

Feb. 17, 1942.

P. S. MADSEN ET AL

2,273,128

WATER BAG

Original Filed April 13, 1936

2 Sheets-Sheet 1

Fig. 1.

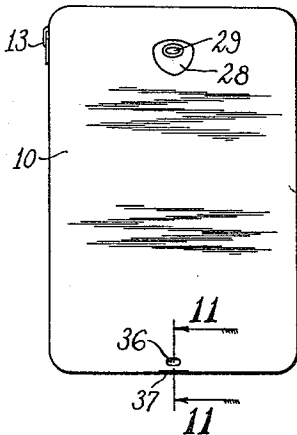


Fig. 2.

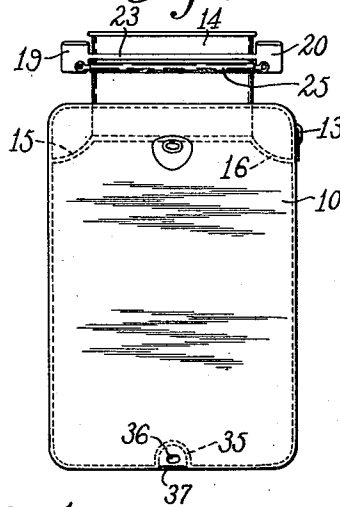


Fig. 3.

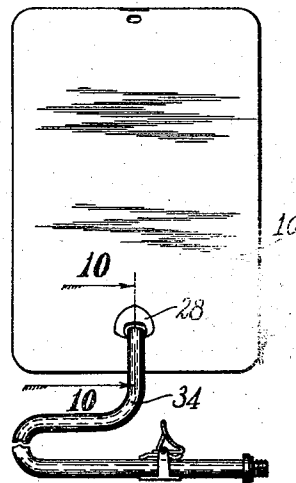


Fig. 4.

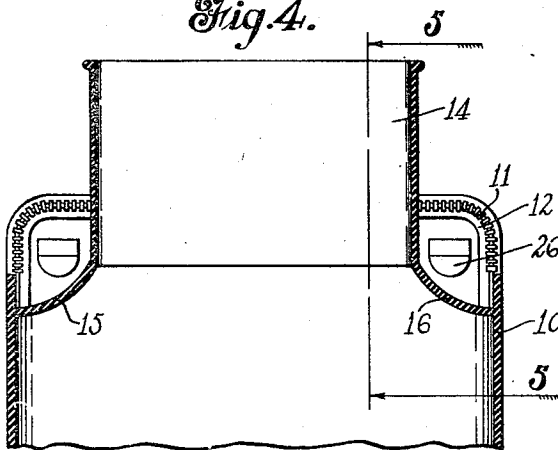


Fig. 5.

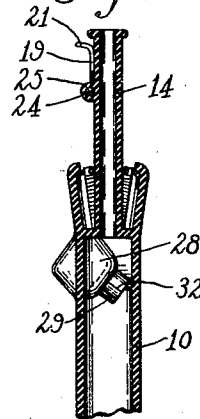


Fig. 9.

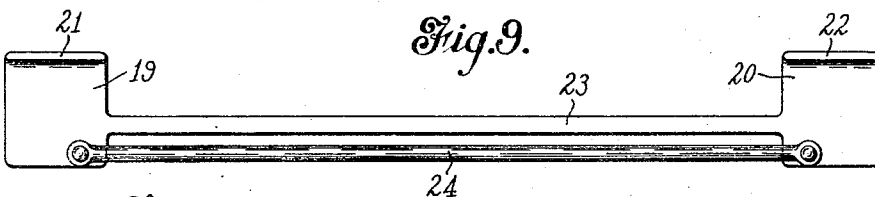
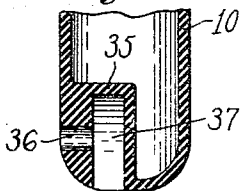


Fig. 11.



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2 Sheets-Sheet 2

Fig. 6.

