(No Model.)

L. H. RAYMOND.

LIFE RAFT.

No. 589,139. Patented Aug. 31, 1897.

Fig. 1.

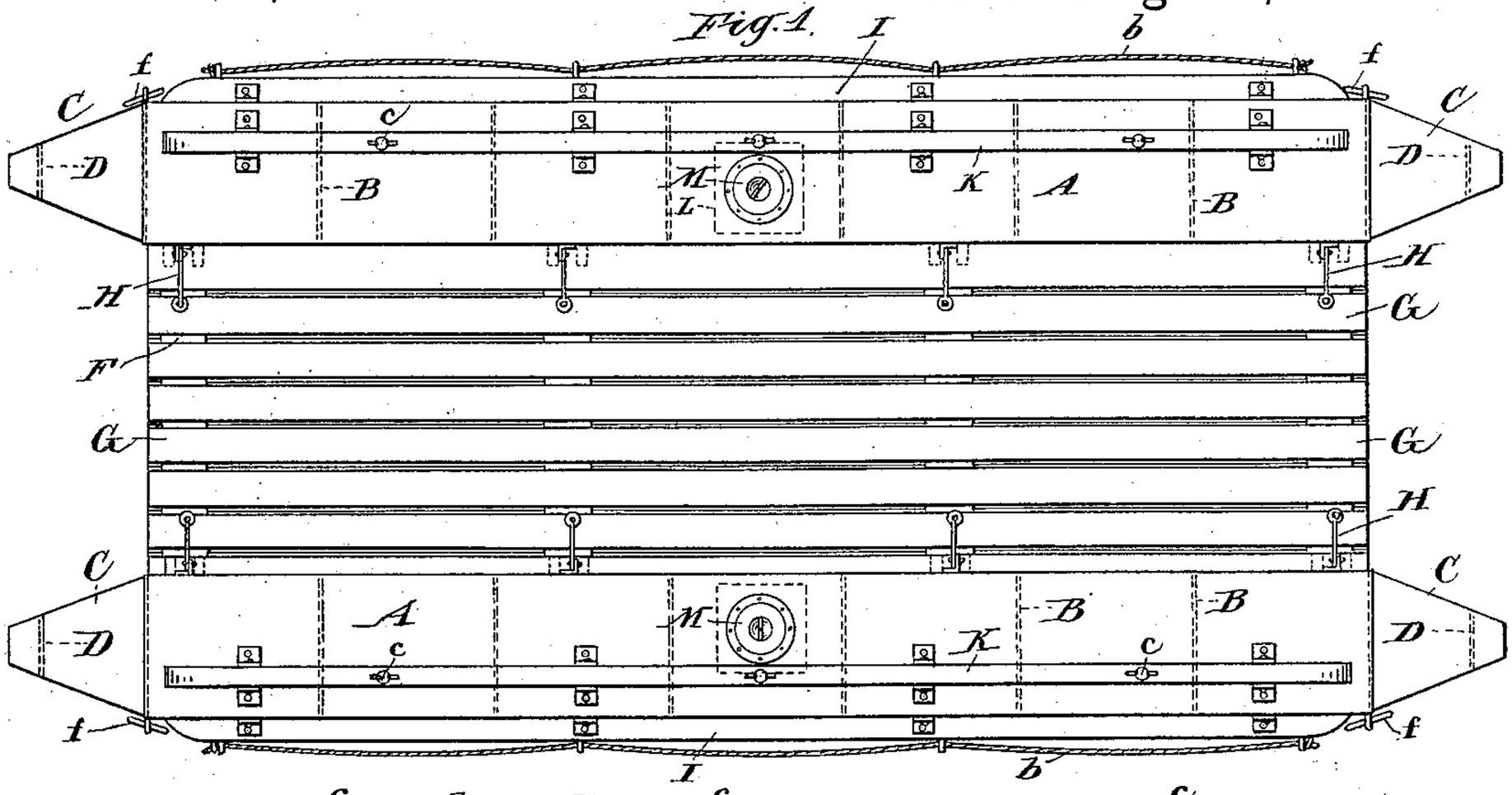


Fig. 2.

