M. Ludlum.

Life Boat.

No. 23,380. Patented Mar. 29, 1859.

Fig: 1.

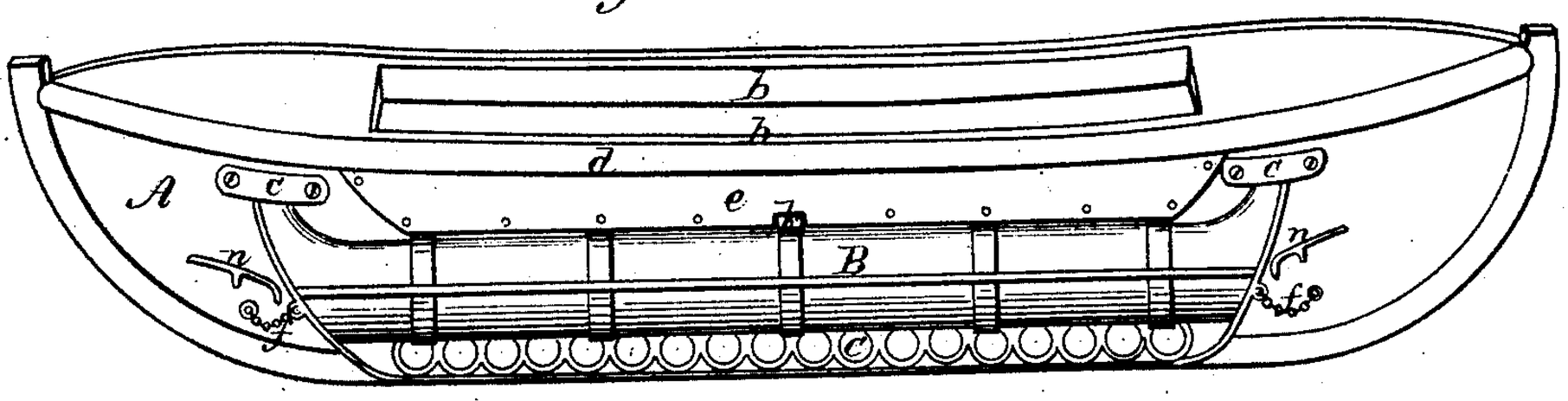

Fig: 2.

