

(No Model.)

2 Sheets—Sheet 1.

M. EDWARDS.  
LIFE RAFT.

No. 428,833.

Patented May 27, 1890.

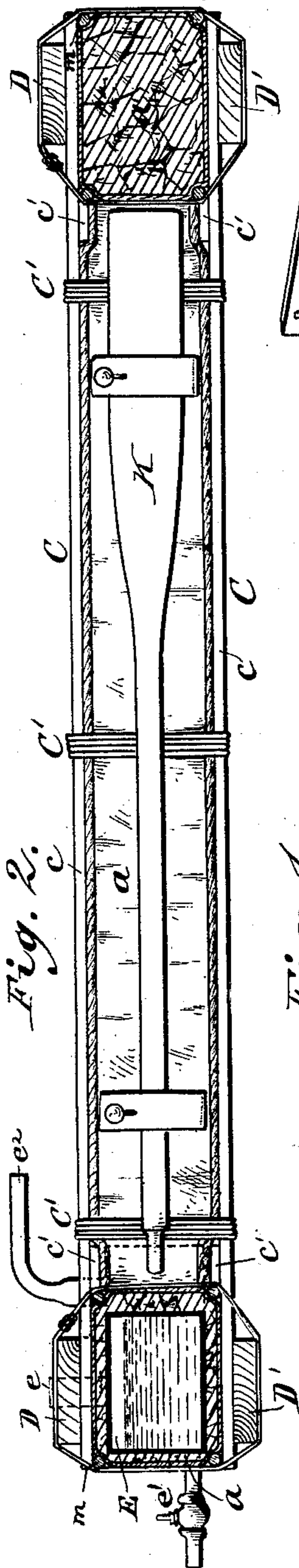


Fig. 2.

Fig. 1.

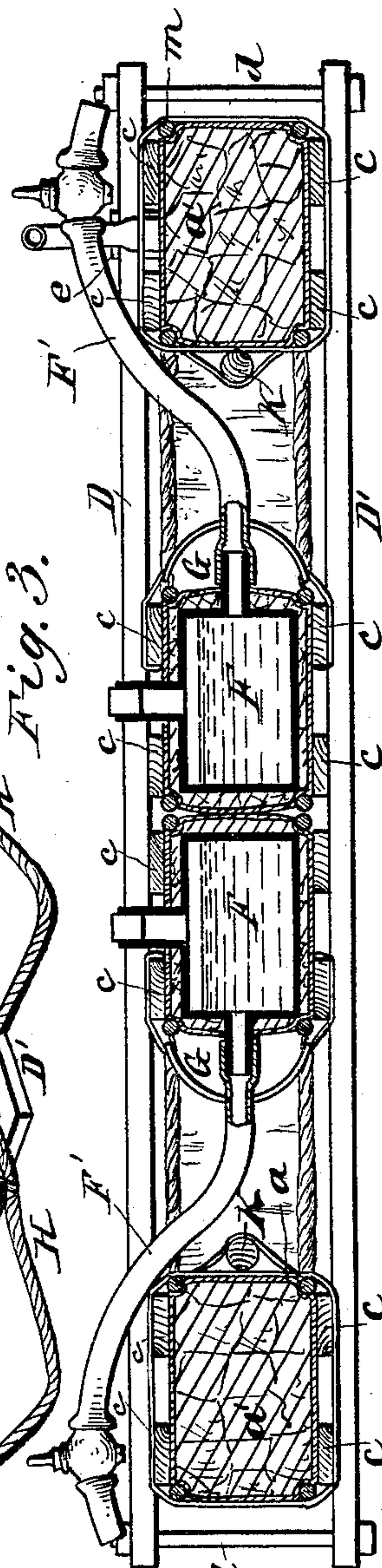
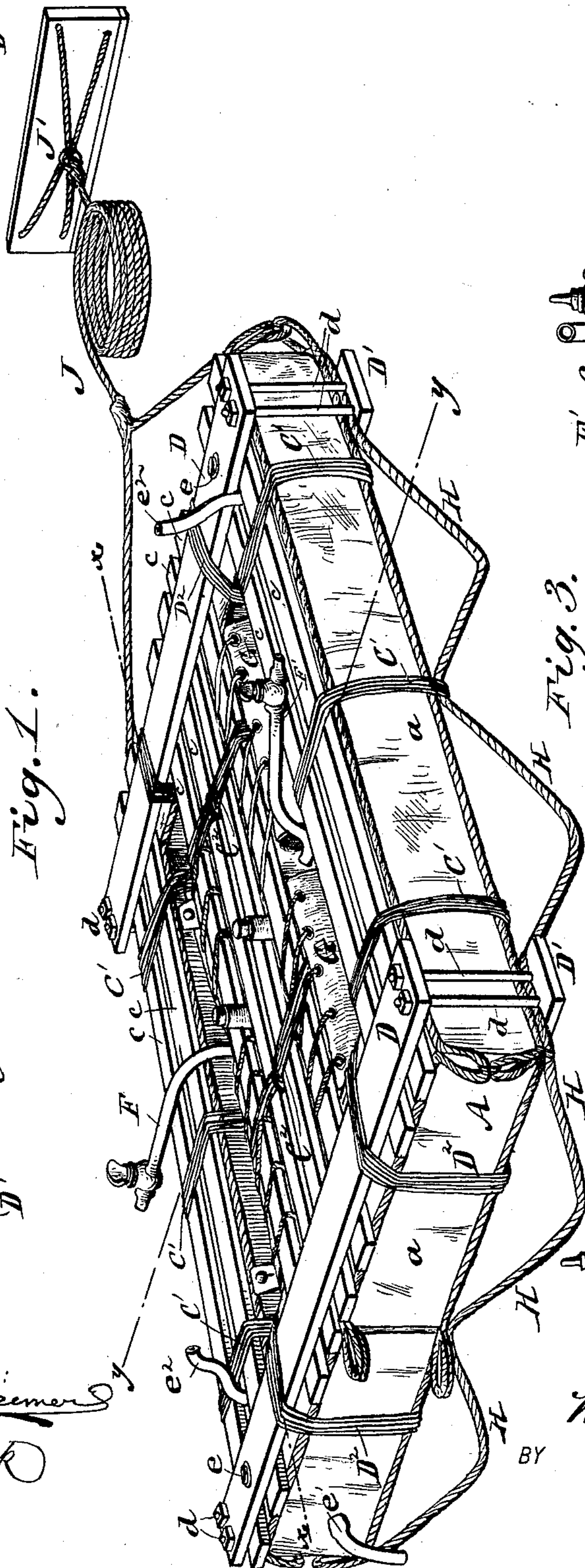