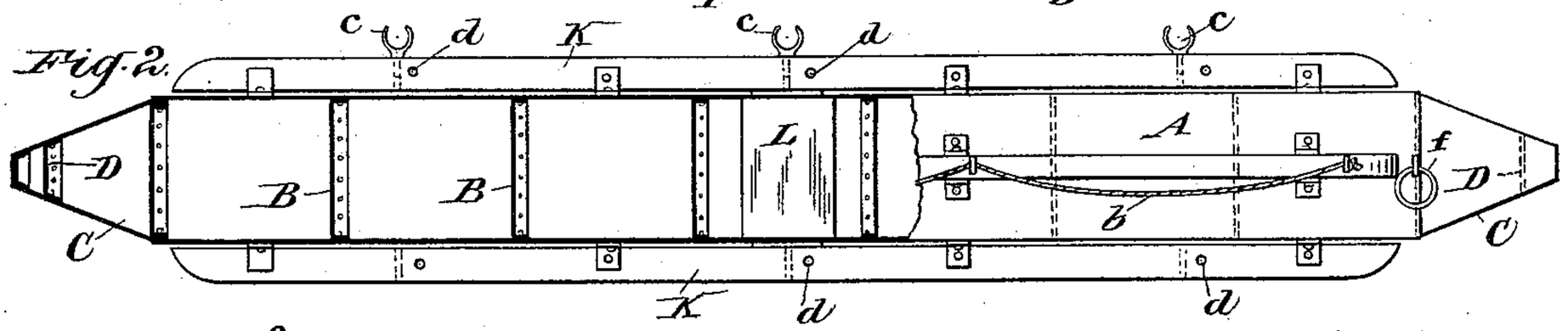


Fig. 3.

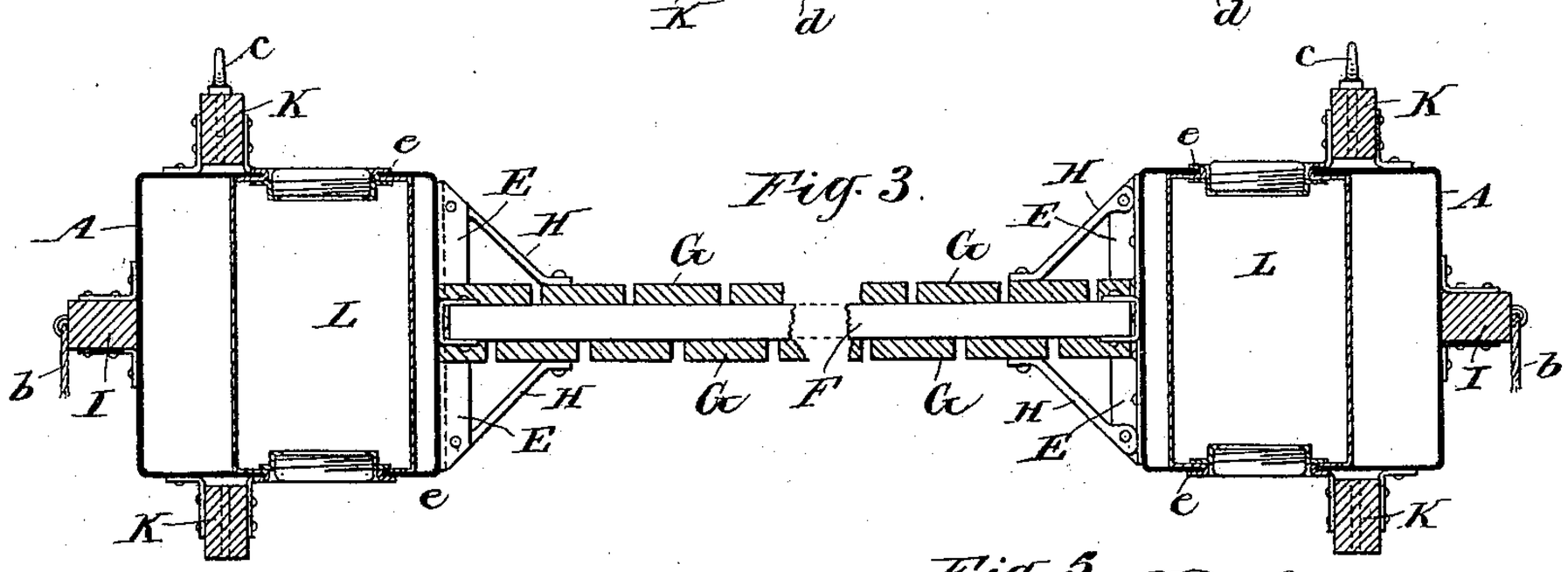


Fig. 4.

