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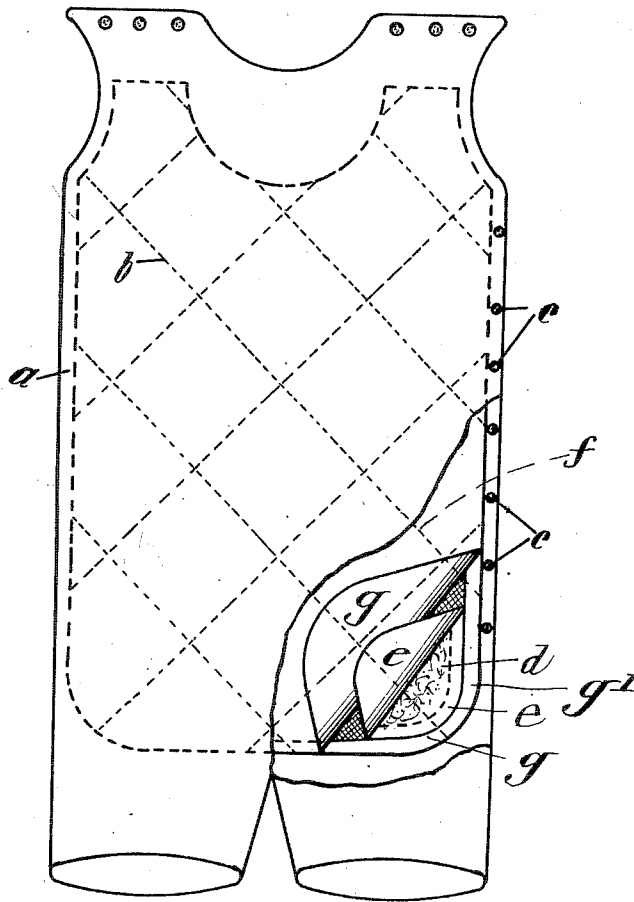
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BUOYANT WEARING APPAREL, CLOTH, AND OTHER ARTICLE.

APPLICATION FILED MAY 25, 1911.

1,044,652.

Patented Nov. 19, 1912.



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UNITED STATES PATENT OFFICE.

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1,044,652.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed May 25, 1911. Serial No. 429,504.

To all whom it may concern:

Be it known that I, KARL HARTWIG, merchant, a subject of the Emperor of Germany, and a resident of Berlin, Germany, have invented certain Improvements in Buoyant Wearing-Apparel, Cloth, and other Articles, of which the following is a specification.

The present invention relates to an arrangement for making wearing apparel, cloth and other articles buoyant and consists in the provision between two sheets of any desired flexible material of a layer of kapok or the like, and the open edges of said sheets being sewed, glued or closed in any other suitable manner. The material thus formed may be used, plain or quilted, either as lining for various kinds of wearing apparel, coverlets, foot-clothes or the like, or as the main constituent thereof so that these parts will have a great buoyancy. A costume made up in this manner possesses such buoyancy in water that a person attired in the same is safe from sinking.

The invention is illustrated in the accompanying drawing in connection with a bathing costume.

The costume *a* has at one side a slit for the introduction of the buoyant insertion *b*, shown dotted in the figure. Press-buttons *c* or the like are provided for closing the slit.

The kapok or like material is indicated at *d* and is inclosed between suitable fabrics *e*. I prefer to quilt the kapok and the sheets *e*, as indicated at *f*, to prevent displacement and bulging of the kapok, incident to its use in practice. The quilted sheets, with the kapok inclosed therebetween, are then disposed between sheets *g* of waterproof fabric or like waterproof material and the sheets *g* are glued or suitably secured along the margins *g'*, in a manner not merely to shed water but to positively exclude water and maintain the kapok in a dry condition.

Kapok, and likewise other inherently buoyant materials, may possibly retain their buoyant properties to a greater or less extent even after being immersed in water, or dampened by being thoroughly moistened. However it is well known that repeated soaking in water of such buoyant material, followed by subsequent drying of the same, will gradually and surely impair and decrease its initial buoyant efficiency. Especially is this so with a material such as kapok,

which is of a loose fibrous texture and fluffy character. When kapok is dampened or actually immersed in water, its fluffy fibers mat and become heavy by reason of the fact that when soaked or moistened the material retains a certain amount of water. Furthermore it requires a comparatively long time to thoroughly dry kapok and where bathing suits are in continuous service, as at bathing beaches, a great deal of time is required to dry the pads and a correspondingly larger equipment is required. Now by tightly inclosing the initially buoyant material in a water-tight inclosure, the objectionable drying operation is entirely avoided, the material is never soaked and never becomes heavy to handicap the user by reason of great weight, and the material is always maintained in its original fluffy state thereby avoiding all objections on the ground of hygiene.

It is preferable not to stuff or pack the material into the inclosure tightly, to completely fill it, in the sense that a mattress is stuffed or filled, because such a form of pad bulges and would project too far from the body of the user thereby offering too much resistance to his progress in the water. On the contrary, it has been found in practice, that by maintaining the material in a water-tight inclosure, a relatively thin pad of kapok can be used and it may be loosely disposed in a relatively large envelop or water-tight inclosure so that the material only partially fills the same thereby forming a flexible pad which is relatively reduced in volume and which readily shapes itself to conform to the body of the user and lies snugly thereagainst.

The insertion *b* is capable of carrying even two persons and is therefore most appropriate as a swimming appliance.

The buoyant material may be applied to all kinds of wearing apparel, such as blouses, jackets, and the like, or any kind of cloth. It may be woven entirely or partly of kapok or the like.

I claim:

1. An article of wearing apparel provided with a closable pocket, and a flat rectangular buoyant member adapted for insertion into said pocket and comprising a mass of inherently buoyant material, suitable sheets of fabric inclosing said buoyant material and being quilted together therewith, and sheets

of inherently water tight material inclosing the quilted fabric sheets and buoyant material, the margins of the water tight material being connected water tight, substantially as and for the purposes set forth.

2. An article of wearing apparel provided with pad attaching means, in combination with a buoyant pad adapted to be secured by said means and comprising a mass of inherently buoyant material of a pliable

and loose texture or character and made to form a pad like member, means attached to said member to prevent bulging and displacement of the mass, and a flexible water tight covering inclosing said means and member, substantially as described.

KARL HARTWIG.

Witnesses:

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