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SELF INFLATING PILLOW

Filed Aug. 18, 1930

3 Sheets-Sheet 2

*Fig. 1a*

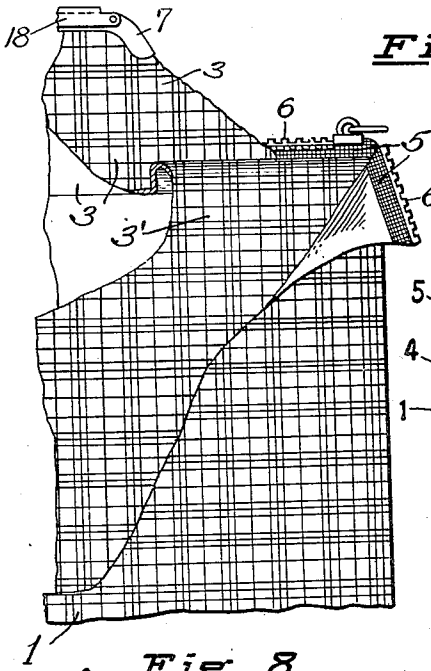


*Fig. 7.*

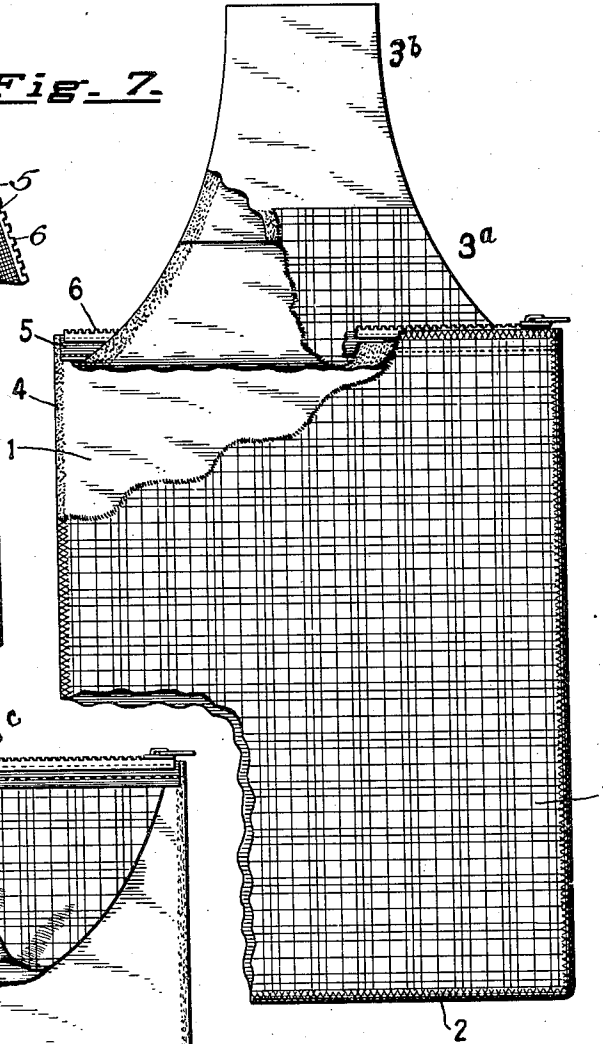
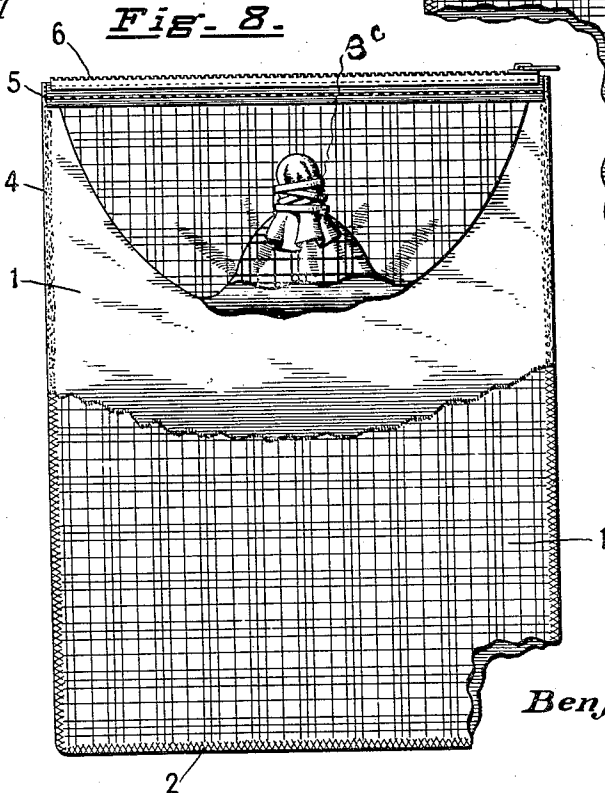