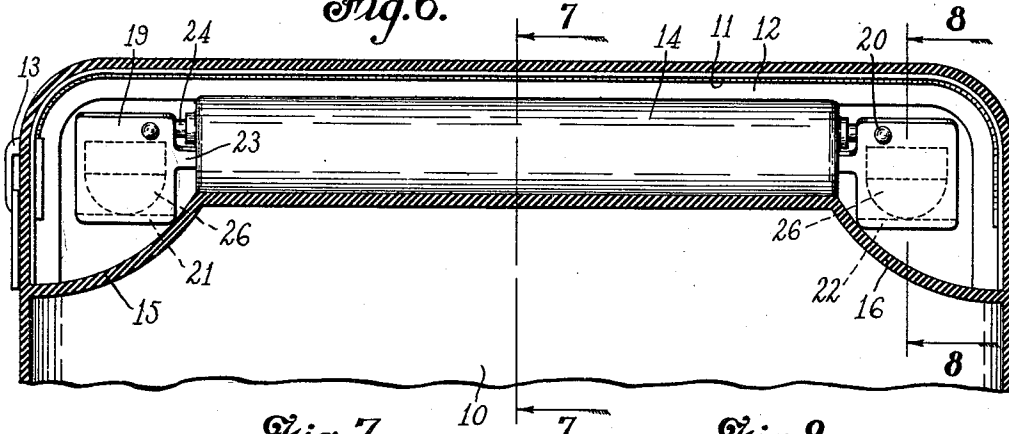


Fig. 7.

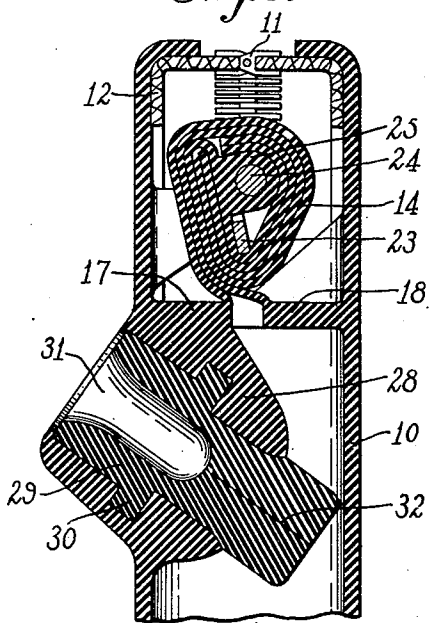


Fig. 8.

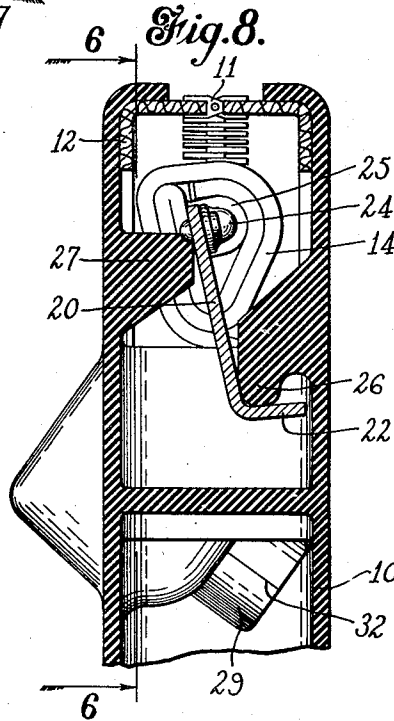
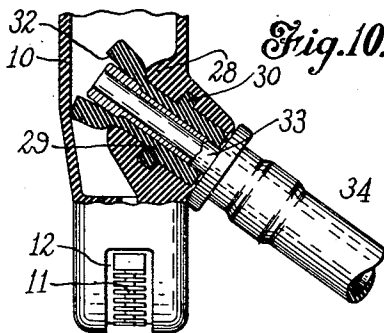


Fig. 10.



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2,273,128

WATER BAG

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Continuation of application Serial No. 74,108,
April 13, 1936. This application October 7,
1937, Serial No. 167,772

8 Claims. (Cl. 150—2.1)

This invention relates to water bags, and more particularly to a receptacle designed to be water-tight which may be employed as a hot water bag, but which will at the same time have a neck or mouth of sufficient size so that the receptacle may readily be filled with pieces of ice, and which will be provided with a connection for a syringe tube so that it may also be used as a syringe. Certain features of our invention, however, are desirable for use in devices for one or more of the purposes above named, and are not necessarily restricted to a bag or receptacle which is used for all of the three stated objects.

