

No. 735,876.

PATENTED AUG. 11, 1903.

J. HOLLAND.
HOT WATER BOTTLE.
APPLICATION FILED APR. 22, 1903.

NO MODEL.

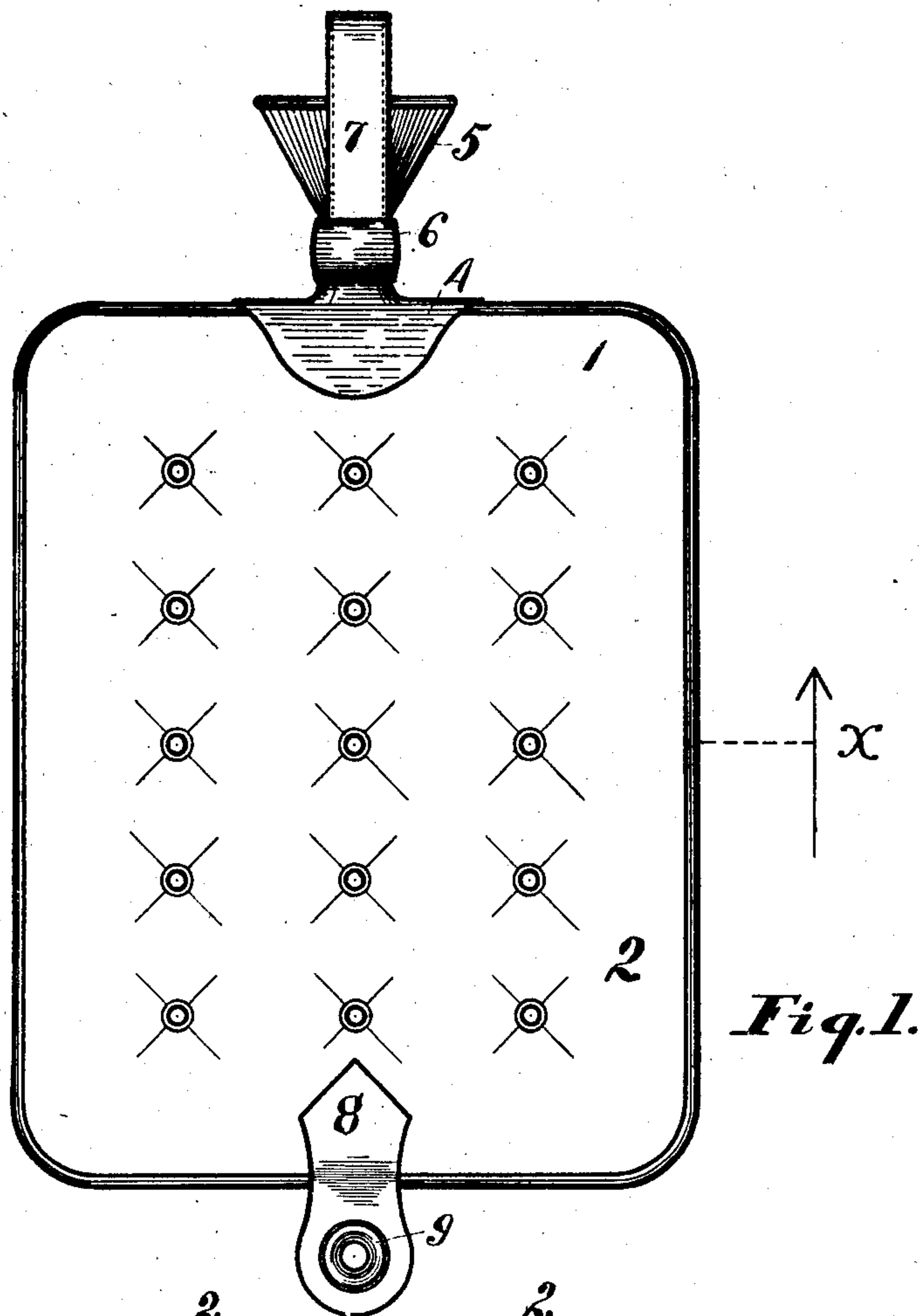


Fig. 1.

