

Life-Rafts

No. 146,316.

Patented Jan. 13, 1874.

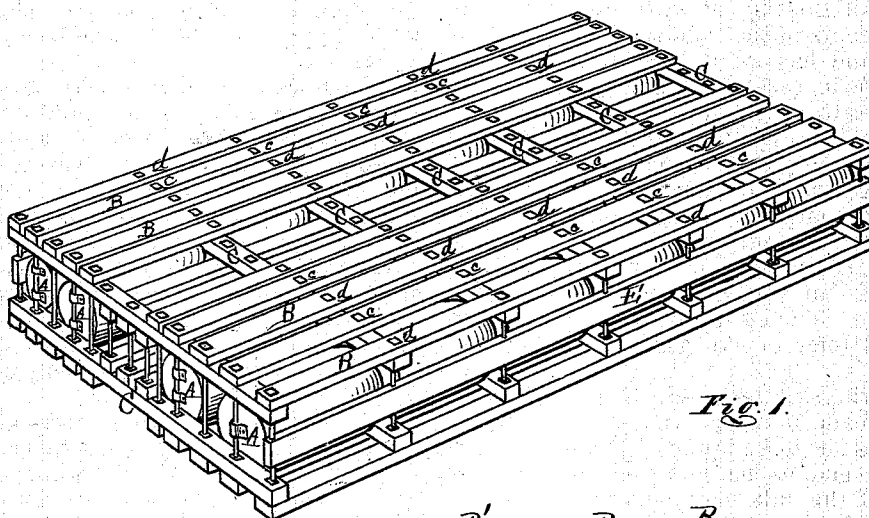


Fig. 1

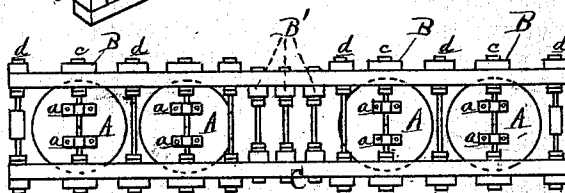


Fig. 2

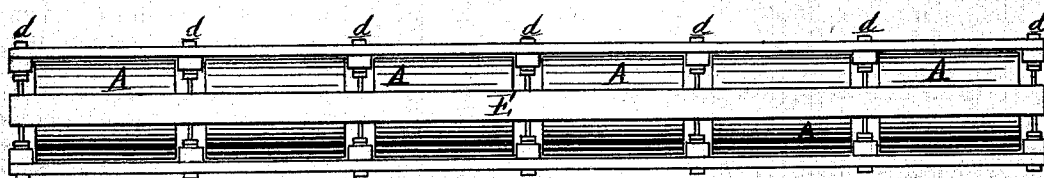


Fig. 3.

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GEORGE CLARK, OF ECORSE, MICHIGAN.

IMPROVEMENT IN LIFE-RAFTS.

Specification forming part of Letters Patent No. **146,316**, dated January 13, 1874; application filed July 31, 1873.

To all whom it may concern:

Be it known that I, GEORGE CLARK, of Ecorse, in the county of Wayne and State of Michigan, have invented an Improvement in Life-Rafts, of which the following is a specification:

The nature of this invention relates to certain improvements in the construction of life-saving rafts, and has for its object the preservation of life in case of disaster at sea, by making the raft very buoyant, thoroughly protecting the float-cylinders, so they will not be injured under any ordinary circumstances, and furnishing a much more durable, a lighter, and more easily handled raft than those heretofore in use for this purpose.

Figure 1 is a perspective of my improved raft. Fig. 2 is an enlarged elevation of one end. Fig. 3 is a side elevation.

Like letters refer to like parts in each figure.

In the drawings, A represents four courses of cylinders, made of any suitable sheet metal, so prepared as not to be injured by water, and placed end to end, as many in each course as the length of the raft may require. These cylinders should be about two feet long and one foot in diameter. Each end of each of these cylinders should be provided with a pair of loops, *a*, directly opposite each other, or a single loop, *b*, at the center of the end of the cylinder, where one end is provided with a single loop, and the abutting end of the next cylinder is provided with the pair of loops. They should be so arranged that the same bolt will engage with the three loops in the manner of a three-section hinge. The bolts *c* pass through the rails B, the cross-ties C, and the loops on the ends of the cylinders, holding the latter firmly in place. D is a series of other rails, secured at each end and at each intersection with the cross-ties C by the bolts *d*. E are side fenders, extending the whole length of the raft, to protect the outer courses of cylinders, and they are secured in place by the bolts *d*, which secure the outer rails to the cross-ties. These bolts should pass through the side fenders, which should be properly bored for the purpose. All the bolts *c* and *d* should be threaded at each end, and each end provided with two nuts, so arranged that one nut on each bolt will, at each

end thereof, rest against the outer sides of the rails, while the other nut shall, at each end of the bolt, rest against the inner sides of the cross-ties, when the nuts are screwed to place, the latter-described nuts acting as bearings to prevent the weight imposed upon the raft from crushing or bearing upon the cylinders, while the outer nuts hold the whole of the parts together.

These courses of cylinders may be placed immediately contiguous, or at small intervals, as shown in the center of each of the figures of the drawing. In this latter case the rails B' may be placed in said intervals below the cross-ties, forming a depressed recess below the plane of the rest of the raft, wherein the occupants may more securely place themselves.

These rafts may be fitted with row-locks, steps for masts, and any other conveniences desired. These may be stored between the courses of cylinders, where they may readily be reached when needed.

It is the design to have these rafts kept on the hurricane-decks of steamers, whence they may readily be thrown into the water by one or two persons of ordinary strength, thus avoiding the delay and uncertainty of working falls and cranes in launching boats. Both sides of the raft being alike, it makes no difference which side is up when thrown into the water.

I am aware that cylindrical floats are used; but these extend the whole length or breadth of the raft. These, being confined within a frame under certain circumstances, and being rigid, might, in a sea, have the effect of levers to pry the frame-work of the raft to pieces. I adopt the short cylinders connected together in the manner described, and laid in courses, to prevent such an accident, and give greater flexibility to the raft.

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

The combination of the series of independent cylinders loosely attached to each other with the frame-work and securing-bolts, as described, for the purpose set forth.

GEO. CLARK.

Witnesses:

H. F. EBERTS,
H. S. SPRAGUE.