(No Model.)

L. H. RAYMOND & J. ROBERTS.

Life-Raft.

No. 227,054. Patented April 27, 1880.

Fig: 1.

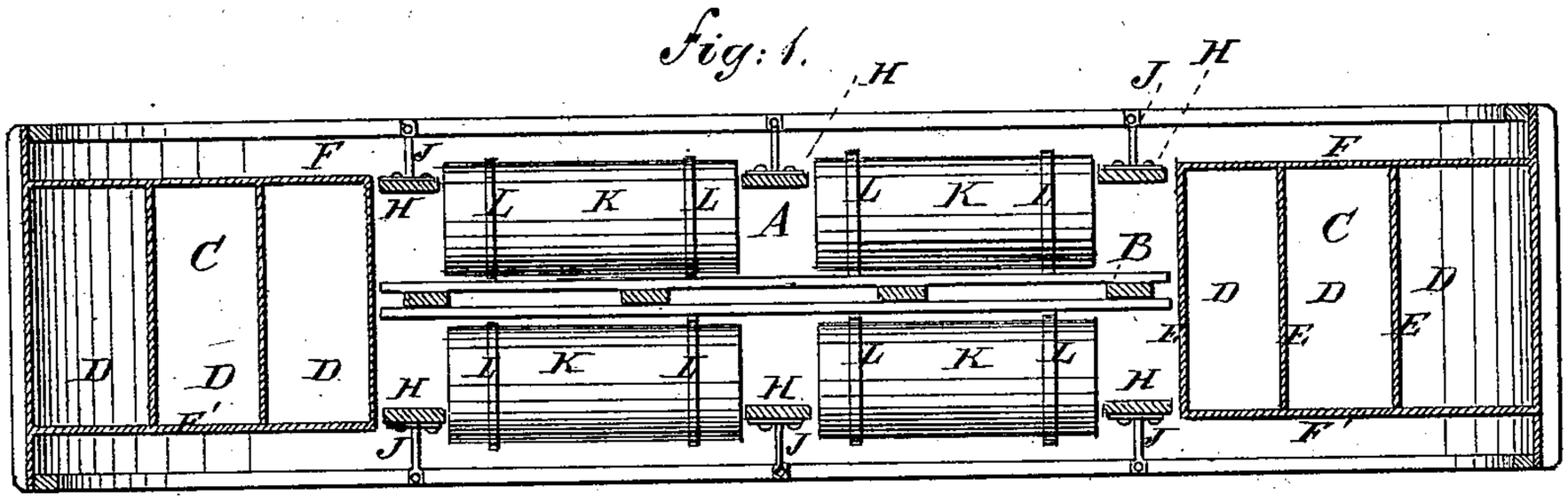


Fig: 2.

