C. Furbush.

Extensible Life Raft.

No. 22,175. Patented Nov. 30, 1858.

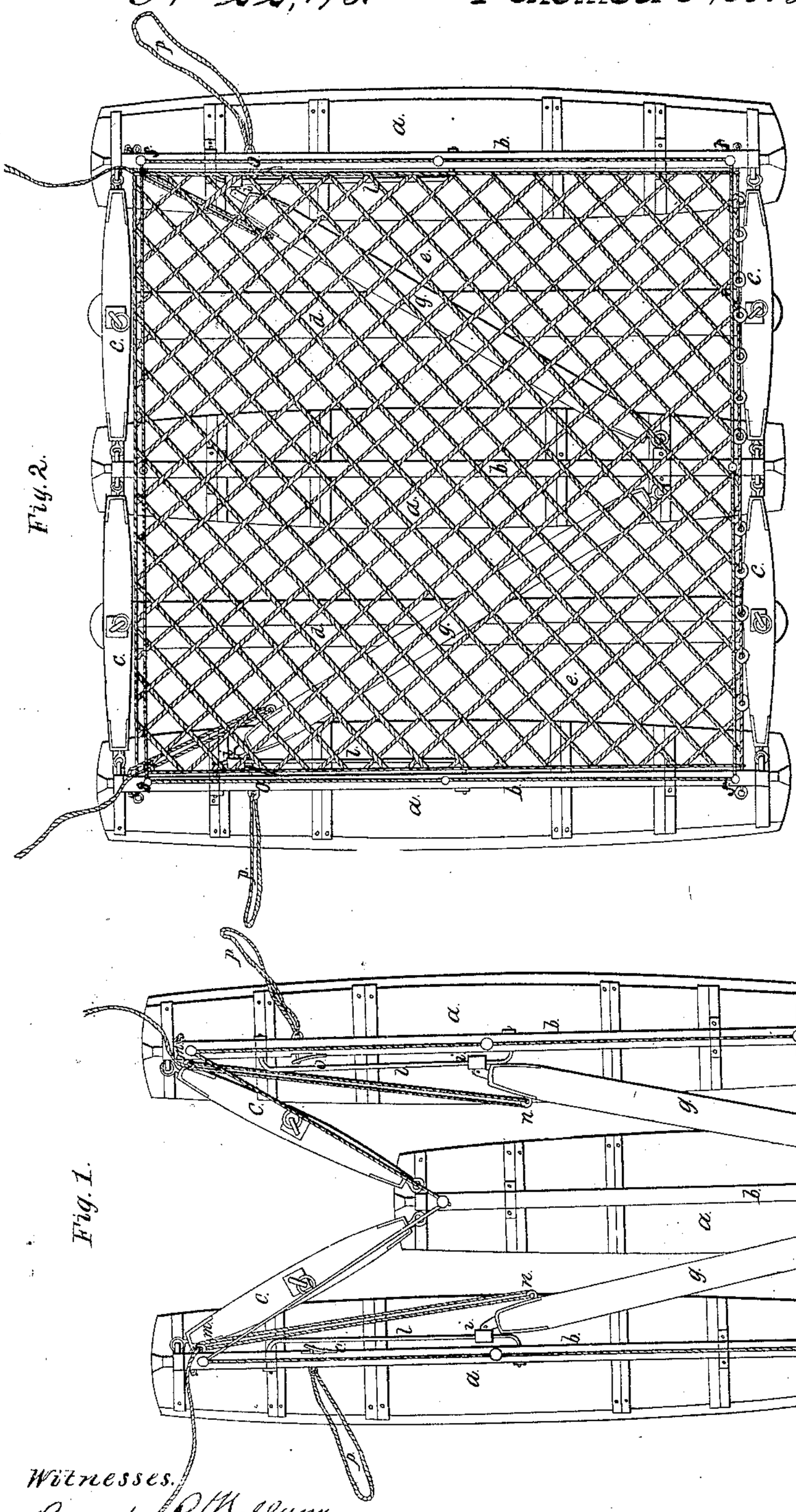

Fig. 2.