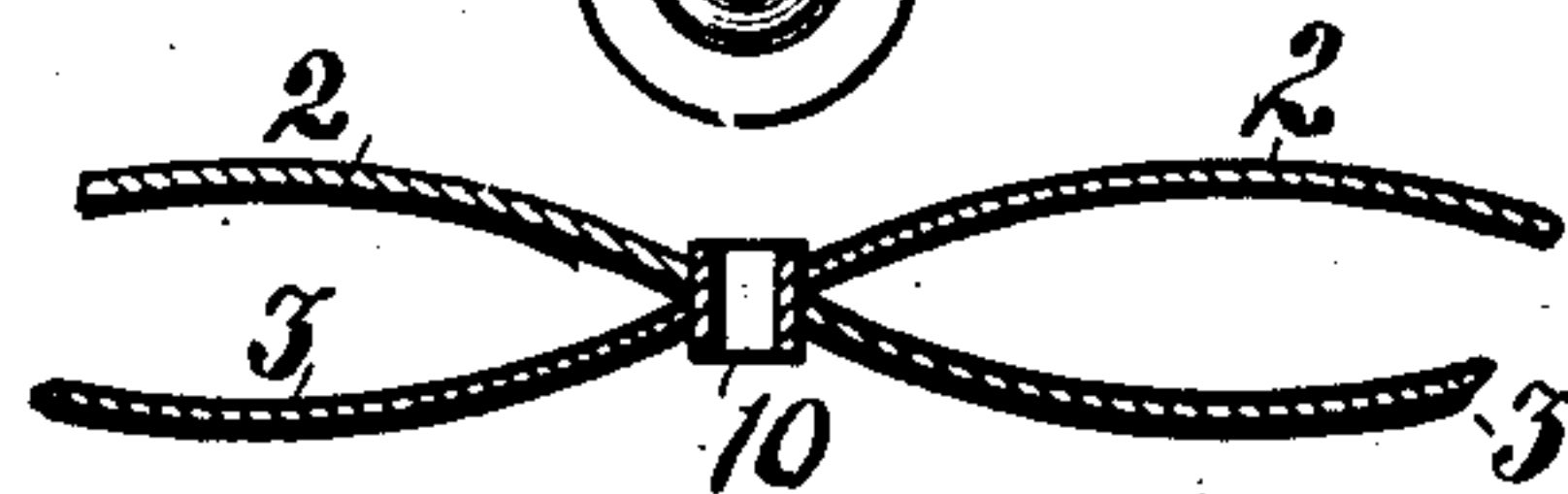


Fig. 2.

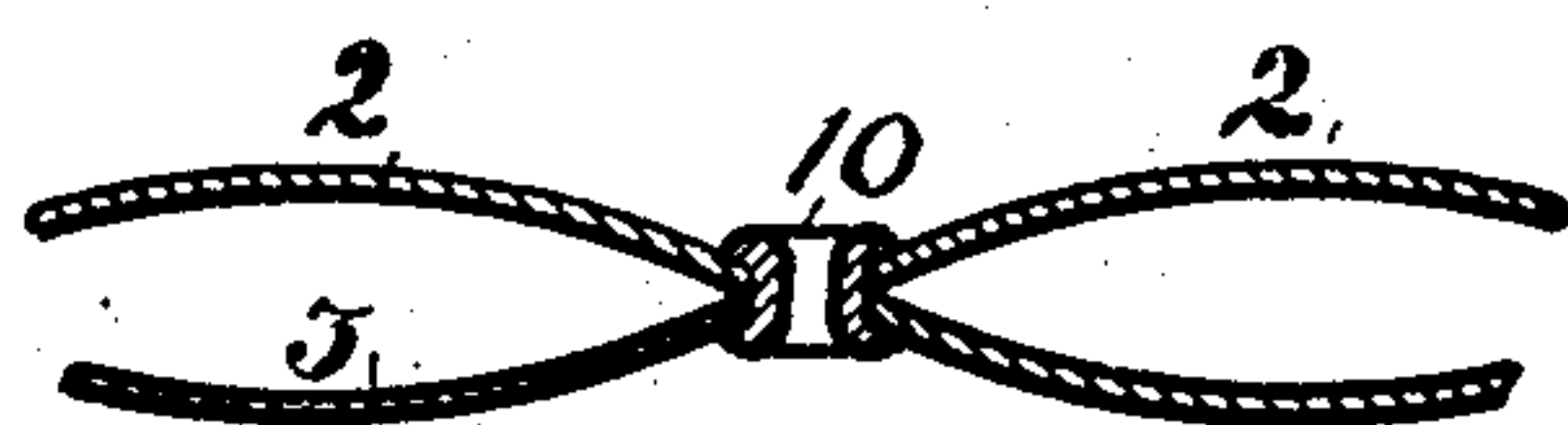


Fig. 3.