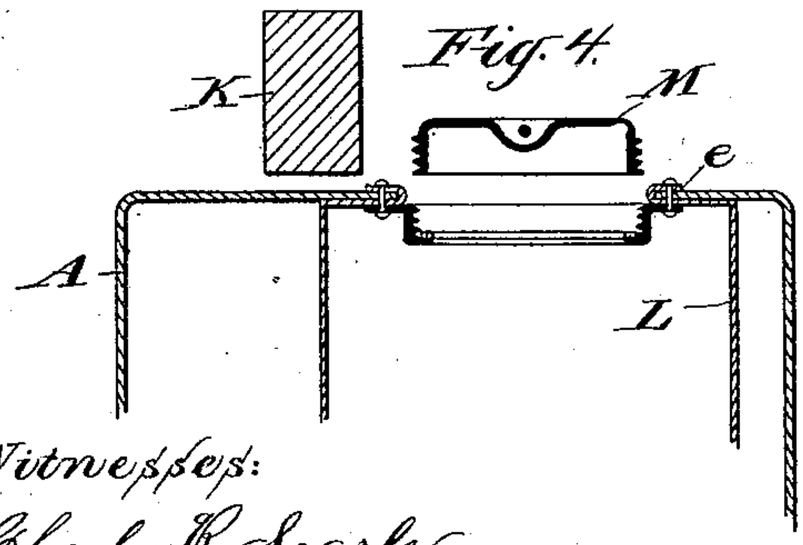


Fig. 5.

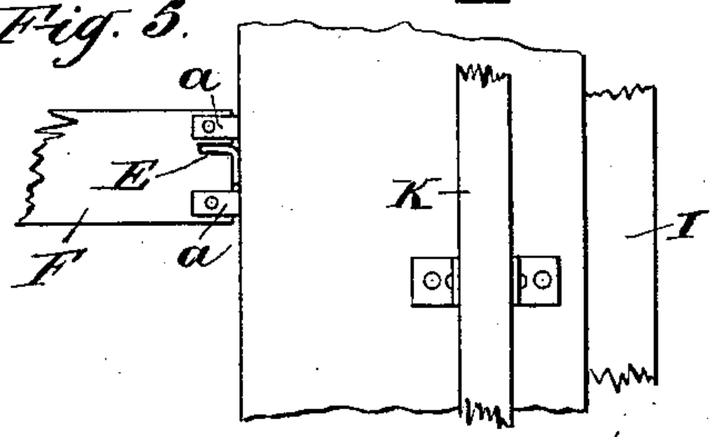
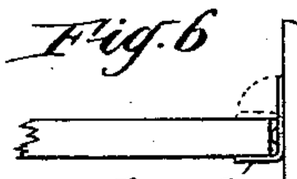


Fig. 6



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UNITED STATES PATENT OFFICE.

LEWIS H. RAYMOND, OF BROOKLYN, NEW YORK, ASSIGNOR TO EMMA I. RAYMOND, OF SAME PLACE.

LIFE-RAFT.

SPECIFICATION forming part of Letters Patent No. 589,139, dated August 31, 1897.

Application filed December 10, 1895. Serial No. 571,635. (No model.)

To all whom it may concern:

Be it known that I, LEWIS H. RAYMOND, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Life-Rafts, of which the following is a specification.

My invention relates to life-rafts such as are carried on shipboard to be launched in certain emergencies for safe carrying of persons and stores or goods; and the object of my invention is to provide or produce a device of the class named which shall be light, strong, compact, durable, and convenient to handle or launch, which shall afford increased carrying capacity and increased comfort, safety, and convenience for persons and goods, and which shall be well protected against damage or disablement.

To accomplish all of this and to secure other and further advantages in the matters of construction, operation, and use, my improvements involve certain novel and useful features of invention, as will be herein first fully described and then pointed out in the claim.

In the drawings, Figure 1 is a plan of my improved life-raft. Fig. 2 is a partial vertical section and side elevation showing the construction and arrangement of the water-tight tanks. Fig. 3 is a cross-section, on a larger scale, of the raft, (a fragment of the central part being broken out,) showing the arrangement of the water-tank and bread or provision compartment and other details. Fig. 4 is a sectional elevation of a fragment of one of the side tanks, showing one of the covers for the contained compartments removed from its seat and illustrating the manner of securing these compartments in place. Fig. 5 is a plan of a fragment, showing the end of one of the cross-timbers in place; and Fig. 6 is a vertical view showing the manner of applying the fastening.

