Sheet 1. 2 Sheets.

H. H. Day.

Life Boat.

No. 4,356. Patented Jan. 15, 1846.

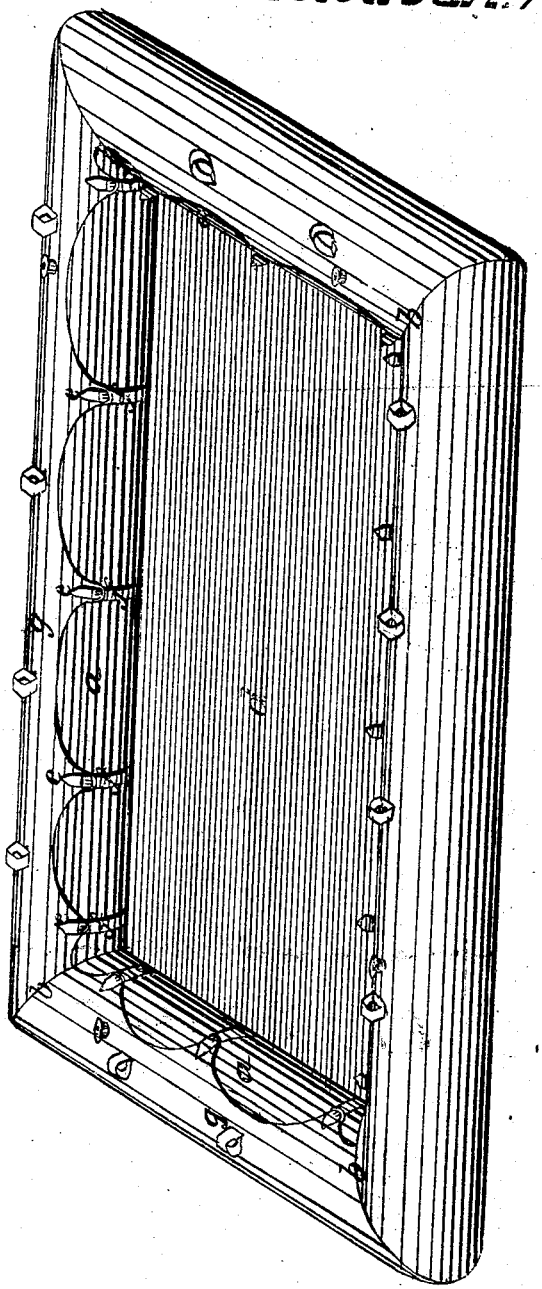

Fig. 3

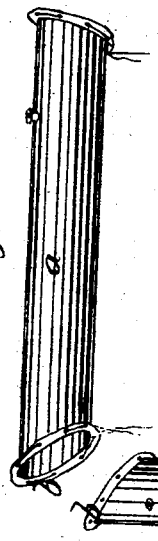

Fig. 1

Fig. 2

Sheet 2. 2 Sheets.

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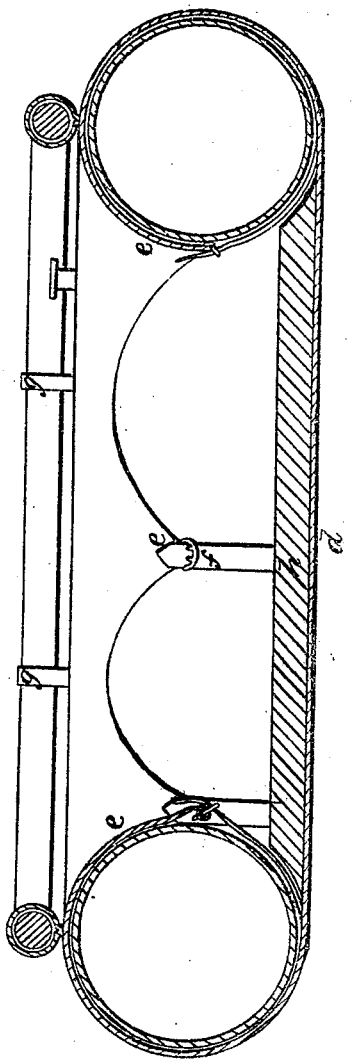

UNITED STATES PATENT OFFICE.

