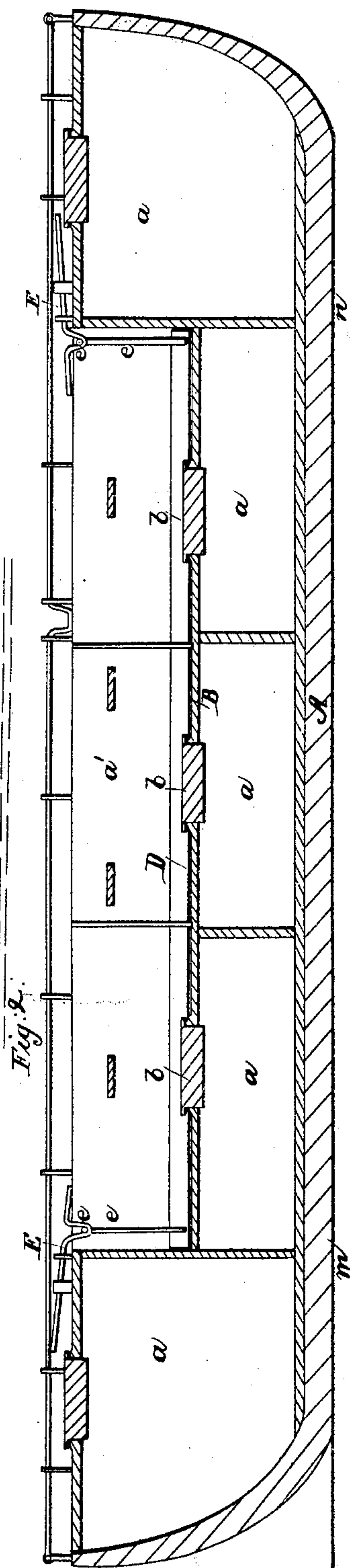
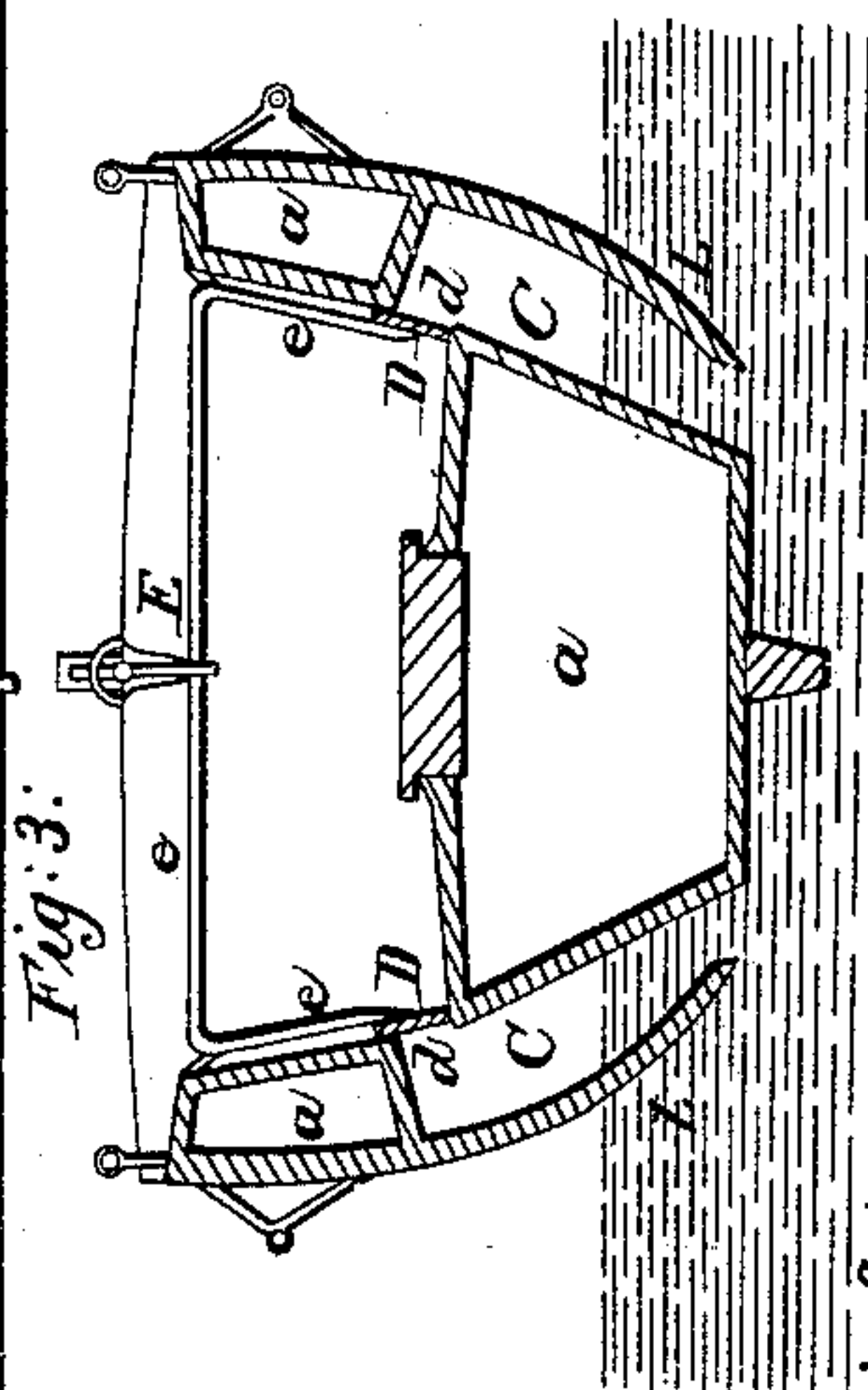