In all the figures like letters of reference wherever they occur indicate corresponding parts.

A A are the water-tight side tanks, which are relied upon to afford the requisite buoyancy of the apparatus. These are made of sheet metal and are square (or substantially so) in cross-section. Heretofore the side tanks have been made in cylindrical form. The square or rectangular form has many advantages over the cylindrical for this purpose, as will be seen. With the cylindrical it is difficult and expensive to fasten the platform securely, the space occupied by the tanks is wholly lost so far as accommodating passengers is concerned, and with an equal width of raft the cylindrical tanks have not nearly the cubic capacity of the square ones, and hence do not afford nearly as great buoyancy.

The tanks A are supplied with bulkheads or interior partitions B at suitable intervals, dividing the interior into numerous water-tight compartments and contributing to the strength of the tanks, and each terminates at each end in a pyramid C, the same being also protected by an interior partition D near the extremity. This is so that if the extreme point is damaged the buoyancy of this portion will not be entirely lost. On the inner vertical face of each tank, at suitable intervals, are riveted angle-irons E E, which stiffen the tanks and afford convenient points at which to apply and secure braces for the flooring.

F F are cross-timbers. To secure these, I employ brackets, as *a a*, riveted to the sides of the tanks, and bolt down through these and the timbers. The timbers F being notched to escape the angle-irons, may rest upon the brackets, as indicated in Fig. 6, the top of which is then bent down upon the timber and the bolt applied. One bracket on each side of the angle-irons will answer very well. The longitudinal boards are then to be laid. These are shown at G G, and they may be spiked to the timbers F, which occupy about the middle portion of the raft. The boards or strips G on one side are placed so as to cover the openings between the boards on the opposite side, as indicated in Fig. 3. This prevents the splashing of water through the flooring, at the same time leaving the latter sufficiently open for drainage, as is required.

Braces, as H H, extend from the tops of the angle-irons, to which they are secured, down to the flooring-boards, where they are also secured, and thus the tanks and floor are braced and held.

I I are side strips of wood secured at about the middle of the tanks to prevent damage to the sides thereof. They are usually supplied with hand-lines, as *b b*.

Each tank is supplied with a top and bottom timber, as K, set a little distance from the surface to allow a waterway under them. When in the water, they act as keels, and they protect the tanks when the raft is being slid overboard. They are set toward the outer sides, as shown, leaving a clear portion of each tank toward the center ample to furnish a good bench for persons to sit upon. They accommodate rowlocks, as *c c*, which when not in use are located in the perforations *d d*.

It is usual to lash bread tanks or "beakers" and water-casks upon rafts of this class; but these are invariably in the way and are liable to be washed overboard. The rectangular tanks A afford a convenient place for storing these necessary adjuncts.

L L are tanks or compartments which may be used one for bread or provisions and one for water. These are located inside the tanks A, as shown, one on each side of the raft. They touch at top and bottom to make them secure, but do not reach to the sides; so if tanks A are punctured these vessels will not be damaged. To make these vessels watertight, they are provided with necks, which are extended through openings in tanks A and bent over and riveted and soldered in place, if necessary, as at *e e*.

The covers M enter threaded seats provided for them, and when in place they are about flush with the top or bottom of tanks A, so as not to interfere with the use of the tank for seating purposes.

The raft is the same top and bottom, so it is immaterial which side comes uppermost when it is launched.

The water and food compartments have water-tight covers at top and bottom, so they are always accessible. They are kept stored when on board ship, and the two caps or covers enable them to be easily cleaned or washed out and replenished from time to time.

The rings *f f* are for lines to raise or lower or tow the raft.

The form of the improved raft is such that for the same amount of buoyancy it is more compact than the ordinary forms and may be more compactly stored on deck. It is convenient and substantial and answers all the purposes or objects of the invention previously set forth.

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

In a life-raft comprising rectangular side tanks having bulkheads, top and bottom string-pieces and centrally-disposed flooring connected with the tanks as explained, the combination with the said tanks, of the provision-compartments located therein, removed from the side walls, but touching at top and bottom and provided each with removable upper and lower screw-threaded covers of which the outer faces are flush with the surfaces of the tanks, substantially as and for the purposes set forth.

Signed at New York, in the county of New York and State of New York, this 3d day of December, A. D. 1895.

LEWIS H. RAYMOND.

Witnesses:
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WORTH OSGOOD.