April 17, 1945. E. M. BRANDSTEN 2,373,994

LIFE PRESERVER

Filed July 20, 1942

Fig. 2

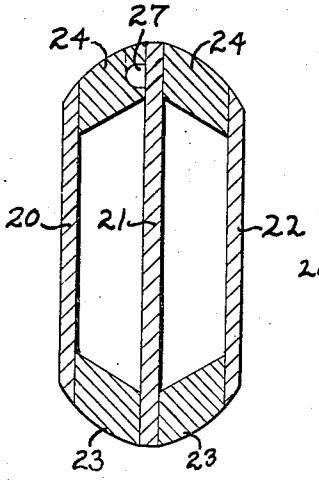


Fig. 3

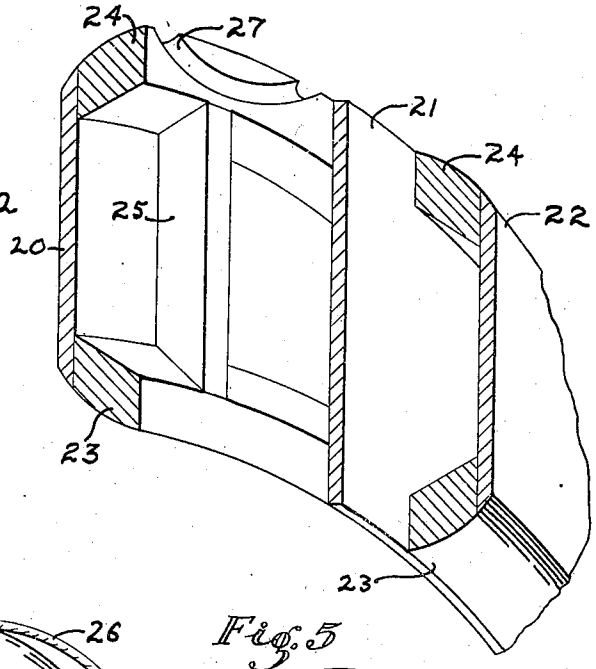


Fig. 4

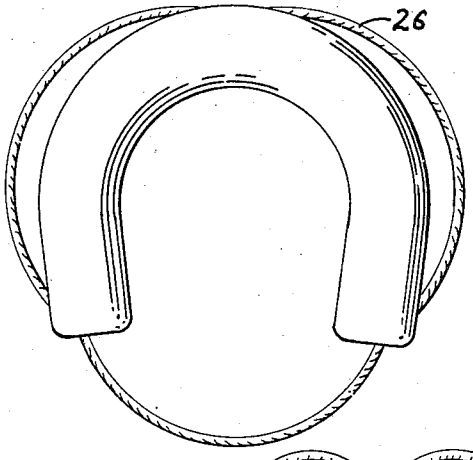


Fig. 5

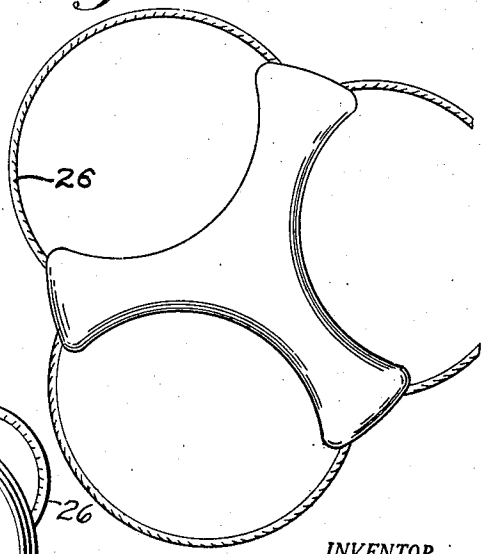
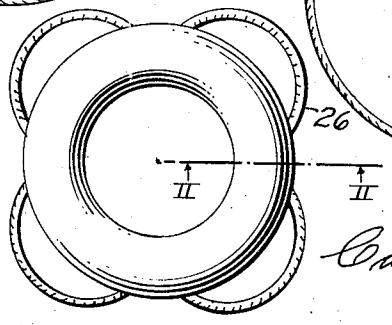


Fig. 1



INVENTOR.
ERNST M. BRANDSTEN
BY
Eastberg & Roemer
ATTORNEYS.

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LIFE PRESERVER

Ernst M. Brandsten, Woodside, Calif.

