

W. H. MILLER.
WATER BOTTLE.
APPLICATION FILED APR. 19, 1920.

1,374,088.

Patented Apr. 5, 1921.

Fig. 1.

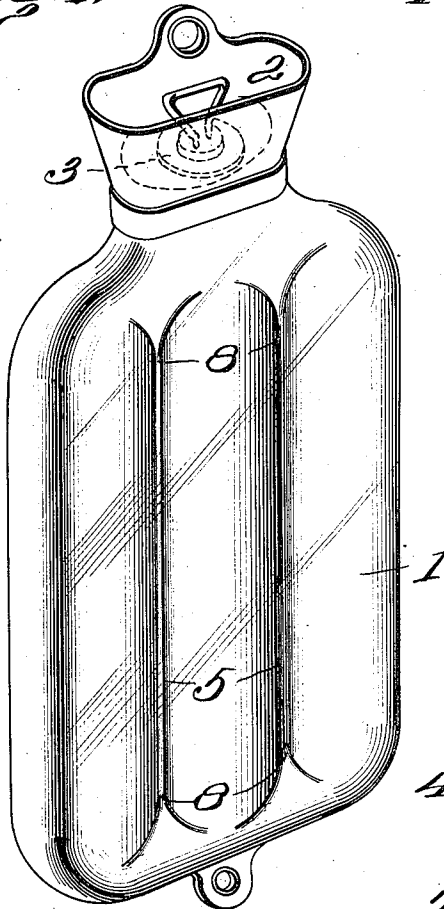


Fig. 2. Fig. 4.

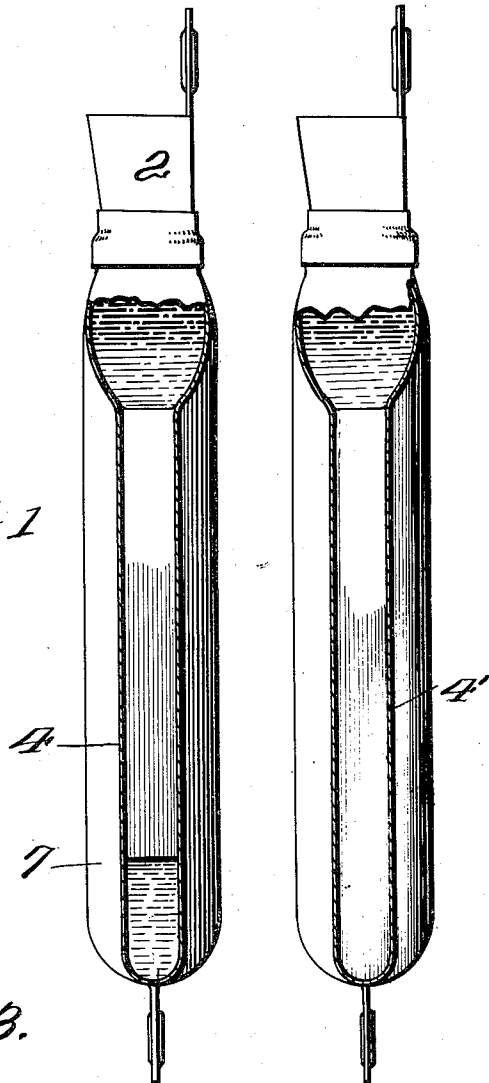
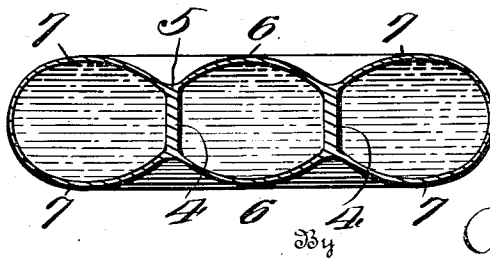


Fig. 3.



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WATER-BOTTLE.

1,374,088.

Specification of Letters Patent.

Patented Apr. 5, 1921.

