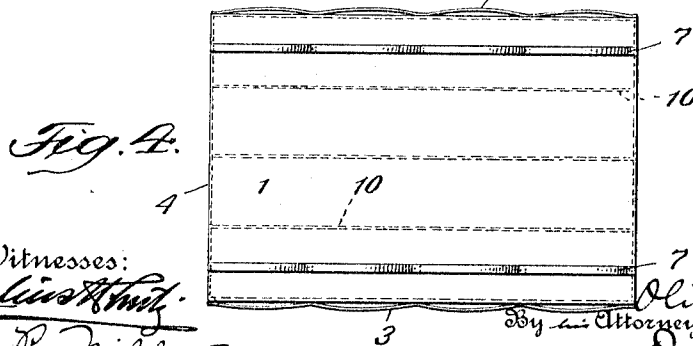
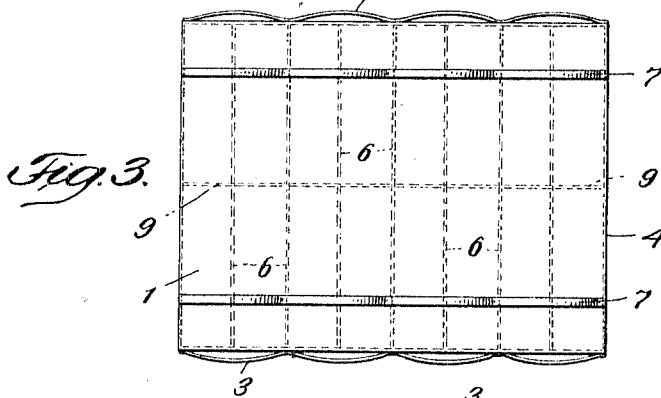
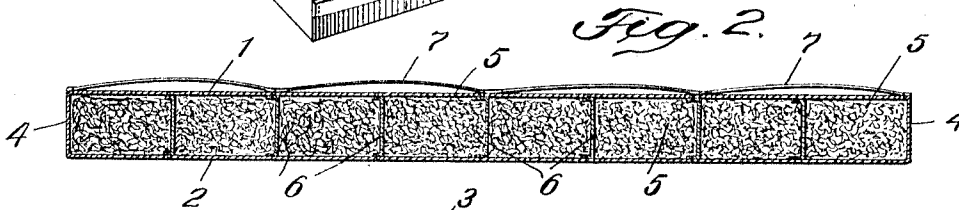
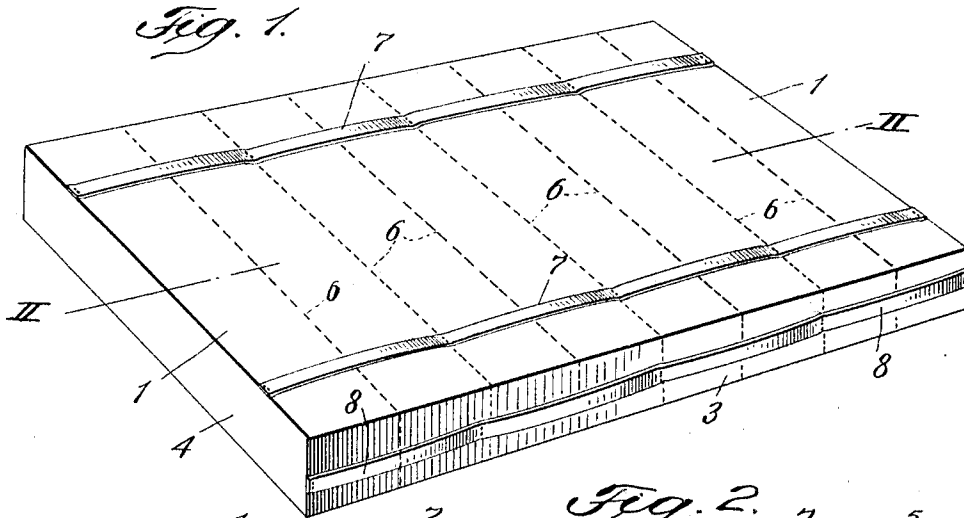


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LIFE RAFT.
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1,107,652.

Patented Aug. 18, 1914.



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UNITED STATES PATENT OFFICE.

OLIVER M. BURTON, OF CHICAGO, ILLINOIS.

LIFE-RAFT.

1,107,652.

Specification of Letters Patent.

Patented Aug. 18, 1914.

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To all whom it may concern:

Be it known that I, OLIVER M. BURTON, a citizen of the United States, and resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Life-Rafts, of which the following is a specification.

