

(No Model.)

G. F. KLAPPKY.
LIFE BOAT.

No. 506,048.

Patented Oct. 3, 1893.

Fig. 1.

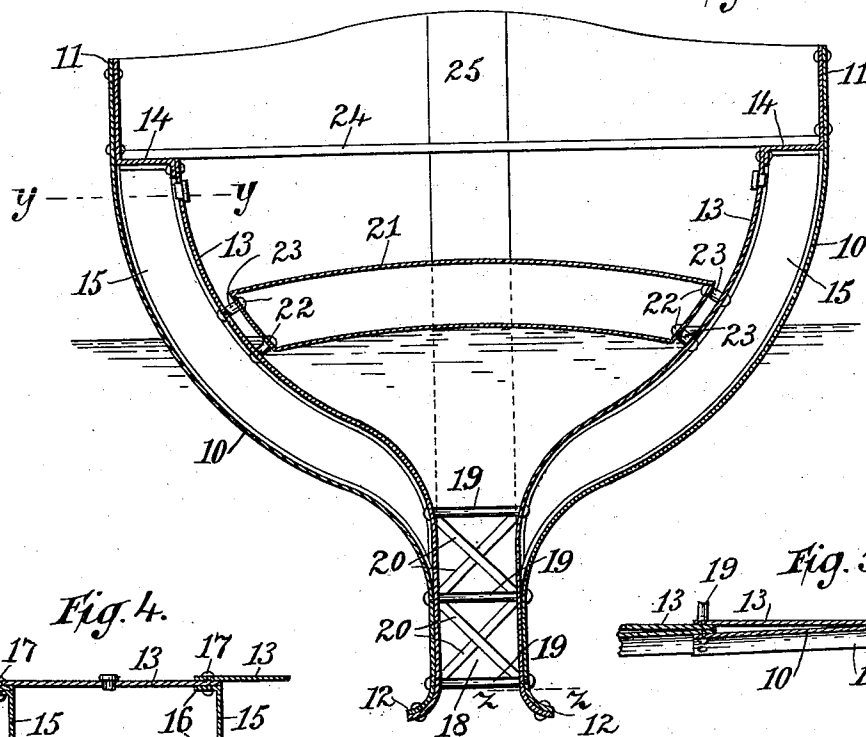


Fig. 4.

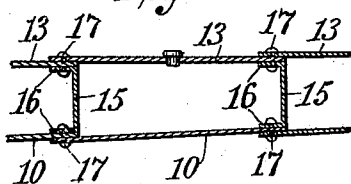


Fig. 5.

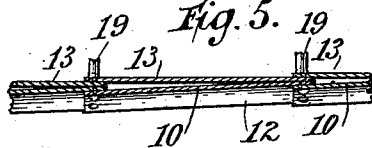


Fig. 2.

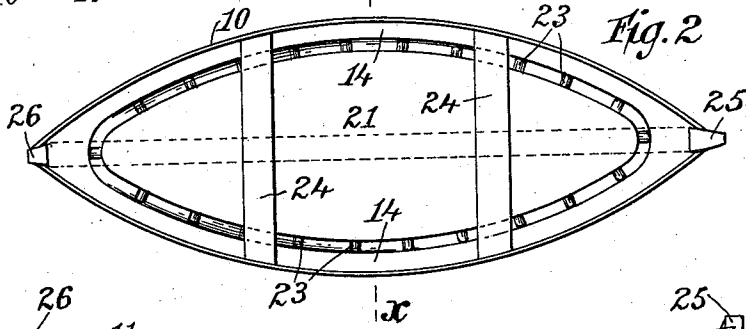
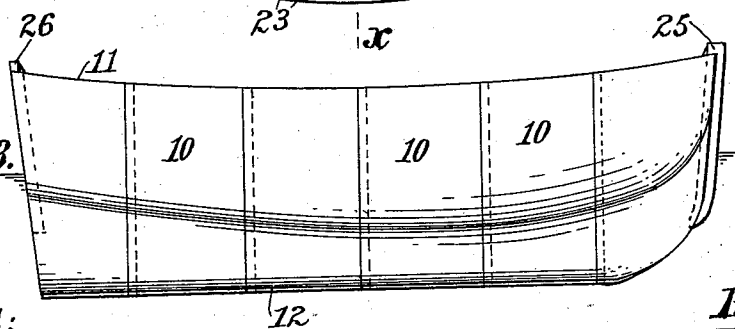


Fig. 3.



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UNITED STATES PATENT OFFICE.

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LIFE-BOAT.

SPECIFICATION forming part of Letters Patent No. 506,048, dated October 3, 1893.

Application filed April 20, 1893. Serial No. 471,146. (No model.)

To all whom it may concern:

Be it known that I, GOTTFRIED F. KLAFFKY, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Life-Boats; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the figures of reference marked thereon, making a part of this specification.

My invention relates to ships and boats and its object is to improve and simplify the construction of life-boats or other small crafts which may be exposed to stormy seas. In all such vessels, it is desirable that the water which may have been accidentally shipped, shall find ready means of escape from the interior and for this purpose the means which have been heretofore provided do not fulfill their object in as successful a manner as may be wished. For example, it has been proposed to construct the keel of the boat with downwardly projecting channels which end in openings at right angles; or to leave spaces between water-tight compartments which form the sides of such a boat. At best, such devices are only operative in deep water and where the bottom of the boat does not come in contact with sand or mud. When, however, the boat has to be launched from a mud or sand beach the said channels become clogged and if they are not cleared, when a sea is shipped the water will not pass out of the boat. My improvements obviate this difficulty by providing a large and easily cleared passage for the water which may have entered the boat, and at the same time by means of my specific construction I am enabled to secure strength and rigidity. My invention also comprises means for preventing to a greater extent the liability of capsizing in a heavy sea, and to this end I form the keel with a downwardly and outwardly projecting flare, which will permit the boat to take a greater hold on the water. Furthermore, I make use of sheet metal throughout in the construction of my boat and strengthen it by means of flanged ribs which are wide at the top and narrow at the bottom and which, together with the skin and sheathing, form air chambers larger at the top than at the bottom.