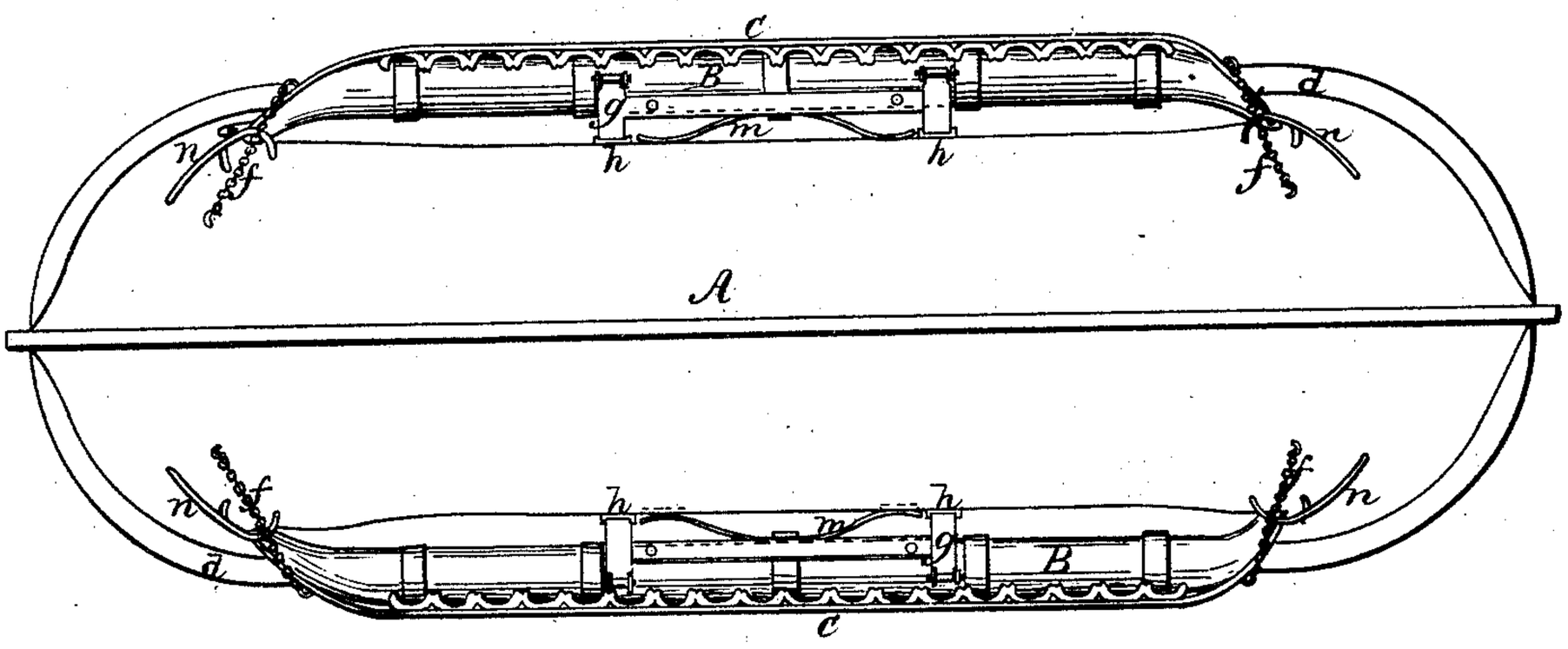

Fig: 3.

Fig: 4.

Witnesses.
Lodl Brown
George H Smith

Inventor.
M Ludlum

UNITED STATES PATENT OFFICE.

MATTHIAS LUDLUM, OF FAIR HAVEN, VERMONT.

LIFE-BOAT.

Specification of Letters Patent No. 23,380, dated March 29, 1859.

To all whom it may concern:

Be it known that I, MATTHIAS LUDLUM, of Fair Haven, in the county of Rutland and State of Vermont, have invented a certain new and useful Improvement in Life-Boats, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which forms part of this specification, and in which—

Figure 1 represents a view in perspective of a life boat constructed according to my improvement; Fig. 2, an inverted plan, or view of the boat turned upside down; and Figs. 3 and 4, transverse sections of the boat, with the floats in different positions.

My improvement has reference to that description of life boats in which the boat proper is provided with floats along either outside of it. Such floats have been variously constructed and arranged. They have been situated both immediately under the gunwales of the boat and below them. They have been made, too, both of rigid and soft or flexible material, and formed with prow ends at their extremities. Adopting such disposition or arrangement of floats, I prefer to construct them of oblong or oval configuration in their transverse section, with their shortest diameter in direction of the width of the boat or thereabout, so as to secure for them a large buoyant capacity within only a moderate extension of them from or beyond the sides of the boat. I also prefer to construct them of ten (more or less) separate air tight canisters arranged in line corresponding in direction with the length of the boat and terminating so as to form elevated prow ends to the float, with a continuous brace between each canister turned to fit them on the inside, and with clasped bands on the exterior of either float; whereby the floats are made strong, though light, and one or more of the canisters may at any time be easily removed for replacement by another or others in case of accident. Such air tight canisters may be made of zinc or copper, or in the case of a gun boat of galvanized iron. On the exterior, the floats may be made of cedar. This construction however of the floats may, as regards detail, be more or less varied, at pleasure.

Referring to the accompanying drawing, in which many of the parts of the complete boat, and especially its frame work and interior fittings, are shown in part or base outline only; the boat proper (A) may be made in the ordinary or any suitable manner, with tight lockers and tanks, or safes, at either end capable of conversion into air tight chambers, and with valves, if desired, on either side of the keel for emptying the boat of water. The upper interior portion of either side (*b*) of the boat may also be constructed to form air tight lockers, in compartments, for the purpose of containing clothing, provisions, and other articles. Such safes and lockers should be provided with air and water tight doors, and the tanks be furnished with draw-off faucets and feed pipes or tubes. These parts, and the seats, means for propelling the boat, and other appliances not immediately pertaining to the novel features of my present improvement, may be varied at pleasure. Some of them may be omitted, or others may be added.

