L. VIALET-CHABRAND.

RAFT LIFE BOAT.

APPLICATION FILED JULY 6, 1914.

**1,173,544.**

Patented Feb. 29, 1916.

2 SHEETS—SHEET 1.

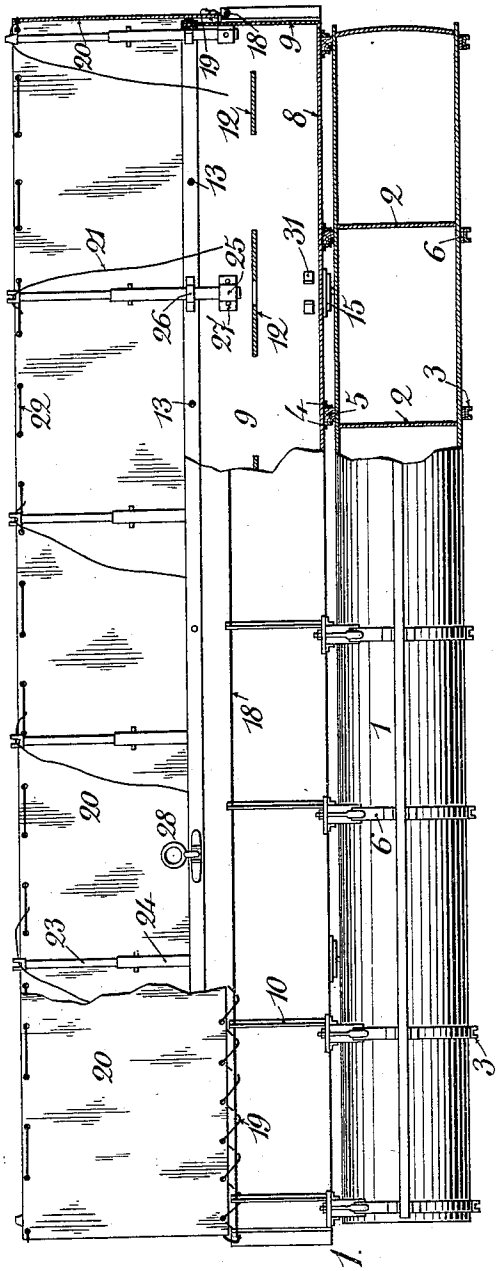


Fig. 1.

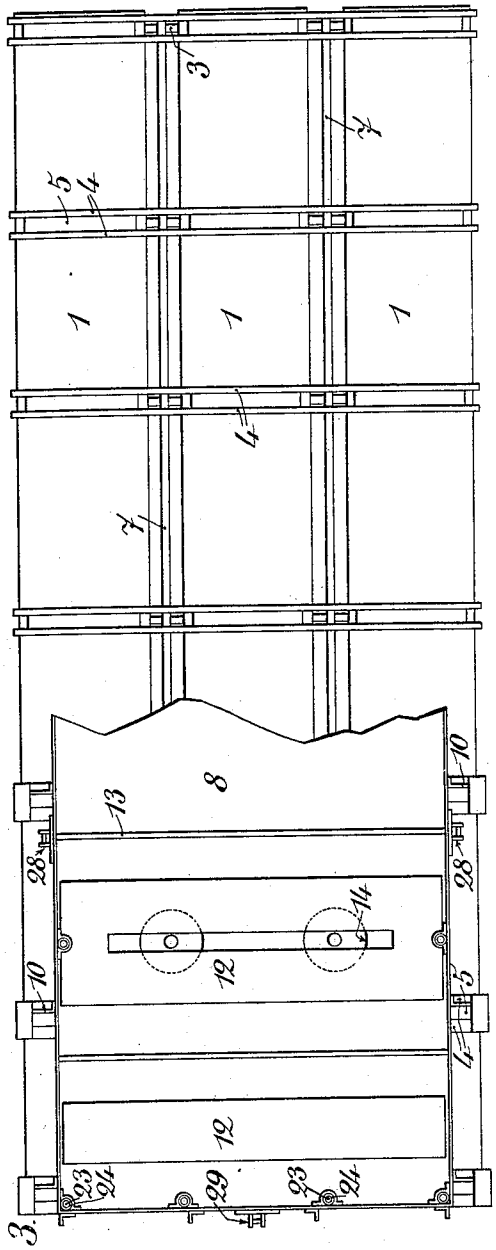


Fig. 3.