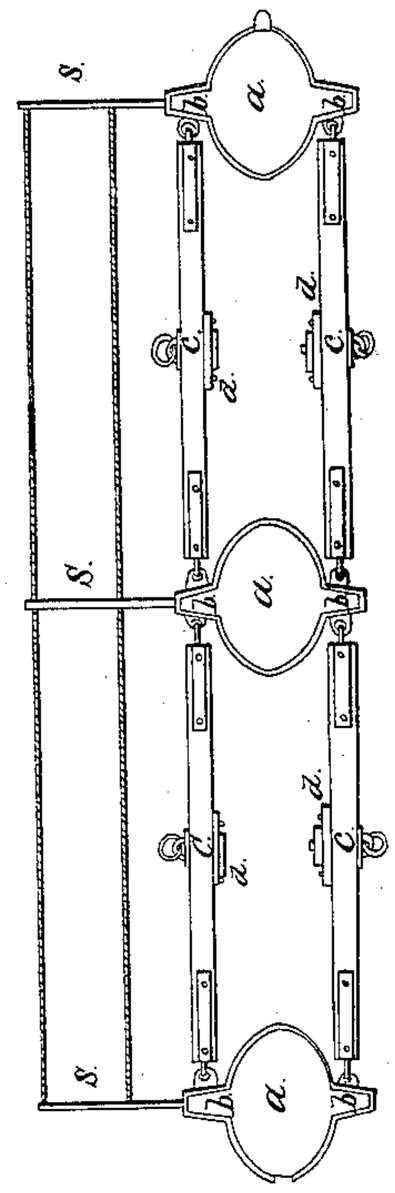

Fig. 3.

Fig. 1.

Witnesses.
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UNITED STATES PATENT OFFICE.

CALVIN FURBUSH, OF KITTERY, MAINE.

EXTENSIBLE LIFE-RAFT.

Specification of Letters Patent No. 22,175, dated November 30, 1858.

To all whom it may concern:

Be it known that I, CALVIN FURBUSH, of Kittery, in the county of York and State of Maine, have invented certain new and useful Improvements in Life Rafts or Floats; and I hereby declare that the folowing is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan view of the raft nearly closed; Fig. 2 a plan view of the same opened to its utmost extent and Fig. 3 an end view of Fig. 2.

The letters of reference indicate the same parts in the different figures.

My invention relates to a form of life boat or float in which air tight tubular floats are so arranged and connected by braces, with flexible joints that the raft can be thrown overboard in a closed position and afterward expanded in the water to its full extent, the flexibility of the connecting joints being such as to permit the free elevation or depression of any one or more of the floats by the action of the waves, without strain upon any of the parts.

The following is a description of the raft. It is composed in the present instance of three tubular air-tight floats (*a*) which may be made of wood or metal, of any convenient form or dimensions, they are strengthened on the top and bottom by longitudinal ribs (*b*). The tubes *a*, are connected at top and bottom (parallel to each other) by parallel braces (*c*) which are jointed to the ribs *b*, by double eyes, admitting of both horizontal and vertical motion. The braces are connected in pairs by longitudinal bars (*d*) pivoted thereto by bolts. These bars assist in supporting the netting *e*, which supplies the place of a flooring to the raft when extended. The raft is extended and held in that position by diagonal braces (*g*) jointed at one end by eye bolts, and swivel eyes to the ribs *b*, of the center floats and jointed at their other ends to sleeves (*i*) which traverse upon the guide bars *l*, secured to the ribs of the outer floats. A line is fastened by one end at *m*, and passing through an eye-bolt *n*, returns through an eye-bolt at *m*, and serves as a tackle to haul out the sleeve attached to the end of the brace. The raft is extended by means of these braces and held in position by spring catches *o*, which prevent the sleeves from sliding back until released by pulling upon the lines *p*, which are attached to the catches. Stanchions *s* provided with man ropes are shipped in sockets upon the side which may be uppermost in the water, the two sides of the raft being constructed alike, it is a matter of indifference which side is uppermost.

My improved raft possesses great advantages over boats of any description for saving life and property in case of fire or shipwreck from any cause. A raft of three tubes 20 feet long, when closed will take up no more room than a boat of the same length. Davits and the accompanying tackles are not required, the raft may be tumbled overboard in any position as it makes no difference which side is uppermost. One or two hands can haul out the sleeves lock them in position and ship the stanchions for the man ropes; all this can be done by passengers without the aid of experienced seamen; while the lowering of a boat can seldom be accomplished safely, even by the latter in times of danger and confusion especially when the vessel has way on her or in a heavy sea. Securing the parts together by flexible joints as before described allows the raft to conform to the surface of a rough sea, thus preventing strain and consequent breaking up of the raft, but the flexible joints I do not claim as they have been before used.

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

The combination of the diagonal braces *g*, sleeves *i*, and guide bars *l*, with the tubular floats *a* in the manner set forth and for the purpose specified.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

CALVIN FURBUSH.

Witnesses:

CHARLES G. BELLAMY,

MARTHA A. BELLAMY.