In the accompanying drawings: Figure 1 is a transverse section on the line $x-x$ of Fig. 2, but on a larger scale, of a life-boat built according to my improvement. Fig. 2 is a plan view of the boat. Fig. 3 is a side elevation. Fig. 4 is a partial section on the line $y-y$ of Fig. 1. Fig. 5 is a partial section on the line $z-z$ of Fig. 1.

The two sides of the boat consist of the outer skin 10 formed of narrow strips of sheet metal, which extend transversely of the length of the boat from the gunwale 11 to the keel 12, where they flare outwardly on each side as shown in Fig. 1. In the same manner, the inner sheathing of the boat is also formed of narrow strips 13 of sheet metal, which start from the angle pieces 14 near the gunwale 11 and join the outer skin 10 at the keel, forming compartments to contain air which are large at the top and narrow at the bottom.

For the purpose of giving the necessary strength to the structure, I make use of flanged ribs 15 which conform to the shape of the boat and through whose flanges 16 pass the bolts 17 which connect together the adjacent strips 10 of the outer skin and also the inner sheathing strips 13, besides forming in themselves the sides of water-tight compartments or air chambers. Each skin and sheathing strip overlaps the edge of the next one aft and the bolts 17 are passed through the overlapping edges and the flanges of the rib.

By consulting Fig. 1, it will be readily understood that each rib is wide at the top and narrows to a point at the lower end or near the keel; this shape causes the outerskin 10 and the inner sheathing 13 to form air chambers which are wider at the top, and as the buoyancy of a vessel constructed of metal depends on the air which takes the place of the water displaced, it is evident that the boat when capsized will right itself on account of the fact that the larger quantity of air contained in the portions of the air compartments which are nearest to the gunwale, will tend to rise to the surface of the water and necessarily carries the boat with it to an upright position.

The keel of the boat is formed by bolting directly together the lower ends of the skin strips 10 to the ends of the inner sheathing

strips 13 on each side, leaving a central passage 18 which gives free opportunity to the water to flow in or out of the boat. To keep apart the two sides, I use bolts 19 which are shouldered at each end for the purpose intended, and are riveted on the outside of the sides of the keel. For greater strength I add diagonal braces 20. The ends of the outer skin strips and inner sheathing strips form a double thickness of metal and together make a more substantial keel than if the inner sheathing was carried down only part way. The flared ends 12 which form the lower part of the keel, will hold the water as the boat is rocked from side to side and give it greater stability while avoiding to a certain extent its liability to capsize in a sea. The floor 21 is also an air-tight compartment of sheet-metal, and extends from stem to stern of the boat with, however, a space between its sides and the inner sheathing, so that if the boat should ship water, the latter will not remain on the floor 21, but flow down underneath.

By Fig. 1 it will be seen that under normal conditions the water line is just under the floor, which will prevent the water remaining on top of the floor.

To connect the floor 21 to the sides, I make use of bolts 22, and spacing sleeves 23, but any other suitable means may be employed to secure the floor in place with spaces between its edges and the sides of the boat.

The seats or thwarts 24 rest upon the angle pieces 14 and need no further description.

At the stem and stern of the boat the skin and sheathing are given the proper shape and are bolted together to solid stem and stern posts 25, 26.

I claim as my invention—

1. A boat having its sides formed with an outer skin and an inner sheathing separated by an air space, the skin and sheathing on each side being secured together at the bottom to form one side of the keel, substantially as shown and described.

2. A boat having its sides formed with an outer skin and an inner sheathing separated by an air space, the skin and sheathing on

each side being secured together at the bottom to form one side of the keel and turned outwardly at the lower edge of the keel, substantially as shown and described.

3. A boat having its sides formed with an outer skin and an inner sheathing separated by an air space, and having flanged metal ribs to which the skin and sheathing are secured, the skin and sheathing being secured together at the bottom to form one side of the keel, substantially as shown and described.

4. In a life-boat, the combination of the two sides, each composed of an outer skin and an inner sheathing separated by an air space and secured together at the bottom to form one side of the keel, solid stem and stern posts to which said sides are secured, and means to secure said sides together at the bottom with a space between them, substantially as shown and described.

5. In a life-boat, the combination of the two sides, each composed of an outer skin and an inner sheathing separated by an air space and secured together at the bottom to form one side of the keel, means to secure said sides together at the bottom with a space between them, a hollow floor forming in itself an air-tight compartment, and means to secure said floor within the boat with spaces between its edges and the sides of the boat, substantially as shown and described.

6. A boat having two hollow sides secured together, each side being composed of an outer skin made up of transverse strips, an inner sheathing also made up of transverse strips, an angle piece to which both skin and sheathing are secured at the top, the skin and sheathing being secured together at the bottom, and flanged ribs to which the edges of adjacent strips of both skin and sheathing are secured, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GOTTFRIED F. KLAFFKY.

Witnesses:

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EDWARD F. OTTO.