*Fig. 8.*



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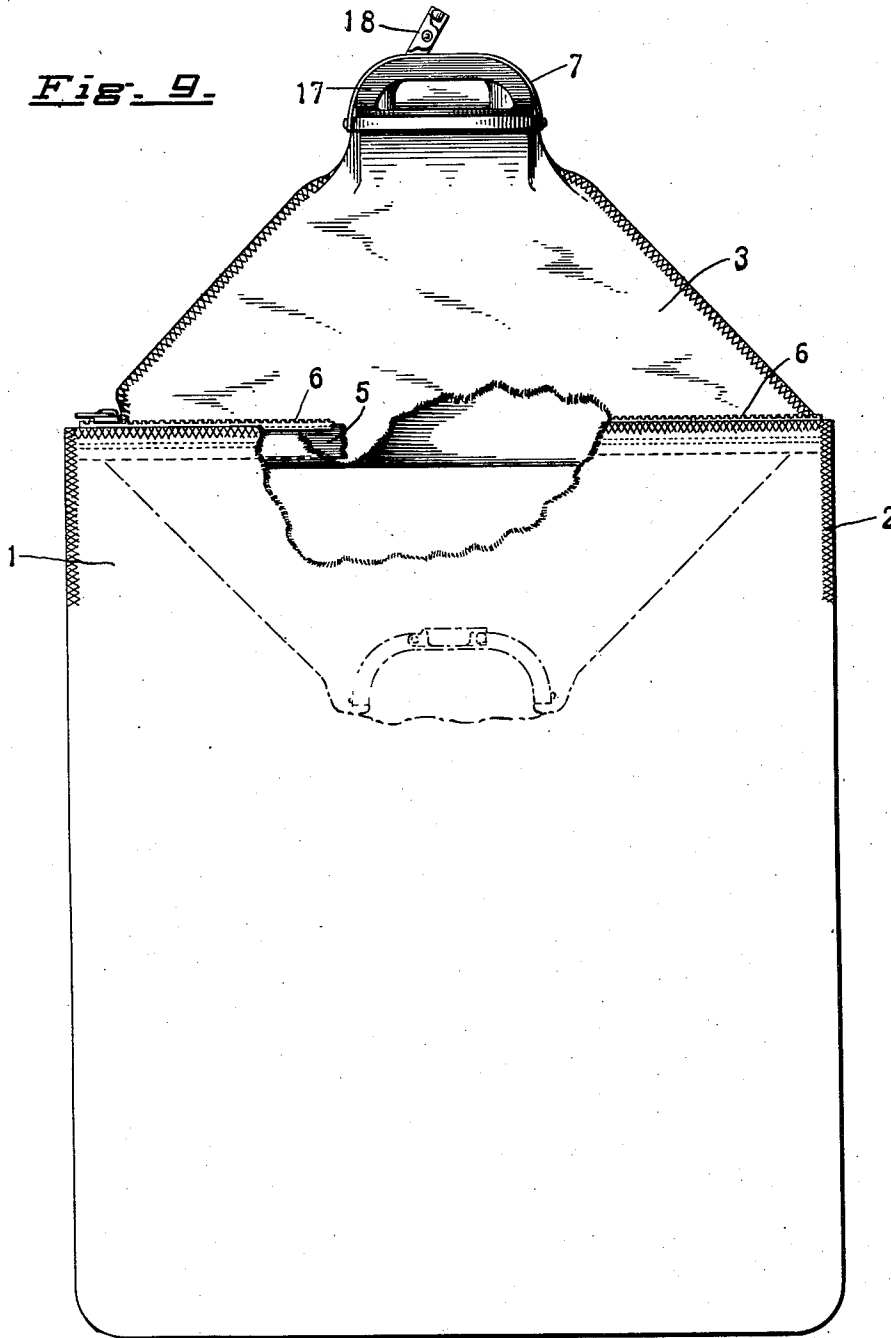
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Fig. 9.