HORACE H. DAY, OF NEW YORK, N. Y.

PORTABLE INDIA-RUBBER BOAT.

Specification of Letters Patent No. 4,356, dated January 15, 1846.

To all whom it may concern:

Be it known that I, HORACE H. DAY, of the city, county, and State of New York, have invented a new and useful Improvement in the Manner of Constructing India-Rubber Boats or Pontoons, and that the following is a full, clear, and exact description of the principle or character thereof which distinguishes it from all other things before known and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of a boat constructed in accordance with my improvement; Figs. 2 and 3, separate views of the end and side cylinders; and Fig. 4, a cross vertical section of the boat.

The same letters indicate like parts in all the figures.

Boats and pontoons have been made of inflated bags or cylinders of india rubber cloth connected together and provided with a platform above them; or the india rubber cloth has been made in the form of a boat with a wooden frame within to distend the cloth and give the requisite strength; but these plans have been deemed objectionable—the former requires too many cylinders to give the necessary buoyancy, and the latter is not only too heavy, expensive, and liable to wear and tear, but a single hole punctured in any part of the cloth below the water line will cause the whole to sink. My improvement it is believed avoids these objections and consists in forming the boat of a sheet of india rubber for the bottom extending around and attached to hollow cylinders of india rubber cloth connected together by their ends to form the outer frame, or what corresponds with what are termed the gunwales in ordinary boats.

In the accompanying drawings (*a*) represents the cylinders which are made air and water tight of india rubber cloth with the ends beveled as at (*b*) to fit together to form the outer frame or form of the boat. Each cylinder being provided with an inflating tube and valve of similar construction to those used in life preservers, and the beveled ends with cords for the convenience of connecting and disconnecting them. For a scow formed boat I employ four such cylinders, two end and two side ones with the ends mitered or beveled at an angle of forty-five degrees, as represented in the accompanying drawings; but when it is desired to give a sharp bow and stern, then a greater number may be required. The ends of the cylinders are closed, (as represented at (*c*), Figs. 2 and 1) to avoid the necessity of uniting the ends of the several cylinders with water tight joints. The sheet of india rubber cloth which constitutes the bottom (*d*) of the boat is carried around and over the cylinders, as represented at (*e*, *e*, *e*, *e*), and secured by straps and buckles (*f*), and where this sheet passes around the angles, formed by the junction of any two of the cylinders, a gore must be cut out and the edges properly reunited with india rubber cement. Loops (*g*) may be attached to that part of the cloth which passes over the cylinders to receive rods of wood to give stiffness to the whole structure. If desired, boards (*h*) may be placed in the bottom to prevent the weight of persons in the boat from protruding that portion of the bottom on which the weight rests; but this is only necessary to prevent an increased resistance of the water to the motion of the boat. When the cylinders are not inflated the boat can be folded in a small compass, or taken to pieces for transportation by simply unbuckling the bottom and disconnecting the cylinders.

I am aware that boats and pontoons have been formed of inflated cylinders of india rubber connected together side by side to receive a platform above them; and also that the outsides of boats have been made of india rubber cloth distended by means of a wooden frame placed within,—and therefore I wish it to be distinctly understood that I do not claim as my invention simply making boats of india rubber cloth either with or without inflated cylinders; nor do I claim simply making boats with hollow air tight vessels around the gunwales, as this has been resorted to in life boats made of wood or metal, but,

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

Making boats of a sheet or sheets of india rubber or other water proof cloth attached to a frame consisting of inflated india rubber cylinders, in manner substantially as herein described.

HORACE H. DAY.

Witnesses:

HALSEY BROWER,

WILLIAM H. ROGERS.