Fig. 3.

WITNESSES:  
*John H. Deemer*  
*W. Sedgwick*

INVENTOR:  
*M. Edwards*  
*Munn & Co*

BY

ATTORNEYS

(No Model.)

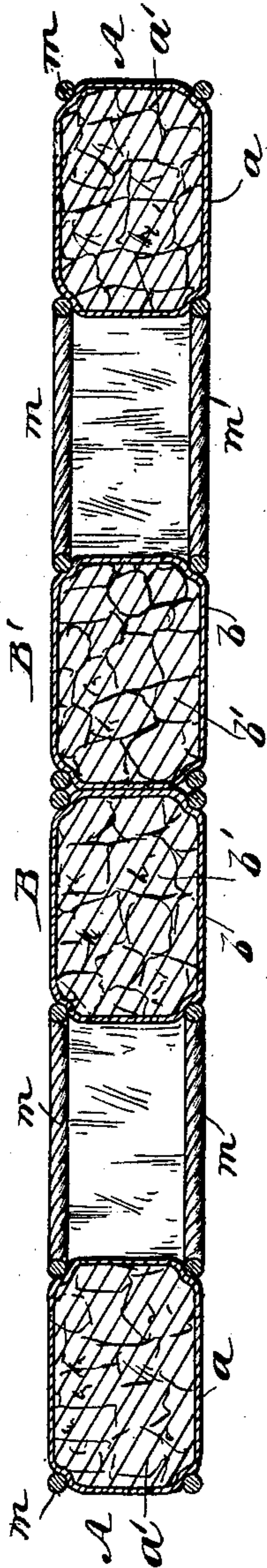
2 Sheets—Sheet 2.

