

W. B. DAVIES.

Life-Rafts.

No. 135,784.

Fig. 1.

Patented Feb. 11, 1873.

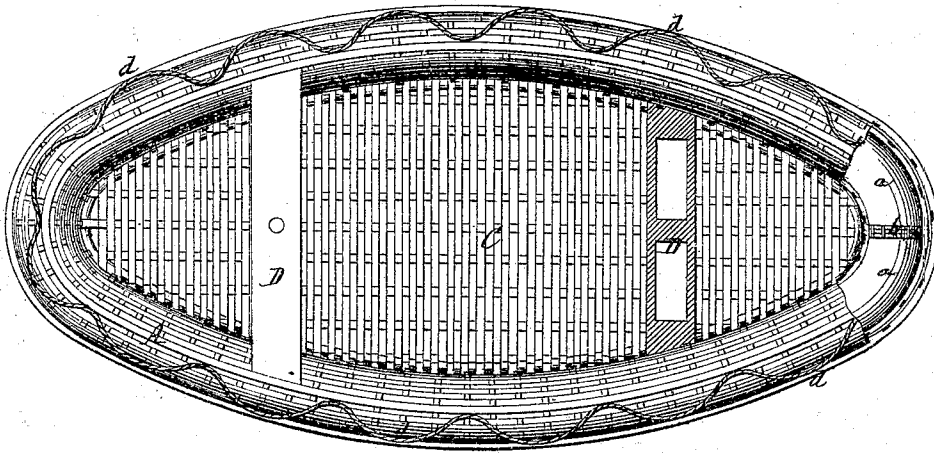


Fig. 2.

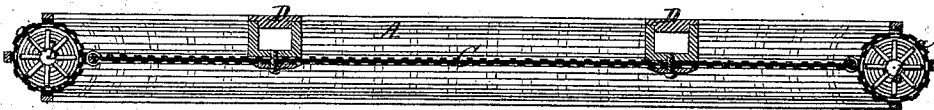


Fig. 3.

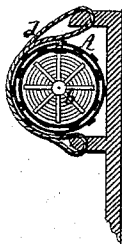
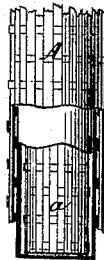


Fig. 4.



Witnesses.

Chas. Walters.

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UNITED STATES PATENT OFFICE.

WILLIAM B. DAVIES, OF NEW YORK, N. Y.

IMPROVEMENT IN LIFE-RRAFTS.

Specification forming part of Letters Patent No. 135,784, dated February 11, 1873.

To all whom it may concern:

Be it known that I, WILLIAM B. DAVIES, of the city, county, and State of New York, have invented a new and useful Improvement in Life-Boats; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a plan or top view of this invention. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a partial transverse section of a modification of the same. Fig. 4 is a horizontal section of the same.

Similar letters indicate corresponding parts.

This invention consists in the arrangement of an annular cylinder, braided of rattan or other material of a similar nature, and filled with floats, which are also braided of rattan and covered with some water-proof material, said annular float-containing cylinder being either provided with a central open bottom, or secured to the gunwale of an ordinary boat in such a manner that by the floats great buoyancy is imparted to the annular cylinder, while at the same time said floats are protected, and, on account of their own elasticity, are not liable to be stove in.

In the drawing, the letter A designates an annular cylinder, which is braided of rattan or other buoyant and elastic material which is capable of resisting the influence of seawater. This annular cylinder is made, by preference, in the form of an oval, as shown in Fig. 1 of the drawing, and its cavity is filled with a series of floats, *a*, which are also braided of rattan or other buoyant and elastic material, and covered with some water-proof fabric, so that the air contained in the same will increase their buoyancy. Between the ends of these floats are placed fenders *b*, made of rattan or other suitable material, in the form of flat cylinders, of a somewhat smaller diameter than the floats, so that if the annular cylinder is exposed to an exter-

nal pressure this pressure will be principally sustained by the fenders, and the floats, as well as the shell of the cylinder, will be protected against being crushed.

This annular float-containing cylinder may be secured to the gunwales of a boat, as shown in Fig. 3; and in this case it serves to protect the boat from being stove in, and it also increases the buoyancy of the boat, and prevents it from upsetting or from being swamped.

In most cases, however, I prefer to provide the annular float-containing cylinder with a central diaphragm or bottom, C, which is braided of rattan or other suitable material; and on this bottom I secure one or more closed chambers, D, which serve as seats, and which are divided in compartments, to contain water and provisions. These chambers may also be used as steps for masts. On the float-containing cylinder are secured a series of ropes, *d*, to give a firm hold to the persons occupying the raft or boat, and to enable persons floating in the water to get a hold on the raft or boat, and to find their way into the same. These ropes may be arranged in any manner best suited for the purpose for which they are intended.

It will be readily understood that a raft constructed of an annular float-containing cylinder with a central bottom can be made comparatively light, and at the same time its buoyancy is such that the same is able to sustain a comparatively-large weight in proportion to its size; and, furthermore, my raft is not liable to upset; it can be thrown in the water at random, and it will always place itself right side up; it is not liable to be stove in by coming in contact with a vessel; it cannot possibly be upset by waves, and it will pass through a surf with safety; and by attaching my annular float-containing cylinder to the gunwales of a boat not only the buoyancy but also the safety of said boat will be materially increased.

My boat is to be steered and propelled by grumets and oars, and it can be fitted up with sails, as previously stated.

The seats are, by preference, made detachable, so that they may be applied to either side of the bottom or diaphragm C.

What I claim as new, and desire to secure by Letters Patent, is—

1. A life-raft, the buoyant float of which is made of an interior frame of basket-work covered with flexible water-proof material, substantially as described.

2. In combination with such buoyant float

a protecting-guard of basket-work, adapted to receive a bottom, C, substantially as and for the purpose specified.

This specification signed by me this 31st day of December, 1872.

W. B. DAVIES.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.