(No Model.)

A. E. REDSTONE.

LIFE SAVING RAFT.

No. 306,428. Patented Oct. 14, 1884.

Fig. 1.

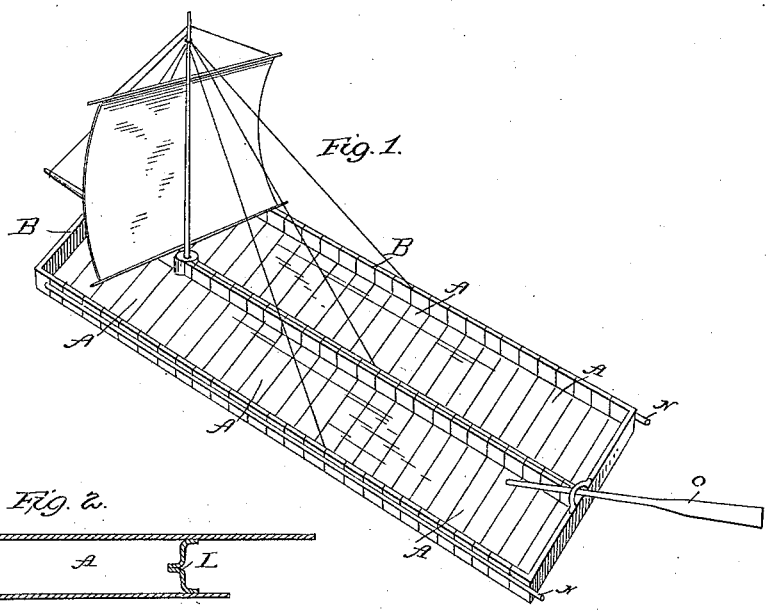


Fig. 2.

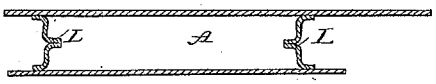


Fig. 3.

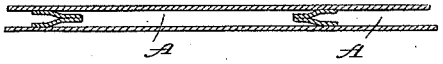


Fig. 4.

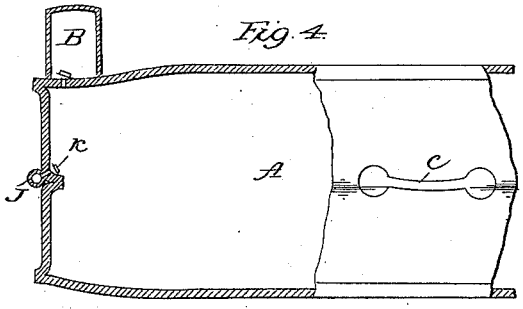


Fig. 6.

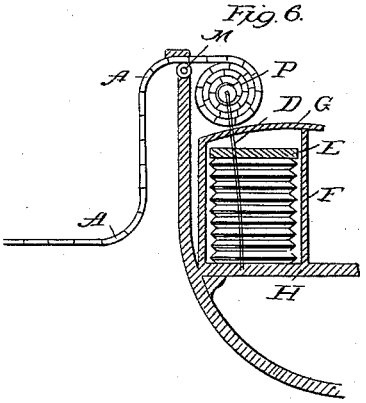


Fig. 5.

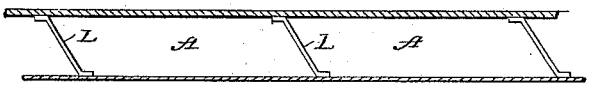
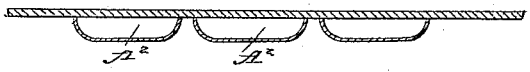


Fig. 7.



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UNITED STATES PATENT OFFICE.

ALBERT E. REDSTONE, OF SAN FRANCISCO, CALIFORNIA.

LIFE-SAVING RAFT.

SPECIFICATION forming part of Letters Patent No. 306,428, dated October 14, 1884.