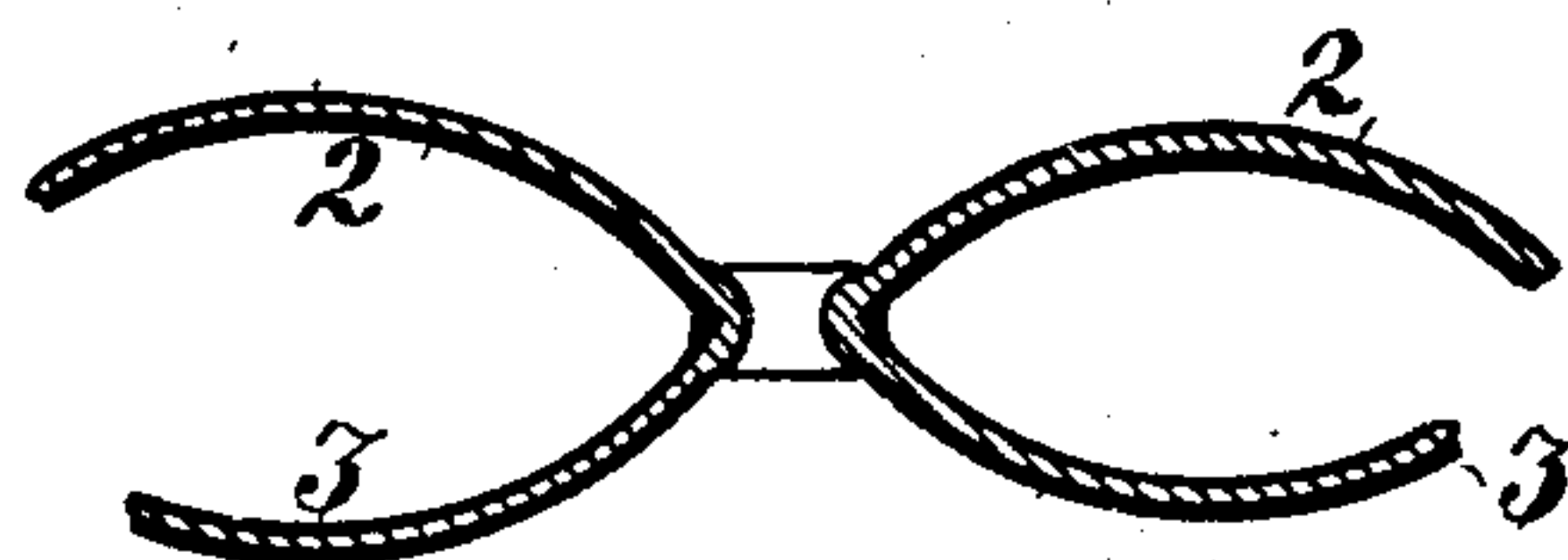


Fig. 4.

Witnesses:
Maude Girard.
Walter Bowman.

Inventor:
Joseph Holland,
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Atty.

UNITED STATES PATENT OFFICE.

JOSEPH HOLLAND, OF AKRON, OHIO, ASSIGNOR TO THE GOODYEAR TIRE & RUBBER COMPANY, OF AKRON, OHIO.

HOT-WATER BOTTLE.

SPECIFICATION forming part of Letters Patent No. 735,876, dated August 11, 1903.

Application filed April 22, 1903. Serial No. 153,723. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HOLLAND, a subject of Edward VII, King of Great Britain, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Hot-Water Bottles, of which the following is a complete specification.

My invention has relation to the production of hot-water bottles and similar articles commonly used for containing a fluid.

The object of my invention is to produce, primarily, a strong serviceable fluid-containing article capable of all the uses to which the ordinary article can be put and provided with means to prevent the fluid contained therein from gathering or accumulating at some point which causes an undue expansion at that point, thus rendering the article unwieldy and inclined to roll or move about.