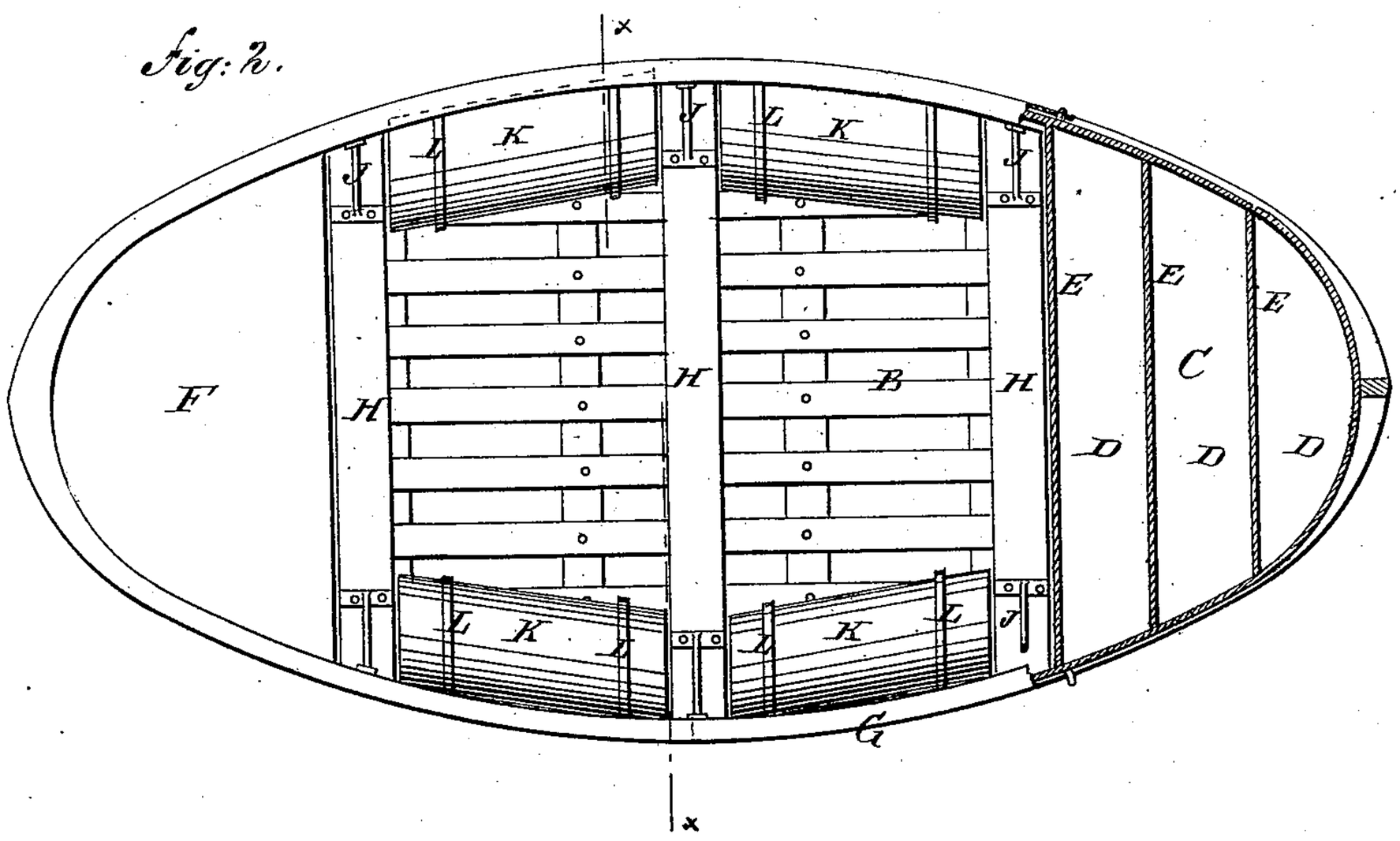
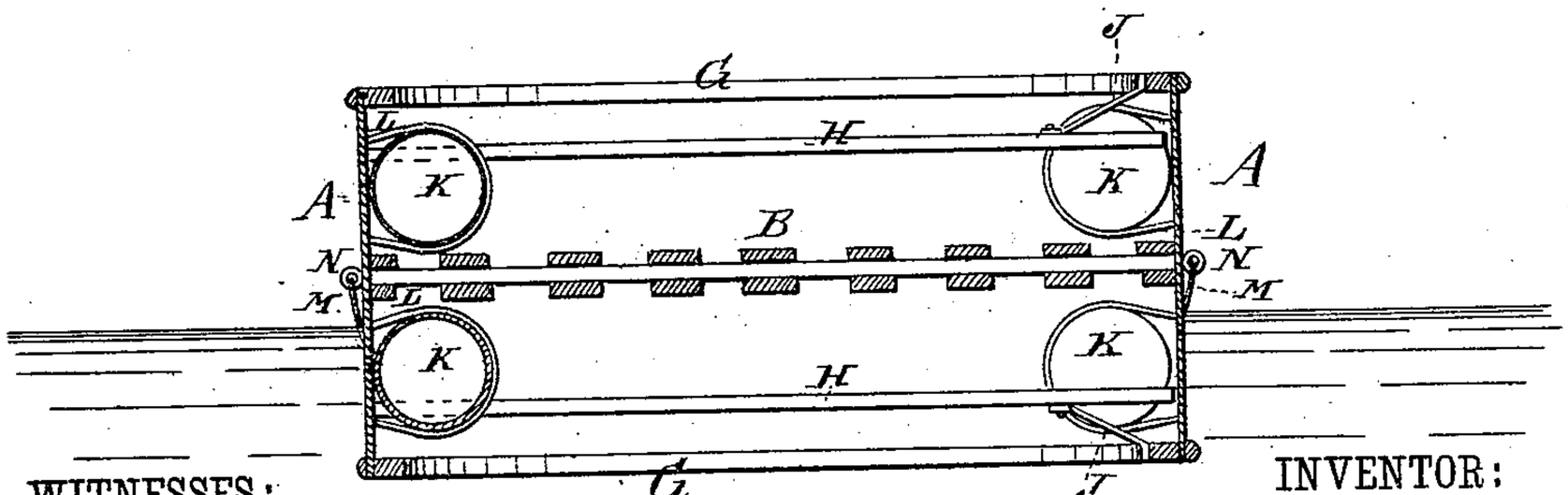


Fig: 3.