Application filed June 30, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALBERT E. REDSTONE, a citizen of the United States, residing in the city and county of San Francisco, and State of California, have invented a new and useful Improvement in Marine Life-Saving Rafts, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view showing the raft complete as arranged for sailing in calm weather. Fig. 2 is a sectional view showing one of the compartments A broken out and the bulk-heads or partitions L partly inflated. Fig. 3 is a similar section to that shown in Fig. 2, showing the same nearly collapsed. Fig. 4 is an enlarged sectional view showing a corner broken out to show the gunwale or rail B, as it is sometimes constructed; also the air-supply pipe J and the check-valve K. Fig. 5 is a sectional view showing two of the compartments A with the partitions or bulk-heads L. Fig. 6 is a sectional view of one side of a vessel, showing the life-raft partly unrolled and passing over the side of the same and out upon the water. It also shows the bellows F, with weighted cover E, for inflating the raft, and a connecting-pipe, D, leading to the center or shaft of the drum upon which the life-raft is reeled.

F shows the bellows placed between decks G and H.

Fig. 7 is a sectional view of a modification.

The following is the construction of the same: I construct the upper surface of the life-raft of rubber, heavier and stronger than that employed for fire-hose, to form a good floor, but sufficiently pliable to bear rolling over a drum upon the ship-deck. I form the lower surface equally strong, but rather more pliable. I form the separate compartments A by means of the partition-strips or bulk-heads L for a twofold purpose. The one object is that in case a hole is made through the same it will only affect the one part. The other important object, though not so material, is to prevent the whole from rising or swelling out in the middle as it is inflated, thus retaining a comparatively level surface for the deck or upper surface. Each compartment A is connected by a branch pipe, J, with the main pipe N, which leads directly to the drum P, and is thereby connected with the pipe D through a swivel-joint in the hollow axle S. The pipe D connects directly with the bellows F, which is shown in Fig. 6. This bellows F may be constructed upon any well-known plan, or any suitable cylinder may be employed for compressing the air and forcing it through the pipe D, the drum P, and the main connecting-pipe N, and the section-connecting pipe J; but I have employed the weighted bellows shown in Fig. 6.

In order to effect the filling of the float in the shortest possible time, I employ the weighted cover E, which may be constructed of metal or other heavy material to give from one to two pounds or more of pressure to the inch. This lid is raised by block and tackle or other well-known means, opening the air-supply valve and allowing the bellows to fill. This I suspend (when fully raised) upon any suitable hangings so arranged as to be tipped and let go instantly by any well-known means now in use.

I have shown another mode of connecting the sections of the float in Fig. 7, where the upper surface is a strong rubber sheet or of any suitable strong and comparatively stiff water-proof material to form a good floor or deck. To the under side I attach the air sacks or compartments A^2 in such a manner as to inflate readily, or be allowed to collapse and not materially to interfere with the rolling of the main sheet (which forms the deck of the float) upon the drum. To the upper surface I attach suitable canvas or other sufficiently flexible material for tents, to form suitable housings. I also make provision with suitable sockets, loops, hooks, ropes, &c., for the purpose of raising sail, and also flexible seats and sinks and other conveniences for the use of passengers.

The following is the operation of the same: The float being reeled upon a drum at the side of the ship inside the bulwarks, (where it is reeled up for the purpose of storing in a small space and to be convenient for use,) the air-supply pipe D is attached, connecting the bellows F with the hollow axle of the drum P by

a swivel-connection, the main pipe J being also connected, thus leading to all the sections of the float. As the float is launched over the side of the ship the bellows-lid E (shown in Fig. 6) is dropped, and the air passes through the pipe D to the hollow axle of the drum P, and from the drum P through the pipe N and branch pipes J to each section of the float, into which it passes through check-valves, and the whole is inflated. It is then detached by detaching the pipe J from the drum, the check-valves confining the air and keeping the sections inflated. In case it should be necessary, separate pipes may lead from the drum P to each section.

When fully launched, the mast, provided with stays, sails, &c., may be rigged for the purpose of navigation. Any suitable spars or strips may be put aboard for stiffening the raft, and when there is time for so doing all the requirements of a complete sailing-vessel may be provided.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a life-raft of the class described, of the reservoir F, weighted, as at E, the pipe D connected with the reel-case P, the raft being connected with the said case P by the pipes N, whereby as the sections are unwound for use they are inflated from the reservoir through the described connections, substantially as described.

2. In a life-raft composed of the outer walls and collapsible partitions, the bulk-head B, secured to said raft and provided with suitable valves and connection with the raft-sections, whereby it is also inflated and caused to form the side of the raft when ready for use, substantially as described.

ALBERT E. REDSTONE.

Witnesses:

JOHN H. REDSTONE,

L. E. REDSTONE.