One of the important objects of this invention is to provide a life raft made up of a fabric casing having a continuous top and a continuous bottom, the interior of the casing being divided into a large number of small independent compartments or cells to contain the buoyant material. The purpose of this construction is to divide the buoyant material into small independent sections or charges so that said material may be uniformly distributed throughout the raft to secure a uniform buoyancy; and also to minimize the injury to the raft by a tear or puncture, or a rupture of the outer casing at any one point. It is manifest that these rafts are used in times of stress and excitement and the outer casing thereof is likely to be torn or damaged, and for that reason it is desirable that the buoyant material within the casing be confined in small pockets or cells. By this construction only the material in the injured cell can be lost or displaced and washed away, the remainder of the raft remaining in its original condition. It is obvious that the buoyancy of the raft will not be seriously affected unless a considerable number of the cells or compartments are broken and the material lost therefrom.

Another object of the invention is to provide a casing with a considerable number of vertically disposed strengthening webs, which webs secure the top and bottom of the casing together, and also brace the sides of the casing, the ends of the division webs being secured to the sides of the casing. These webs also serve as means to which the holding straps may be securely attached, all of which will be fully set forth hereinafter.

In the drawings, Figure 1 is a perspective view of the life raft; Fig. 2 a longitudinal vertical sectional view thereof; Fig. 3 a plan view of a raft showing a slightly different arrangement of interior cells or pockets; and Fig. 4 a similar view showing the cells or pockets running longitudinally of the raft.

Referring to the various parts by numerals, 1 designates the top of the raft and

2 the bottom thereof; 3 the longitudinal sides and 4 the ends thereof. The raft may be of any desired dimensions and of any desired thickness to adapt it for the place in which it is to be stored or used. The casing is preferably formed of some stout fabric which may be water-proof and fire-proof if desired.

The interior of the casing, as shown in Figs. 1 and 2, is divided into a multiplicity of narrow transverse compartments or cells 5. These compartments are formed by means of the transverse division webs 6, said webs being stitched at their upper and lower edges to the top and bottom respectively of the casing, shown clearly in Fig. 2. These division webs are also stitched to the sides 3 of the raft. It is manifest that each compartment 5 is completely separated from the adjoining compartment or compartments and is practically entirely independent of said adjoining compartments. The division webs 6 very greatly strengthen the raft and prevent any material independent lateral or outward movements of any side or portion of the raft.

The compartments or cells are preferably of uniform size and are filled with a uniform quantity of buoyant material so that the raft will be of uniform buoyancy throughout its entire area. The material I prefer to use is silk floss or kapok. This material is very light and buoyant and is affected to a very slight extent by immersion in water. The material is packed in the compartments to any degree of density, but it is usually firm enough to hold the raft of the desired thickness, notwithstanding any hard usage to which it may be subjected.

To enable persons to readily grasp the raft, holding straps 7 are secured along the top thereof and near its longitudinal edges. Holding straps 8 are also secured to the sides of the raft. These straps are anchored by stitching or otherwise, at suitable intervals, to the edges of the division webs whereby said straps may be securely anchored in position. The division webs forming the compartments are also desirable for the reason that if the holding straps are torn from the casing, and the casing thereby broken or ruptured only the material in the broken or ruptured compartment or pocket can escape.

In Fig. 3 the transverse compartments are

shown as divided by a division wall or web 9 which extends longitudinally through the raft at the center thereof.

In Fig. 4 the compartments are shown as formed by means of longitudinally arranged webs 10. It is manifest that these compartments may be made of any desired form and in any suitable number. They should, however, be made of such a size that if one or two be broken and their contents lost, the sustaining power of the raft will not be materially reduced.

What I claim is:

1. A life raft consisting of a flexible casing having a continuous top and a continuous bottom, and side and end walls, division webs secured to the top and bottom of said casing and to the vertical walls thereof and forming a plurality of independent compartments within the casing, said compartments being of uniform size and extending throughout the casing, and a filling of buoyant material in each of said compartments, said filling being of substantially uniform density in the compartments, whereby the raft will be of uniform buoyancy and density throughout.

2. A life raft consisting of a flexible casing having a continuous top and a continu-

ous bottom, and side and end walls, division webs secured to the top and bottom of said casing and to the vertical walls thereof and forming a plurality of independent compartments within the casing, a filling of buoyant material in each of said compartments, said filling being of substantially uniform density in the compartments, holding straps and means securing said holding straps to the casing, said means connecting the holding straps to the division webs.

3. A life raft comprising a flexible casing having a continuous top and a continuous bottom and side and end walls and a plurality of continuous division webs extending throughout said casing and secured to the bottom and top of the casing and forming a multiplicity of small independent compartments of uniform size and a filling of light soft buoyant material packed in each compartment to a uniform density, whereby said raft will be of uniform density and uniform buoyancy throughout.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

OLIVER M. BURTON.

Witnesses:

CHAS. J. MAIN,
TONY O. SPACKEY.