Another object of my invention is to render the article stronger and more serviceable, in which the fluid contained therein will be more evenly distributed and retained and the general appearance and usefulness of the article improved over those now in common use.

Another object is to render the article of use with less fluid to distend it and likewise to permit perfect ventilation through the article and the escape of perspiration or moisture.

To the accomplishment of the aforesaid objects my invention consists in the peculiar and novel construction, arrangement, and combination of parts hereinafter described and then specifically claimed, reference being had to the accompanying drawings, forming a part hereof.

In the accompanying drawings, in which similar reference-numerals indicate like parts in the different figures, Figure 1 is a plan view of an improved hot-water bottle which will serve to illustrate my invention; and Figs. 2, 3, and 4 are sections at the line *x* of Fig. 1, showing in order the manner in which the article is constructed.

In the drawings, 1 is a bottle or bag which is herein used as an illustration of my invention, made of two sheets of unvulcanized rubber 2 and 3, their outer edges being united together by a lap or welt along their edges.

The upper portion of the bag 1 is reinforced by an extra layer 4, from which extends the filling-funnel 5, which is united to the bag proper by the binder 6, which also serves to retain in place a strap or loop 7, by which the bag may be supported in a vertical position. At the lower end of the bag is a strap 8, in the end of which is a gromet 9, by which the bag may be supported in an inverted position for the purpose of drainage. Thus far the description applies to the ordinary article heretofore used equally as well as to mine. I now take the article thus constructed, it of course being at this time in an unvulcanized condition, and punch through both side walls of the article as many holes as desired, the number of these openings being determined by the fancy of the maker or the use to which the article is to be put. I then cut a soft unvulcanized rubber tube 10, having an exterior conformation shaped similar to the openings in the article, into suitable lengths, the lengths of these sections of tube being determined by the thickness of the side walls of the article; but they must be of such a length as to pass through the two sides thereof and project therefrom a short distance. The external diameter of this tube is substantially equivalent to the interior diameter of the holes which have heretofore been punched through the article. These short sections are taken one by one and inserted in the openings formed in the bag, and the upper and lower ends of the tubes are then flared outwardly until they adhere to the sides of the article surrounding each opening. The sticky nature of the material from which the tubes and article are formed causes them to readily adhere to the sides of the opening 1 and remain therein and assume the form shown substantially in Fig. 3. When all of the holes have been thus treated, the article is placed in a vulcanizing heat and kept there sufficiently long to cure the material to a desired condition. During this vulcanization process the eyelets or short sections of tube inserted in the article will unite with and form an integral portion of the article proper, and the result will be that illustrated in Fig. 4. The union of the eyelets or short sections of tube with the edges of the

side walls of the article will be substantially obliterated and the tubes or eyelets become a portion of the article itself. It is obvious that in the use of a heated fluid in said article were these tubes or eyelets made of metal the heat generated by the fluid in the article would cause great discomfort to the person using it, and if the eyelets or tubes were made of some other substance than the article itself they would not unite permanently therewith, and hence the bag would at this point be weaker than the general structure thereof and would commence to leak at this point long before the general body would show any signs of wear or depreciation. The insertion of these eyelets of the same material with the article and their virtual incorporation into the structure thereof renders them equally strong and as serviceable and lasting as the main portion, and as a consequence they give off no greater heat than does the body of the article, and also give to the article a tufted appearance, similar to a cushion. This unnecessary the use of a large volume of fluid to distend the bag and serves to retain the fluid evenly over its entire surface, whereas

in the use of a bag without these eyelets, unless it is distended to its utmost capacity, it will permit of the movement of the fluid therein, causing inconvenience and discomfort to the user and afford at best but an unsatisfactory article. 30

What I claim, and desire to secure by Letters Patent, is— 35

A fluid-containing device substantially as shown, having the side walls thereof united at intervals by eyelets, said eyelets consisting of short lengths of a tube made of the same material as the body of the bag with the edges of the said eyelet or tube rounded over and adherent to the side walls of said device and arranged to unite therewith during the process of vulcanization, substantially as shown and described and for the purpose specified. 40 45

In testimony that I claim the above I hereunto set my hand in the presence of two subscribing witnesses.

JOSEPH HOLLAND.

In presence of—

C. E. HUMMPHREY,
MAUDE ZWISLER.