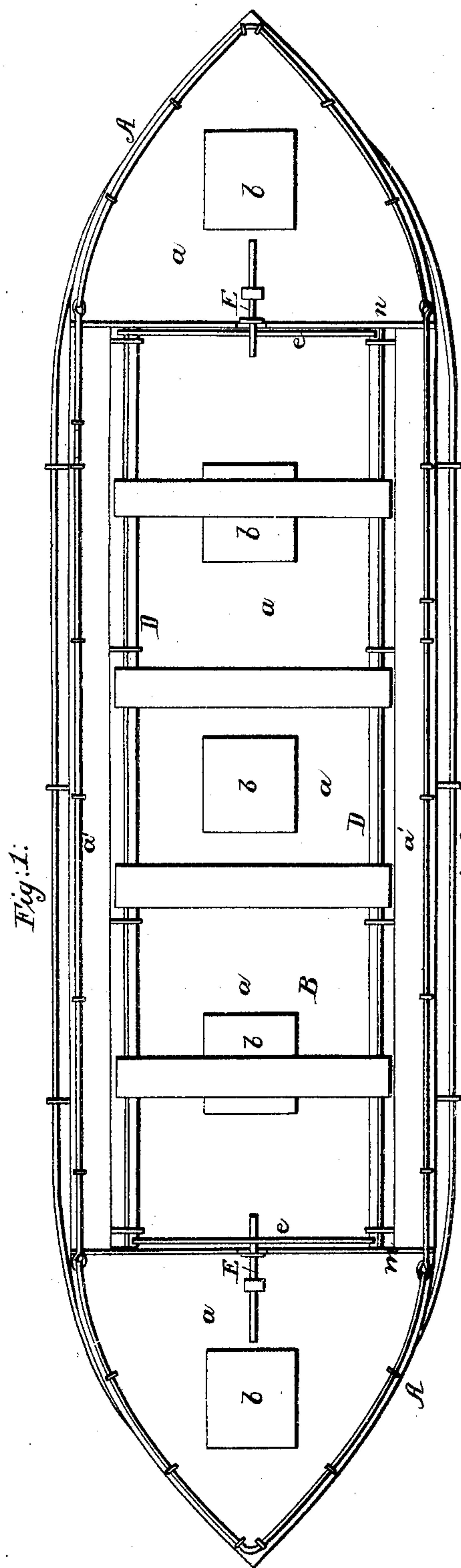