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UNITED STATES PATENT OFFICE.

LEWIS H. RAYMOND, OF NEW YORK, N. Y., AND JOHN ROBERTS, OF DUNELLEN, N. J.

LIFE-RAFT.

SPECIFICATION forming part of Letters Patent No. 227,054, dated April 27, 1880.

Application filed March 6, 1880. (No model.)

To all whom it may concern:

Be it known that we, LEWIS H. RAYMOND, of the city, county, and State of New York, and JOHN ROBERTS, of Dunellen, in the county of Middlesex and State of New Jersey, have invented a new and Improved Life-Raft, of which the following is a specification.

The object of our invention is to provide a new and improved life-raft which is simple in construction, durable, and effective in use.

The invention consists in a raft made with sides of equal height below and above the floor, and having independent cylindrical air-chambers fastened thereto between the seats above and below the floor, and also having air-chambers, made in compartments, formed between the sides at both ends of the raft.

It further consists in a gunwale on the top and bottom of the sides and thwarts held and braced by means of braces connecting the gunwale and the thwarts.

In the accompanying drawings, Figure 1 is a central longitudinal sectional elevation of our improved raft. Fig. 2 is a plan view of the same. Fig. 3 is a cross-sectional elevation of the same on the line *x x*, Fig. 2.

The raft is formed of the outer shell or sides, A A, between which a double-slatted floor, B, is supported in the middle of the heights of the sides, so that a raft with floor and sides is formed in whatever position the raft may rest on the water. Air-chambers C C are formed at the ends of the raft, and are subdivided into a number of entirely-closed independent compartments, D D, by the transverse or longitudinal partitions E E.

The sides A may form part of the air-chambers, which, in this case, have the top F and bottom F′ attached to the sides, so as to form an air-tight joint; or the air-chambers may be made independently, and may be placed into the space between the sides A A, at the ends of the raft.

The top and bottom edges of the sides A A are protected and stiffened by a heavy and strong gunwale, G, which also facilitates the handling of the raft and gives a good bearing for the oars or oar-locks. Thwarts H H are placed transversely suitable distances apart, according to the length of the raft, and are held by end braces, J J, passing from the gunwale to the top of the thwarts, to both of which they are securely fastened.

The thwarts are arranged above and below the floor—that is to say, they are suspended from each gunwale—so that the raft will in all positions have seats for the persons on the same.

The tops of the chambers C C are preferably made on a level with the upper sides of the thwarts, so that the sides form a low inclosure around the sides and around end of the top of the end air-chambers.

Between each two thwarts a cylindrical air-chamber, K K, is fastened to the sides A on the inside by means of bands L L, surrounding the said cylindrical air-chambers, or in some other suitable manner. These cylindrical air-chambers are provided above and below the floor, and are entirely independent of each other and in no communication whatever, so that if one of them becomes damaged it can be renewed easily and without affecting the others.

The cross-section of the cylinders K K may be triangular or polygonal, instead of circular, as may be necessary or desired.

Life-lines M M are attached to the outside of the raft by means of staples N N, or in some other suitable manner.

Ordinarily only the air-cylinders on one side of the floor will be submerged; but if a very heavy load is to be carried, the upper tier of cylinders will also assist in keeping the raft afloat.

The raft may be made of any desired size, and of wood or metal, as may be desired.

If one of the compartments of the end chambers should happen to leak the other compartments are not affected thereby, and easily keep the raft afloat.

We are aware that rafts with one continuous air-chamber on the ends and sides have been made heretofore; and we are also aware that rafts have been made with side cylindrical tanks of the entire length of the raft. We do not claim this; but,

Having thus described our invention, we

claim as new and desire to secure by Letters Patent—

A life-raft made substantially as herein shown and described, and consisting of an outer shell with air-chambers at the ends, a slatted floor supported in the middle of the height of the outer shell, of independent cylindrical air-chambers fastened to the inner side of the shell above and below the floor, and of the thwarts, as set forth.

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Witnesses:
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