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2 SHEETS—SHEET 2.

fig. 2.

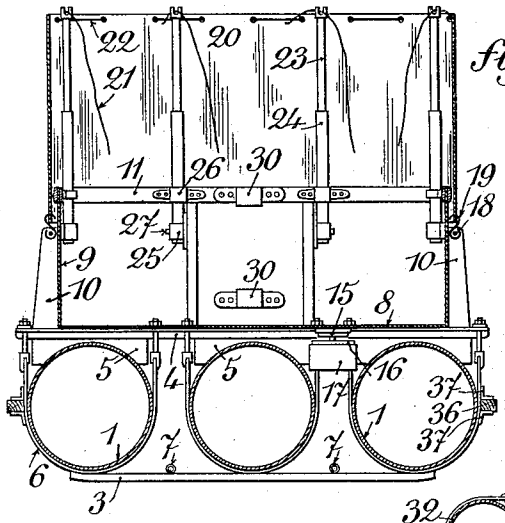



fig. 4.

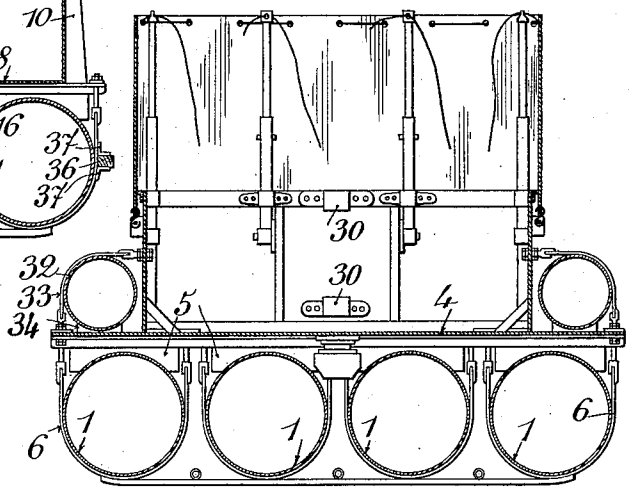
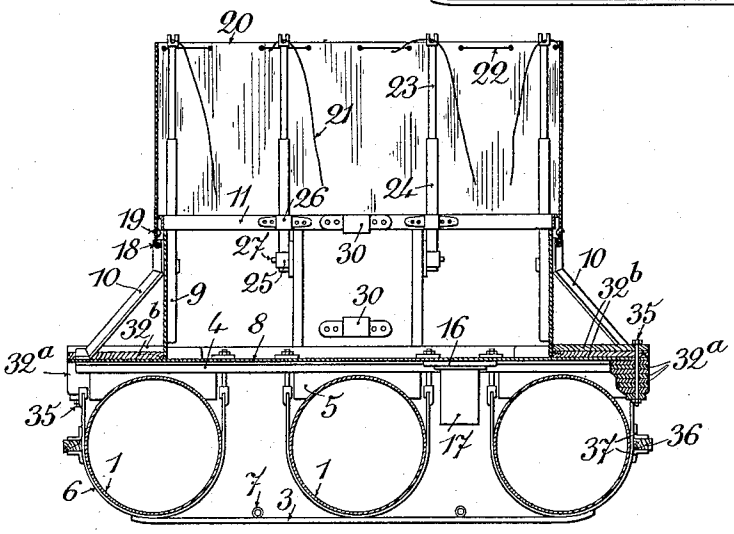



fig. 5.