A. L. Shears.
Life Boat.

N^o 20,374.

Patented May 25, 1858.



UNITED STATES PATENT OFFICE.

A. L. SHEARS, OF OMRO, WISCONSIN.

LIFE-BOAT.

Specification of Letters Patent No. 20,374, dated May 25, 1858.

To all whom it may concern:

Be it known that I, ALBERT L. SHEARS, of Omro, in the county of Winnebago and State of Wisconsin, have invented a new and useful Improvement in Self-Emptying Life-Boats; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, is a plan or top view of a life boat constructed with my improvements, Fig. 2, is a vertical longitudinal section, and Fig. 3, a vertical transverse section of the same.

Similar letters of reference in each of the several figures indicate corresponding parts.

The nature of my invention consists not in providing scuppers for boats, nor in closing these scuppers by means of valves or gates, but in the arrangement of the double sides as constructed, forming air chambers on a line with the upper section and being open at the bottom, for the purpose not only of buoying and sustaining the boat, but of protecting the scuppers and valves from the force of the sea.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A, represents the hull of the boat. It may be made of wood or iron, and constructed with seven separate air chambers a, a, a, a, a, a', a' , and with five hatches b, b, b, b, b , leading into the five central air chambers a, a, a, a, a , which are all in the same line below the deck B, while those a', a' , are on opposite sides of the hull and above deck as shown in Fig. 3.

C C, represent vertically curving water discharging passages formed on opposite sides of the hull between the central and the side air chambers as shown. These passages lead down from above deck and communicate with the sea and extend along nearly the whole length of the boat or from m to n , as shown in the drawing.

It will be seen by referring to Fig. 3 that L, L, are the outer or double sides of the boat. At the upper part of these sides there is formed between them and the inner sides of the boat two long air chambers, these chambers being on a line with the second section of the boat. The sides L, L, extend down nearly to the bottom of the boat, leaving an air passage between the two sides

of the boat from the chamber $a' a'$ to the water. These sides L, L, are for the purpose of protecting the hull of the boat from external violence, for protecting the scuppers and valves from the beating and driving of the sea, and also for the purpose of steadying and keeping the boat in an upright position.

D, D, are long vertically falling gates arranged alongside the inner side walls of the hull above deck so as to close the openings at d, d , in said side walls by which the water from above deck communicates with the water of the sea. These valves are connected to treadle levers E, E, arranged at each end of the hull by means of angular connecting rods e, e , as shown, and by being thus connected to levers they can be raised whenever desired very conveniently, it being simply necessary to depress the lever with the foot to accomplish this result and to withdraw the foot to have them close again. Whenever the valves or gates are raised all the water above deck escapes into the sea because the deck is always kept by the bouyancy of the boat far above the water line, and this distance above said line increases as the water escapes owing to her becoming lighter. By this arrangement of water escape passages and valves the baling out or emptying of the boat of water which may be above deck can be accomplished in a few seconds as the operating of the valves does not require but a moment of time and the escape passages are along the whole length of the deck.

The hull constructed as above described may be furnished with four or more seats, so as to accommodate four or more oarsmen, and with oar locks. Over the side air chambers and around the entire hull is constructed an iron railing connected with the oar locks and made firm with stanchions located permanently at suitable distances apart around the outside of the hull to facilitate the holding on of persons in a heavy sea. A guard may also be arranged entirely around the outside of the hull for the purpose of preventing breaking in or injury of the hull, and also facilitate righting up the boat in case she should, even under extraordinary circumstances, capsize. By lightly laying hold of the guard with the hands it is thought she can be easily turned to a proper position for use. The air chambers will serve for receiving such provisions

as are on hand, they being introduced into the same through the hatches.

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

- 5 The arrangement of the sides L, L, as constructed with the hull proper of the boat, forming the air chambers (a' , a' ,) and being open below, and these sides and air

chambers combined and arranged with the scuppers and valves in the manner and for the purpose herein set forth.

ALBERT L. SHEARS.

Witnesses:

JOHN S. HOLLINGSHEAD,
C. B. COTTER.