Application July 20, 1942, Serial No. 451,595

1 Claim. (Cl. 9—17)

This invention relates to life preservers.

The buoyant substance of most conventional life preservers is cork, kapoc or other fibrous material, and it is common practice to incase these substances in canvas or similar textile material in order to retain it in whatever convenient shape may be desired. All of these substances when once wet retain moisture and even when kept dry, the canvas casings deteriorate with age and are likely to tear apart in use unless they are inspected and replaced at frequent intervals. There are many other disadvantages inherent in the use of these materials, and not only is their initial cost high, but the necessity of frequent repair and replacement makes them costly to maintain.

It is the object of the present invention to provide a life preserver or similar buoyant object capable of being manufactured of wood or plastic moldable material that will be relatively indestructible, will not readily deteriorate, and will have buoyancy comparable to that of cork.

It is a further object of the invention to provide a life preserver of wood or other similarly durable material constructed to receive a rope or strips of webbing or the like without the use of metal or other fastening means to secure the rope or webbing in place.

Further objects and advantages of the invention are made apparent in the following specification wherein reference is made to the accompanying drawing illustrating typical forms which the invention may assume.

In the drawing:

Fig. 1 is a plan view of a life preserver of the ring type constructed in accordance with this invention;

Fig. 2 is a sectional view taken on the line II—II of Fig. 1;

Fig. 3 is a fragmentary perspective view with parts in section illustrating details of construction of the life preserver shown in Figs. 1 and 2;

Fig. 4 is a plan view of a modified form of the life preserver shown in Fig. 1; and

Fig. 5 is a plan view of a further modification of the invention.

The principles of the present invention are adaptable to life preservers of various shapes, for example, the common ring type of life preserver illustrated in Fig. 1 which may be built up of wood or other similar material in the manner shown in Figs. 2 and 3. In these figures the buoyant ring is shown as comprised of three flat annular members **20**, **21** and **22** which are separated by marginal inner rings **23** and outer rings **24**. The rings **23** and **24** may be formed of solid wood or plastic material, and in cases where they are formed of wood, it may be desirable that they be built up of laminations glued together for the purpose of strength and economy. Likewise the annular walls **20**, **21** and **22** are preferably formed of thin three-ply stock to provide strength and avoid cracking. The marginal rings **23** and **24** when glued together with the members **20**, **21** and **22**, provide two annular chambers which are sealed against entrance of water, but to provide further strength and insurance against water entering any large portion of the preserver, a plurality of partitions such as indicated at **25** in Fig. 3 are provided to divide these annular channels into many small cells. Due to the construction shown, a very light but extremely rigid structure is provided and this structure is, in fact, so rigid that desirable variations may be made from the conventional shapes customarily used for life preservers. For example, the horseshoe shape illustrated in Fig. 4 is made practical by this construction whereas it would be impossible to produce a rigid structure of this shape in cork and canvas. Such a shape obviously enables a person in the water to enter the central part of the preserver more easily and safely than is possible with the ring-like type shown in Fig. 1. The shape of preserver illustrated in Fig. 5 which is also made practical by the type of construction taught by the present invention is particularly desirable in case of shipwrecks or other disasters where large numbers of people are simultaneously thrown into the water as this kind of preserver particularly if constructed on a slightly larger scale is capable of accommodating three persons in safe and comfortable positions, whereas the ordinary preserver has a capacity of but one. In each of Figs. 1, 4 and 5 the handling of the preserver is facilitated by ropes shown at **26** which in conventional life preservers is sewed or otherwise secured to the canvas covering. To firmly fasten this rope to the preservers of the present invention, one of the wood rings **24**, as shown in Figs. 2 and 3, may be grooved as at **27** before the parts are assembled and glued together so that an opening is provided through which the rope may be threaded without danger of admitting water to the interior of the air cells.

With the structures shown it has been determined that by using wood or other material of comparable weight and strength an extremely durable life preserver may be made which has a buoyance equivalent to that recorded, but which is not nearly as susceptible to deterioration as

cork and canvas, and is capable of sustaining more of the kind of abuse to which life preservers are often subjected.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

A life preserver comprising a plurality of flat members cut to a desired contour, marginal members secured between said flat members to form sealed cells and transversely extending partitions in said cells to divide them into separate water tight compartments, one of said marginal members being provided with grooves which cooperate with one of the flat members to form passages through which a flexible cord-like member may be threaded.

ERNST M. BRANDSTEN.