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To all whom it may concern:

Be it known that I, WILLIAM H. MILLER, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Water-Bottles, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to improvements in water bottles, and is of that type of bottle which is composed of flexible material, preferably rubber.

15 The primary object of my invention is to provide a water bottle composed of flexible material, which is so constructed that when filled with water it assumes approximately a flat shape with longitudinal corrugations, for the purpose of preventing the bottle from sliding or rolling out of position when placed upon a rounded portion of the body.

20 Further objects of this improvement comprises features of construction which will be hereinafter pointed out.

In the accompanying drawings—

Figure 1 is a perspective view of my improved bottle, showing it filled with water.

30 Fig. 2 is a longitudinal central sectional view of Fig. 1.

Fig. 3 is a central cross-sectional view of Fig. 1.

Fig. 4 is a modified construction of Fig. 1.

35 My improved bottle is preferably composed of rubber, though any other flexible material which is impervious to water could be used to carry out my improvements without departing from the invention.

40 The bottle proper is composed of a flexible wall 1, which has its upper end provided with the usual funnel-shaped mouth 2, within which the usual screw-stopper 3 is placed, serving to make a water-tight closure of the filling opening of the bottle.

45 In carrying out my improvement, I provide the interior of the bottle with a plurality of longitudinal partitions 4, which are narrower in width than the cross-sectional extended area of the wall 1, between and at the outer sides of the partitions 4. By reason of this construction, the relatively narrow partitions 4 hold the wall 1 of the bottle when filled with water so that longitudinal depressions 5 and extended portions 6, between the partitions 4 and extended portions 7 at the outer sides of the partitions

are formed, which produces a bottle with longitudinal corrugations composed of these depressions and extended portions.

I preferably make the partitions 4 much 60 thicker than the relatively thin wall of the bag, which for commercial purposes are preferably from two and one-half to three times thicker than the wall 1 of the bottle. This produces partitions which are quite 65 stiff and which offer considerable pressure resistance from the outside, whether the bottle be filled or empty. By making these partitions relatively thicker or stiffer than the wall of the bottle, said wall is 70 maintained with approximately straight sides when empty and is prevented from collapsing under the suction action when the bottle is being emptied. They also maintain the wall of the bottle in separated 75 relation at all times whether filled or empty.

In Figs. 1 and 2, the partitions 4 are shorter than the bottle so that their upper and lower ends are removed from the corresponding ends of the bottle. By this 80 means the partitions determine the length of the longitudinal depressions 5 and thereby the longitudinal corrugations, and form at the ends of the depressions 5 projections 8, which will serve to maintain the bottle 85 against longitudinal movement when placed on an inclined part of the body. To this extent the projections 8 serve as transverse corrugations in a broad sense. Therefore, when considered from a broad point of view 90 the bottle may be said to have longitudinal corrugations with transverse corrugations at the ends of the longitudinal corrugations.

In Fig. 4, I show a modification in which the partitions 4' have their lower ends extended clear to the bottom of the bag. In this construction the longitudinal corrections will extend clear to the bottom of the bag and will eliminate the transverse corrugations or projections 8 at the bottom of 100 the bag.

While I prefer to have the partitions 4 thicker or stiffer than the wall of the bottle, because it has certain advantages herein pointed out, yet I do not limit myself in 105 the broad view of my invention to that relative construction of the parts, nor to the number of partitions used.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A water bottle composed of a flexible

rubber wall having a plurality of parallel partition walls with their edges attached to the inner surface of the bottle wall, the said parallel walls being thicker than the bottle wall for the purpose of holding the side walls of the bottle separated. 15

2. A water bottle composed of a flexible rubber wall having a plurality of longitudinally extending partition walls having their edges connected with the side walls of the

bottle, said walls being sufficiently thicker than the bottle wall to support the side walls of the bottle apart, and the said walls having a width less than the extension thickness of the bottle to form longitudinal corrugations in the side walls of the bottle when filled with water.

In testimony whereof I hereunto affix my signature.

WILLIAM H. MILLER.