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## UNITED STATES PATENT OFFICE

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## SELF INFLATING PILLOW

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Application August 18, 1930, Serial No. 475,878

1 Claim. (Cl. 5—337)

The invention herein disclosed, while termed a self inflating pillow, may, as indicated by the description and drawings, have a dual use. That is, it may serve purely as a pillow, or as a pillow and carrying case for such articles as may be desired.

It is intended initially as a pillow which requires no pump, blow tube or other device for inflating it. The objects of my invention are hereinafter defined and set forth in the claim. However, the general object is to overcome many difficulties which have heretofore been experienced in air pillows.

One of the objects is to provide a pillow which will have a fabricated outer surface and an interior air and waterproof surface which will preclude the possibilities of leakage when once the pillow has been closed.

A further object is to provide an air lock which will not protrude from the pillow structure but will, when the pillow is inflated, be located within said structure and out of contact with the sides of the pillow. Thus the user never comes in contact with metallic fastenings or obstructions of any character.

In carrying out the invention, a further object is developed in the "closure" for the air pocket which has special features of design and usefulness hereinafter more fully defined.

Referring to the drawings:

Figure 1 is a view in side elevation of the preferred form of invention parts broken away.

Fig. 1a is a fragmentary view of parts turned back and broken away to illustrate construction.

Figure 2 is an edge view in fragmentary form.

Figure 3 is a sectional view through the hinge and closure members.

Figure 4 is a sectional view on the line 4—4 of Figure 1.

Figure 5 is a fragmentary section on the line 5—5 of Figure 1.

Figure 6 illustrates the bag closed and inflated.

Figure 7 is a view illustrating a form of closure with the interior bag extended and without the metal closure of Figure 1.

Figure 8 is a similar view with the interior bag closed and inserted in the outer bag.

Figure 9 illustrates a full sized air cushion without the bathing suit compartment illustrated in Figure 1.

While the device herein disclosed is termed a self inflating pillow, and serves all purposes of an air pillow or cushion, it is not limited in use.

It is, in fact, so strongly constructed that it may serve as an ice bag or hot water cushion.

When combined with side pockets, as illustrated in Figure 1, it becomes at once a carrying bag either for light wraps, bathing suits, or whatnot, and still retains its functions of a comfortable pillow.

In the accompanying drawings, Figure 1 indicates a rectangular casing, 1, constituting an inflatable bag that may serve as a pillow or cushion. This is bound about three of its edges with suitable stitching, 2, or other means for making its edges air tight, its fourth edge being left open.

The material used is a fabric completely rubberized on the same material, and the edges throughout the structure are cemented and vulcanized interiorly of the bag so that there is no possibility of the bag breaking or opening at the edges.

It has been a common practice to form bags by cementing the edges, but I prefer to vulcanize the edges together to overcome the objections to the dissolution of cements.

The outer bag is formed with an inside partition, 3', arranged to constitute a pocket into which may be inserted light articles, as already described, the partition being secured air tight at its side and bottom edges to the outer bag, 1, as indicated at 4. At the open end of the bag there is secured an extension, 3, which preferably is of tapering form as represented in Figures 1, 7 and 9. The base of this extension is secured to the open end or mouth of the main bag section in any suitable air tight manner. One, and the preferred, method of making such connection is to secure one edge of the base of the extension to a tape or strip, 5, secured to one edge of the open end of the bag, 1, and the other edge of the extension to the edge of the partition, 3', as represented in Fig. 5.

The tapered bag is provided at its narrowest end with a closure, 7. This closure consists of a pair of jaw members, 8, 9, which are united with hinges, 10, 11. These hinges are quite substantial and have a lip, 12, which prevents opening the jaws beyond a definite and prescribed degree. The jaw 8, is so formed that its upper edge, 13, passes within the edge, 14, of the jaw 9. The lower meeting edges of the jaws of the closure are developed as at 15, 16, so that there is, in reality, a continuous pocket formed in the jaws of the closure to receive a resilient packing, 17.

This packing conforms to the shape of the

jaws as represented in Fig. 3 and is compressed within the bevelled lips, 15, 16, so that it is always retained in the groove of the closure frame.

There is a locking device, 18, for holding the jaws of the closure in locked position.

The material of the second or inner bag, 3, is secured to the jaw members, 8, 9, and may be cemented thereto even though they are further held in place by rivets or other securing devices, 19. In any event, the packing 17, is cemented firmly, and may even be vulcanized, in the space provided therefor in the jaws.

