March 15, 1955 G. MAYER 2,703,891

LIFE BELT

Filed Oct. 30, 1953

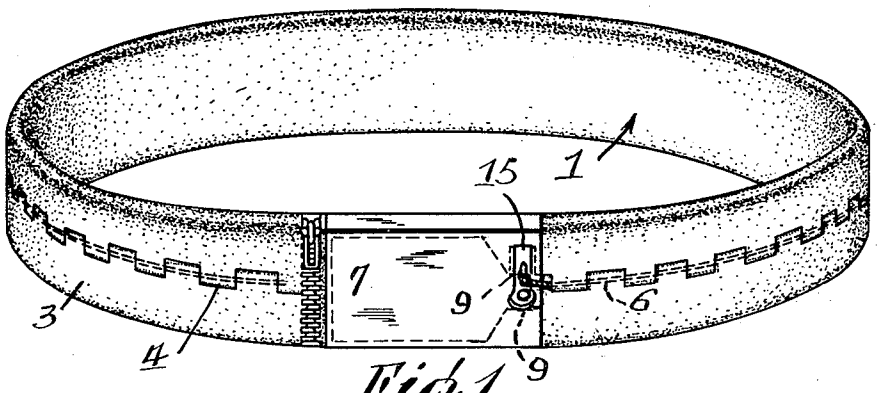

Fig. 1

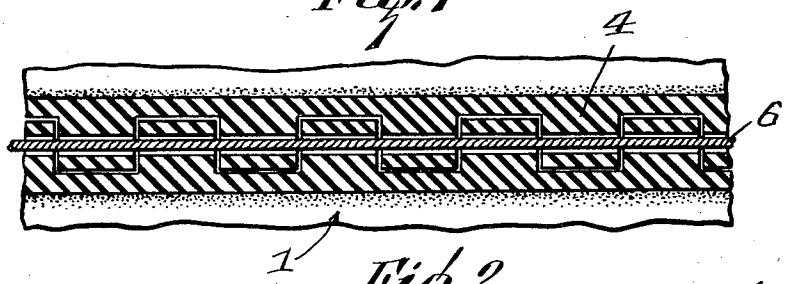

Fig. 2

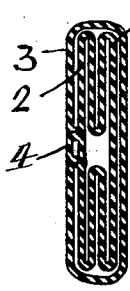

Fig. 3

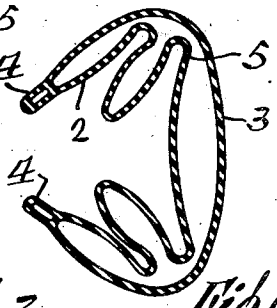

Fig. 4

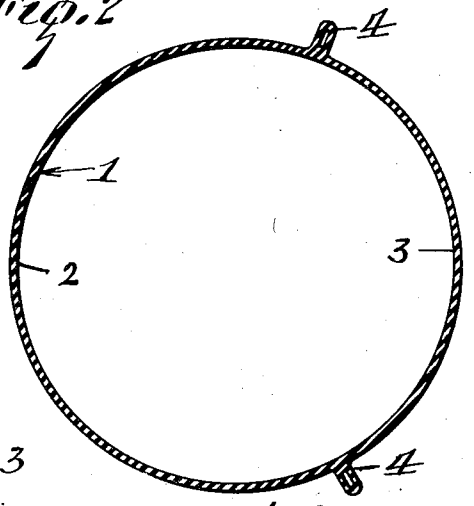

Fig. 6

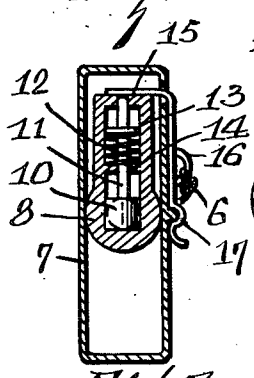

Fig. 7

Fig. 5

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United States Patent Office 2,703,891 Patented Mar. 15, 1955

2,703,891

LIFE BELT

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Application October 30, 1953, Serial No. 389,427

2 Claims. (Cl. 9—17)

The present invention pertains to a novel life belt designed to prevent drowning.

Such belts are usually worn in a deflated condition and include a receptacle of compressed gas which is expanded into the belt by operation of a valve, when buoyancy is needed.

One of the objects of the invention is to provide such a belt that unfolds rather than stretches during inflation. In this connection, another object is to provide for neat folding and for maintaining the belt in the folded condition prior to inflation.