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# UNITED STATES PATENT OFFICE.

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## RAFT LIFE-BOAT.

1,173,544. Specification of Letters Patent. Patented Feb. 29, 1916.

Application filed July 6, 1914. Serial No. 849,222.

*To all whom it may concern:*

Be it known that I, LUCIEN VIALET-CHABRAND, a citizen of the Republic of France, residing at La Ciotat, Bouches du Rhône, in the Republic of France, engineer, have invented certain new and useful Improvements in Raft Life-Boats, of which the following is a specification.

According to this invention the floatability of a casing or chamber for passengers is obtained by means of galvanized sheet-metal parallel cylinders which can be partitioned by means of disks and which are secured underneath the chamber for the passengers by collars. Such cylinders are connected together in such a manner that with the chamber they constitute a whole of great rigidity while all the parts can be dismantled. They are separated from one another by spaces wide enough to allow of the legs of the passengers being placed therein when the apparatus floats upside down, that is with cylinders in the air. The chamber is covered over and provided with benches or seats for the passengers.

In order to better protect the ship-wrecked passengers from the waves which, on breaking against the wall of the chamber, might penetrate therein, a curtain is arranged at the outside and secured to the top of the chamber; such curtain is rolled on itself when the apparatus is on board but can be easily unrolled when required, for instance by means of cords passing in the head of telescopic standards secured around the chamber; in this way the height of the shelter is greatly increased by a simple and very light device.

The adoption of cylinders to make the apparatus of an invariable floatability allows of using thin metal plates but which are very rigid on account of their shape; it allows also increasing the partitioning as may be desired. Furthermore the chamber being high up, independent of the cylinders and not having to penetrate into the water, can also be made of thin metal plates; so it will be notably lighter than the cylinders with their collars and fastening devices; the stability of the system will thus be satisfactory. There will even be the result that in case the apparatus should be precipitated from the deck into the sea it would nearly always fall onto the water under normal conditions, that is with the cylinders down and the chamber up. However in case the apparatus should by chance turn upside down, it might then be used as a raft, and the ship-wrecked passengers would only have to take a place between the cylinders, in sitting down on the latter and in clinging for instance to the tubes connecting the fastening collars of the cylinders, to be in perfect conditions as to stability. So the apparatus is capable of fulfilling the double function of a "boat" when it floats with the chamber in the air or of a "raft" when such chamber is in the water with the cylinders above.

Three embodiments of this invention are shown by way of example in the accompanying drawings, in which:—

Figure 1 shows a raft-boat partly in elevation and partly in vertical section. Fig. 2 is a transverse section. Fig. 3 is a top plan view. Figs. 4 and 5 are two vertical sections of two other embodiments.

The apparatus shown in Figs. 1 to 3 comprises three cylinders 1 of sheet metal, provided with bulkheads 2, and united by cross bars 3 and 4; the upper cross bars 4 are composed of frame couplings which hold between them blocks of wood 5 bearing widely on the top of the cylinders; the latter are pressed against such blocks by flat iron collars 6 to which are riveted the U shaped cross bars 3. The latter are connected together by tubes 7 located in the spaces between the cylinders. On the outsides of the end cylinders bars of wood 36 are secured by means of flaps 37 riveted to the respective collars 6. The cross members 4 support a sheet metal floor 8 on which are secured vertical walls 9 forming the four sides of the chamber for the passengers. Such sheet metal walls are upheld by props 10 secured on the cross members 4 and their upper edge is reinforced by lists 11. Within the casing or rigid chamber thus formed are secured the benches 12 and, in the spaces between the latter, tubes 13 are so secured to the opposite walls 9 as to brace the latter and to form commodious rests for the seated ship-wrecked passengers. In the floor 8 are provided several openings 14 provided with valve-seats 15 and with valves 16 freely suspended underneath the latter. Each valve is provided with a great block of cork 17 which insures the uplifting of the valve by the water which tends to rise through the opening 14 closed by the valve. Around the casing 9 is se-

