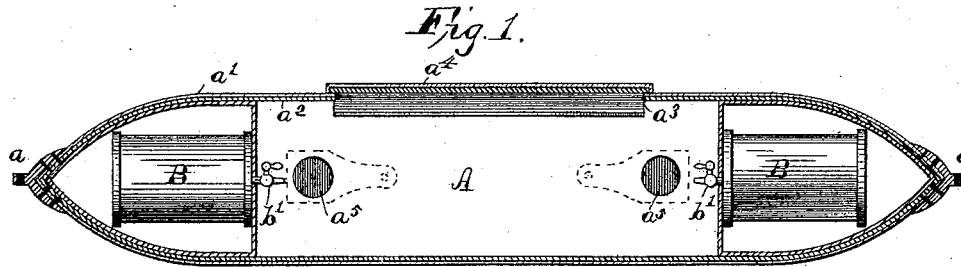
(No Model.)

S. S. BRADFORD.

LIFE SAVING CAR.

No. 343,158.

Patented June 8, 1886.



Witnesses:

J. F. Holden.
Geo. F. Byington.

Inventor

Inventor
Sydney S. Crawford
per Halsey & Halsey
attys.

UNITED STATES PATENT OFFICE.

SYDNEY S. BRADFORD, OF NORFOLK, VIRGINIA.

LIFE-SAVING CAR.

SPECIFICATION forming part of Letters Patent No. 343,158, dated June 8, 1886.

Application filed November 13, 1885. Serial No. 182,729. (No model.)

To all whom it may concern:

Be it known that I, SYDNEY S. BRADFORD, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Life-Saving Cars; 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 that class of life-saving cars in which the occupants are inclosed in a shell to protect them from the water. Heretofore in this class of devices the air in the car would soon become more or less contaminated by the production of carbonic-acid gas, and as the car is as often under the water as above it no means were provided for furnishing a fresh supply of air.

The object of my invention is to provide this form of car with means for keeping up the supply of fresh air, and to relieve the interior of the car of the foul air.

To this end the invention consists of constructions and combinations, all as will hereinafter be described in the specification, and pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 represents a longitudinal section; Fig. 2, a top elevation, and Fig. 3 a detail in section.

A represents the car, having eyes *a* at each end for the cable, and provided with a rubber covering, *a'*, molded thereon, and which keeps the shell *a''* from being punctured by the sharp floating wreckage. The shell *a''* is provided with a man-hole, *a'''*, having a cover, *a''''*, which may be attached upon the inner or outer side, and when in place is hermetically sealed against the admission of water. Upon the top are two openings, *a''''*, covered by a flap-valve, *a'''''*, hinged at *a''''''*, and having a spring, *a'''''''*, which holds the valve in place. This spring is regulated by any suitable means, so that the valve can be made to open automatically under any desired pressure, preferably at a pressure less than that which will make the occupants uncomfortable. The pressure from the inside, however, will be sufficient to open the valve even with the water

pressing upon the latter, as the car is rarely submerged to such a depth that the valve will not be free to act. To produce this pressure, one or more cylinders, B, supplied with compressed air, are placed at suitable points in the shell, preferably at the ends. These cylinders are provided with gage-cocks, *b'*, so that the occupant of the car can regulate the supply of air to the interior of the car, and at the same time regulate the pressure therein and upon the valves, so that in effect the occupant will have complete control of the air-supply and air-exhaust of the shell; or, if desired, the station-keeper may regulate this before the car is started.

It is obvious that the car and the cylinders may be made of any desired size; but I prefer to make the boat about thirteen and one-half feet long and four feet in diameter. The cylinders for such a sized boat are preferably about twenty-four inches by nine inches, and of sufficient strength to stand a pressure of six-hundred pounds, and holding about forty-four cubic feet of air each.

I am aware that torpedo-boats having a covered man-hole and an air-supplying device provided with a regulating gage-cock is old, and that devices for raising sunken vessels have been provided with automatically-operated valves, and these I do not broadly claim; but

What I claim is—

1. A life-saving car having a man-hole, a cover for said man-hole, openings *a''*, closed from the outside by spring-held valves which open outwardly, and an air-supplying device provided with a regulating gage-cock, substantially as described.

2. A life-saving car having the protecting rubber cover, the man-hole, and valve-openings, the man-hole cover and spring-held valves having seats upon the rubber, and an air-supplying device in said vessel, substantially as described.

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

SYDNEY S. BRADFORD.

Witnesses:

R. H. JONES,
C. WEST.