Still another object is to provide means whereby, on opening the valve to permit inflation, the means maintaining the folded condition is released, thereby permitting full inflation.

In the accomplishment of these objects, the body of the belt is essentially an elongated two ply member continuous in cross section. The ends of the body are joined to a buckle in the nature of a receptacle for compressed gas, with a normally closed valve controlling communication with the interior of the belt body.

One of the plies is considerably wider than the other, so that it may be folded and enclosed in the other ply. At the seams or joints of the plies are formed spaced loops, the loops of each series being staggered with relation to those of the other series for meshing. A cord passes through the meshed loops to maintain the folded condition.

A latch mechanism maintains the valve closed against a spring. One end of the cord is interlocked with this mechanism. When separated, the cord releases the latch, permitting the valve to open and inflate the belt body for emergency use.

The invention is fully disclosed by way of example in the following description and in the accompanying drawings in which:

Figure 1 is a perspective view of the belt before inflation;

Figure 2 is a longitudinal section thereof;

Figure 3 is a cross section;

Figures 4 and 5 are similar sections in progressive stages inflation;

Figure 6 is a similar section showing the final inflation: and

Figure 7 is a cross section of the buckle and valve.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

The belt **1** may be regarded as a continuous two ply member with a ply **2** considerably longer than the ply **3**. At the edges of the plies, where they are joined to each other, are formed series of integral loops **4**. The loops of each series are staggered in relation to those of the other series, so that they mesh when brought together, as will presently be shown.

The longer ply **2** is formed with several lengthwise folds **5**, as shown in Figure 1. When the device is worn as an uninflated belt, the ply **2** is folded into several layers, packed together and enclosed by the ply **3** when the series of loops **4** are meshed with each other, as in Figures 2 and 3. A cord **6** is passed through the alined loops to maintain the described condition.

Between the ends of the belt is inserted a buckle in the form of a receptacle **7** for compressed gas. In the container is a valve body **8** (Figure 7) having a lateral connection **9** to the adjacent end of the folded belt. A valve plug **10** normally closes the connection and has an upwardly extending stem **11**. A spring **12** on the stem bears upwardly on a collar **13** fixed on stem **10** and downwardly on a seat **14** of the body **8**.

A latch **15** bears on the upper end of the stem **11** to hold it down, against the action of the spring. The latch includes a snap **17** for fixing it to receptacle **7** and also a hasp **16** formed on the latch, to which the cord **6** is tied, as shown in Figure 7. The valved end of the receptacle **7** is connected to the tubular belt body in any suitable manner. The belt is applied to the body in the usual manner by use of the slide fastener **20** at the other end of the receptacle.

When it is necessary to inflate the belt in an emergency the latch is disengaged at the snap by pulling on the cord **6**, at the same time pulling it out of the loops **4**. Stem **11** is no longer retained, and the spring unseats the plug **10** to admit compressed gas from the buckle to the belt. The cord being free, the gas pressure separates the two series of loops **4** progressively as in Figures 4 and 5 until the belt is fully blown as in Figure 6.

Although a specific embodiment of the invention has been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention as indicated by the appended claims.

What I claim is:

1. A belt comprising an elongated member having two plies joined to each other at the edges to form a continuous double thickness, one of said plies being wider than the other and foldable for enclosure in said other ply, a series of spaced loops at each of said edges, the loops at each edge being staggered in relation to these at the other edge for meshing, a cord passed through the meshed loops for maintaining the first named ply folded and enclosed in the other ply, a receptacle joined to both ends of said member, a fluid connection from said receptacle to one of said ends for passing compressed gas from said receptacle to said end, a valve in said receptacle and adapted to close said connection, a spring tending to open said valve, a releasable latch holding said valve closed, and means interlocking said cord with said latch.

2. A belt comprising an elongated member having two plies joined to each other at the edges to form a continuous double thickness, one of said plies being wider than the other and foldable for enclosure in said other ply, a series of spaced loops at each of said edges, the loops at each edge being staggered in relation to these at the other edge for meshing, a cord passed through the meshed loops for maintaining the first named ply folded and enclosed in the other ply, a receptacle joined to both ends of said member, a fluid connection from said receptacle to one of said ends for passing compressed gas from said receptacle to said end, a valve in said receptacle and adapted to close said connection, a spring tending to open said valve, a releasable latch holding said valve closed, and a hasp on said latch, a snap holding said latch to said receptacle, receiving one end of said cord in order to disengage said latch when said cord is pulled.

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