The floats (B) are of the character before described, in their general construction, and are preferably so arranged as that the gunwales of the boat serve to protect them. These floats, however, are strikingly novel in their action, and in some respects as regards their construction or in the construction and action of certain details used in connection with them as side floats to the boat. Said floats (B), though attachments to the boat at its sides, and though of a more or less rigid character, are so hung as that they may either be drawn in into close proximity with the sides of the boat, or be thrown out their entire width (more or less) from the boat, without however, in either case, or of necessity, changing their full buoyant or original shape; which of course distinguishes them from mere collapsible floats. This action may be secured to said floats (B), by hinging the floats at or near either end to, say, hooks suitably secured in or to the sides of the boat and serving for eyes in the ends of the floats to hitch on to, when such attachment may be covered and protected from injury, and the floats be prevented from accidental unshipping, by outside caps (*c*) bolted to the boat in such a manner as that said caps may be removed in order to detach the floats from their hooks when it is desired to convert the life-boat into an ordinary boat, or in case of requisite repair, and so forth.

Now, it will readily be seen, on looking at Figs. 3 and 4 of the accompanying draw-

ing, how the floats (B), the one at one side and the other at the other side, may be made to lie either in close proximity to the sides of the boat, or be thrown out a considerable distance therefrom, and that to effect such changes of position it is not essential that the floats themselves should be of a collapsible character, though in their construction or material they may be more or less collapsible or flexible, but that in such changes of position their full buoyant form may be preserved, and that, in assuming such different positions, they serve, as it were, to give more or less width of beam to the boat accordingly as circumstances require. The one float on the one side may be thrown out and the other float on the other side drawn in, when the exigencies of the case make that a desirable distribution of the floats. The circumstances under which such alterable and manageable actions of the floats will be found serviceable, readily suggest themselves to the mind of a nautical man, and need no comment here. When drawn in, said floats may bear throughout their length against the sides of the boat and need not project any farther from the sides than will secure them being held "covered" or protected by an elastic fender (*d*) surrounding or surmounting the gunwales of the boat and serving to withstand almost any shock or blow. When thrown out, said floats may have a bearing throughout their length against a shield or piece (*e*) attached to either side of the boat above the floats, and they may be further held, from being thrown out beyond their proper limits, by chains (*f*) at either end; while they may be held secure against the action of the waves and from moving inward from their set outer position, by braces (*g*) hinged to the floats and biting in racks or notches (*h*) in the sides of the boat. Such braces I prefer should be so arranged as that on the floats being thrown out, the braces (*g*) fall of their own accord or weight, so as to be self operating in locking the floats at their limit of extension; while, by pulling on a ring attached to a cord or chain (*i*) connected with the braces, said braces may be released from their grip and the floats be drawn inward.

On the floats coming to their place against or in close proximity to the sides of the boat, they are or may be locked in such position by a self acting catch or drop bolt (*k*) arranged to gear with the float and that may be raised when it is desired to throw the floats out. The floats are shown as being thrown out by a spring (*m*) attached to either float, and the ends of which spring may rest or move on metallic plates secured to the boat. Of course these devices, for throwing out or drawing in and for fastening or holding the floats in either position, may be variously devised.

Guards (*n*) are provided the boat on either side, near either end, to protect the floats from injury.

As a further new feature in connection with these or other floats rigged to the outsides of the boat, I now call attention to an open-work or trellis railing (C) attached to the floats and arranged to project below them. These railings serve a double purpose. They supersede the necessity of any frame work or stand for the boat on the vessel's deck. And they afford a foot-hold for persons in the water for whom there may not be room in the boat.

A life-boat thus constructed, or provided, can go over from the vessel into the water but in one and the right way. Its floats are its "ways." The railing (C) likewise serves to protect and strengthen the adjustable floats, stiffening and giving steadiness to them in being thrown out or drawn in, and preventing warping or breakage during such action.

My improvement may be applied with advantage to gun-boats, surf-boats, fishing-boats, pleasure-boats, and others.

What is here claimed, as new and useful, is:

1. Providing the exterior of the boat with adjustable side floats constructed and hung or arranged to operate in or at different fixed positions or distances to or from the sides of the boat substantially as herein set forth.

2. Also, providing either float, arranged along the outsides of a boat, with an open or trellis work railing made to project below the float essentially as specified.

In testimony whereof, I have hereunto subscribed my name.

MATTHIAS LUDLUM.

Witnesses:

WM. C. KITTRIDGE,
GEORGE H. SMITH.