cured a metal cable 18, to which is attached a strip of cloth 20 by means of cords 19. When the apparatus is on board, such strip is rolled on itself. At the proper time, such strip is unwound and is lifted up by means of cords 21, which are attached to a cable 22 secured to the upper part of the strip, and which pass over the forked end of the telescopic standards 28, 24 secured at distances apart to the sides of the casing 9. The strip 20 then forms a protecting curtain which rises for instance to a man's height. The outer tube 24 of each of such standards is guided in fixed collars 25, 26 and is secured in the lower collar by means of a pin 27. The said standards can be lowered when the apparatus is on board in entering the tube 23 into the tube 24 and in sliding the latter through the collars 25, 26; their lower part then comes and takes a place in the guides 31. At 28 are placed the supports for the oars which serve for the propulsion and at 29 is placed a support for the steering oar. Collars 30 for the fastening of a mast will also be placed at the front. In case the apparatus should float upside down, the ship-wrecked passengers could sit down on the cylinders, their feet being placed in the intervals between the latter and their hands being placed on the tubes 7. Of course one may vary the number of tubes, seats and the like as well as the details of the embodiment shown.

In Fig. 4, 1 also designates the main cylinders, united by cross bars 3, 4, the upper cross bars 4 bearing on such cylinders through the medium of pieces of wood 5, and the whole is pressed by flat iron collars 6 to which are riveted the cross bars 3. In this embodiment, the cylinders 32 are arranged above the floor on the sides of the raft-boat; their diameter is smaller than that of the cylinders 1; they are kept between the collars 33 and the brackets 34, the latter being associated with the blocks 5 on the lowermost cylinders. The said cylinders 32 serve as stabilizers. The upper part of the apparatus is quite level, which allows of placing several similar apparatus one above another.

In the modification shown in Fig. 5, the stabilization is increased, not by the cylinders, but by blocks of cork $32^a$ which are secured by means of bolts 35 under the edges of the sheet metal floor 4, and also by wood panels $32^b$ secured above the same floor 4 by means of the same bolts 35. Such panels also serve to facilitate the embarkation.

Claims:

1. A life raft-boat comprising a casing open at the top, hollow cylinders under such casing, cross bars placed above and below such cylinders, blocks of wood between the cylinders and the upper cross bars, collars which pass underneath the cylinders and the ends of which are secured to the bottom of the casing, the said lower cross bars being secured to the bottom of the said collars, and longitudinal tubes secured to the said lower cross bars in the intervals between the said collars, the bottom of the casing being secured on the upper cross bars.

2. A life raft-boat comprising a casing open at the top, transverse benches in such casing, tubes placed between the benches at a supporting height for the passengers seated, the ends of such tubes being secured to the lateral walls of the casing, hollow cylinders secured underneath the casing, parallel to one another, and tubes of support between such cylinders, spaces large enough to house the legs of the passengers being provided between the said cylinders.

3. A life raft-boat comprising a casing open at the top, hollow cylinders underneath such casing, telescopic standards secured to the walls of the casing, a cable secured around the casing, a curtain attached to the said cable, and cords passing over the top of the said standards and attached to the top of the said curtain.

4. A life raft-boat comprising a casing the top of which is open and the bottom of which extends laterally and outwardly, hollow cylinders underneath the bottom of the casing, and floating bodies attached to the edges of the bottom of the casing, such bodies comprising, at each side, blocks of cork secured underneath the said bottom and wood panels secured above the floor.

5. In a life raft-boat a casing, collars secured to the walls of such casing, vertical tubes guided in such collars, pins for securing the said tubes in the said collars, rods in such tubes, and guides secured at the bottom of the walls of the casing and adapted to hold the said tubes when they are lowered.

In testimony, that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

LUCIEN VIALET-CHABRAND.

Witnesses:
CHAS. P. PRESSLY,
MAURICE ROUX.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."