M. EDWARDS.  
LIFE RAFT.

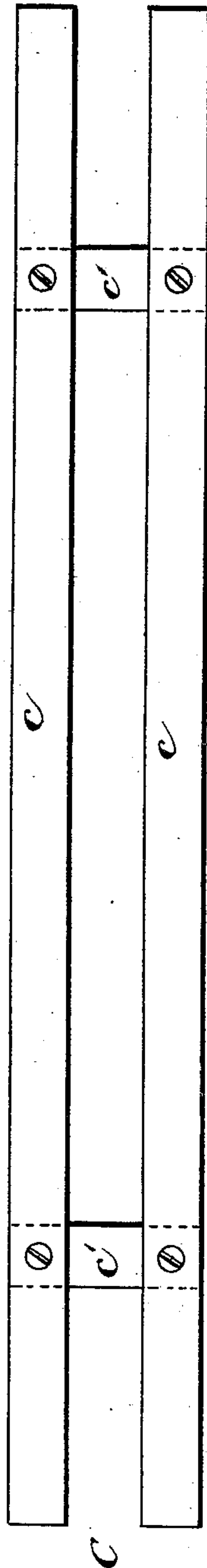
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*Fig. 4.*



*Fig. 5.*



WITNESSES:  
*John H. Deumer*  
*C. Sedgewick*

INVENTOR:  
*M. Edwards*  
BY *Munn & Co.*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

MILLS EDWARDS, OF JERSEY CITY, NEW JERSEY.

## LIFE-RAFT.

SPECIFICATION forming part of Letters Patent No. 428,833, dated May 27, 1890.

Application filed January 15, 1890. Serial No. 336,961. (No model.)

*To all whom it may concern:*

Be it known that I, MILLS EDWARDS, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Life-Raft, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my new and improved life-raft. Fig. 2 is a longitudinal sectional elevation of the same on the line  $x x$  of Fig. 1. Fig. 3 is a transverse sectional elevation on the line  $y y$  of Fig. 1. Fig. 4 is a sectional view of the outer and inner buoys, and Fig. 5 is an enlarged plan view of one of the binders.

The invention will first be described in connection with the drawings, and then pointed out in the claims.

A is a rectangular buoy composed of a canvas covering  $a$  and a filling  $a'$ , of cork or other buoyant material. In the space between the sides and ends of the rectangular buoy are fitted the buoys B B', composed of canvas covering  $b$  and filling  $b'$ , of cork or similar material. The buoys A B B' are held between or have lashed or otherwise secured to them on opposite sides light binder-frames of wood. These are preferably made as shown at C, Fig. 5, each composed of slats  $c c$ , joined by cross-strips  $c' c'$ . One of these is placed on the top and bottom side of each buoy and firmly lashed thereto by cordage applied as shown at C' and also at C<sup>2</sup>, the latter serving at the same time to lash the inner buoys B B' together. The ends of the slats are bound by the upper and lower end boards D D', held together by the rods  $d d$  (shown clearly in Fig. 1) and the lashing D<sup>2</sup>. At opposite corners of the main rectangular body is fitted a can or receptacle E for oil, which may be forced out upon the water to quell the violence of the waves. These cans are provided each with a spout  $e$  for filling it, and with an outlet-pipe  $e'$  and with a pipe  $e^2$ , through which a person on the raft may with his breath force the oil in small quantities out of the oil-receptacle.

At the center of the inner buoys B B' are fitted the tanks or receptacles F for water. To each of these is attached a tube F', through which persons on the raft may suck water to quench thirst, and at each side of the inner buoys is lashed a pouch or bag G, by or in which provisions may be carried on the raft.

At each side and end of the raft are fastened the foot-ropes H, on which a person can conveniently and safely stand and cling to the sides of the buoy, and in this manner the capacity of the raft is largely increased.

At one end of the raft is attached a drag-rope and drag J J', by which the raft may be kept up in the wind and kept steady in rough weather. K K are oars lashed to the sides of the buoy, as shown clearly in Figs. 2 and 3.

The edges of the buoys are finished with a cord  $m$  to protect and strengthen the canvas.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A life-raft comprising a continuous buoy in the form of a hollow square lashed between upper and lower binder-frames, combined with one or more intermediate buoys, also lashed between binder-frames, which are lashed to the main buoy and its binder-frames, substantially as described.

2. The buoy A, in the form of a hollow square, made of canvas and cork or other buoyant material, the inner buoys B B', the binder-frames C, of slats of wood, at the top and bottom of the buoys, the ends of the binder-frames of the buoys B B' lapping upon the main buoy, and the end boards D D', bolted together upon the ends of all the binder-frames, substantially as described.

3. In a life-raft, a buoy made of canvas and cork held between upper and lower binder-frames lashed to the buoy, in combination with one or more tanks or receptacles E, held within the body of the buoy and provided with an inlet and outlet pipe, by which the oil may be expelled by blowing into the receptacle, substantially as described.

MILLS EDWARDS.

Witnesses:

JOHN E. JONES,  
H. A. WEST.