There is a great advantage in providing the jaws with the lips, 15, 16, and the hinges, 10, 11, which permit a parallel engagement of the resilient packing, 17.

An even pressure is placed upon this packing by the construction described, so that it will be moisture and air tight both across the meeting faces of the packing and with respect to the channels or pockets of the jaws within which it is arranged.

The packing, 17, is of a very resilient, and at the same time, compressible material, and when once the jaws have been brought together and locked by the locking device, 18, they are put under such pressure that they completely fill the chambers of the jaws and thus provide an hermetic seal for the closure.

The inner bag, 3, serves as a means for enlarging the volume of air which may be taken into the structure when the bag is open, and when it is closed it traps this large volume of air.

This bag is then forced downward into the outer bag and compresses the large volume of air into a comparatively small space.

When the flexible edge-closer is drawn to close the outer bag, the entrapped air is sufficient to give the desired degree of inflation to the bag. The operation will be quite apparent.

The inner extensible bag is let down into the outer bag with its closure open. The outer bag is then stretched transversely to entrap as large a volume of air within it as possible.

By then raising the inner bag to its fullest extent, while the closure is open, a further volume of air is caught, and by then locking the closure and forcing the extended bag downward, its entrapped air, when compressed, is sufficient to fully inflate the pillow. The open end of the outer bag, 1, is provided with a closure that serves the double purpose of closing the pocket for wraps or the like, and also closing in the extension, 3, after it has been telescoped into the main bag. For this purpose I prefer to use a flexible device of the sliding clasp type such as indicated at 6. The parts of this closure are preferably carried by tapes or strips, 5, carried by the material of the outer bag and secured thereto at its open end.

When the bag is thus inflated, all the metal parts of the closure are within the inflated bag and cannot come in contact with the user. This feature I consider a marked improvement over bags which have a sealing closure at the edge and furthermore, I have been able to make a more artistic pillow in that it may be made of

any desired form and will have regular outlines without any protruding sealing devices. It is to be understood that the device as herein illustrated may be modified to any desired degree without departing from the spirit and intent of the invention.

In the modification illustrated in Figs. 1 to 6, I am showing the inner bag as a closed air receptacle with its extensible end secured within the outer bag, but leaving a space between the walls of the respective bags for carrying any articles desired. The flexible edge-closer closure, of course, prevents accidental displacement or loss of articles placed in the pockets. Otherwise, the air cushion elements are operated as heretofore described.

Of course, it is quite possible to have a bag impervious to the passage of moisture and air of the same general shape, for instance, as that shown in Figures 7 to 9, with an extensible part for collecting a greater volume of air than would be collected in the main part of the bag. This bag could then be inserted in a fabric bag having a closure upon the side as for instance, the flexible edge-closer closure.

The operation of such a device would be identical with the structures above described.

Obviously, the inner impervious bag would serve as a self inflating air trapping device which would extend the fabric bag, with its flexible edge-closer closure, to its full extent.

This is not illustrated in detail, as it is quite obvious that there will be no change in principle or operation.

In Figures 7 and 8, there is shown a form of the invention wherein the metallic hinged closure of the remaining figures is not employed, but instead the closure or hermetic seal for the pillow is shown as consisting of an extensible portion 3<sup>a</sup>, secured to the main bag portion 1, with an extended neck of soft impervious fabric or pure gum rubber 3<sup>b</sup>. This makes a convenient form, inasmuch as the soft rubber neck 3<sup>b</sup>, may be gathered together, turned down and secured by a rubber band or other restricting device 3<sup>c</sup>.

What I claim as my invention and desire to secure by Letters Patent is:

A pillow formed of air and water tight fabric, comprising three superposed sheets of such fabric united air tight around three sides of the pillow, a flexible closure at the remaining side or end of the pillow carried by the two outer sheets of the fabric, an auxiliary inflating member secured air tight to one outer, and the intermediate, sheets of fabric, at the end of the pillow having the closure, said auxiliary member being extensible beyond the limits of the pillow and foldable within the pillow inside the closure whereby it constitutes a means for entrapping a greater volume of air than is normally entrapped by the pillow, and a hermetic seal for the pillow carried by the said auxiliary member, the other of the outer sheets of fabric completing a carrying bag or pocket outside the air entrapping parts of the pillow, but adapted to be closed by the said flexible edge closure.

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