It is more or less common to combine a hot water bag and syringe into a single device, that is, to provide a rubber bag or similar receptacle with a filling opening which may be closed against leakage, and also with a connection for a syringe tube which may also be closed when it is desired to use the device as a hot water bottle. However, such a receptacle has not been well adapted for use as an ice bag, owing to the fact that the filling opening is usually of relatively small size and will not receive sufficiently large pieces of ice. If the filling opening was of large size, difficulty was encountered in closing this opening tightly against leakage, or, if a screw plug was employed, the bag would be unwieldy and awkward or uncomfortable to use.

The present invention, however, has for one of its objects the provision of a three-in-one receptacle which may be used as a hot water bag, as an ice bag, or as the receptacle for a fountain syringe.

Another object of the invention is the provision of a receptacle formed of waterproof material so that it may contain water, which is provided with a relatively large filling neck through which cracked ice may be inserted, and which also embodies means for effectively closing said filling neck when the bag or receptacle is in use to prevent leakage of the contents.

Another object of the invention is the provision of a bag or receptacle of the character described, which is provided with a filling neck of relatively large size and of flexible material, whereby this neck may be folded within the outline of the receptacle itself and the latter closed over the neck to conceal the neck from view.

Another object of the invention is the provision of a water-tight receptacle which when closed will have a smooth exterior outline, and will be provided with no projecting necks or tabs such as are usually found in fountain syringes or hot water bottles.

A still further object of the invention is the provision of a water-tight receptacle having a filling neck, and means for closing said neck against leakage, and also being provided with a secondary closure within which the neck may be contained, so that the latter is concealed and lies within the regular outline of the receptacle when the secondary closure is in closed position.

To these and other ends the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the drawings:

Fig. 1 is a front elevational view of a combined hot water bag, ice bag, and fountain syringe receptacle embodying our invention, the device being shown in closed position;

Fig. 2 is a view similar to Fig. 1 but showing the device with the filling neck extended ready to be filled;

Fig. 3 is a view similar to Fig. 1, the receptacle being in a reverse or upside-down position for use as a fountain syringe;

Fig. 4 is a sectional view of the upper portion of the device showing the interior construction;

Fig. 5 is a partial sectional view on line 5—5 of Fig. 4;

Fig. 6 is a sectional view on line 6—6 of Fig. 8 showing the parts in fully closed position;

Fig. 7 is a sectional view on line 7—7 of Fig. 6;

Fig. 8 is a sectional view on line 8—8 of Fig. 6;

Fig. 9 is an elevational view of the lock bar secured to the filler neck;

Fig. 10 is a sectional view on line 10—10 of Fig. 3; and

Fig. 11 is an enlarged section on line 11—11 of Fig. 1.

To illustrate a preferred embodiment of our invention, we have shown a waterproof bag or receptacle 10 which may be and preferably is made of rubber, as is usual with hot water bags of this character. As shown, for example, in Figs. 4, 7 and 8, the bag 10 is open across its entire top, and for a short distance down each side. At the edges formed by this opening a fastening means is provided to secure the edges together. As shown, this means may be in the form of the ordinary "zippers" or "hookless fasteners" 11, which may be mounted upon tapes 12, the tapes in turn being secured to the rubber walls of the bag. The usual slider 13 is provided to effect the opening and closing of the fasteners.

The closure just described may be termed the secondary closure of the receptacle, as this does not form the water-tight or leak-proof closure

for the water-containing portion of the device. That closure will, however, now be described. A filler neck 14 is provided which leads into the interior of the receptacle. This neck, as shown in Figs. 4 and 5, is relatively wide and flat, and is joined integrally to the walls of the receptacle by means including fillets 15 and 16, the latter meeting the side and end walls a short distance below the upper end or closure 11. The fillets 15 and 16 secure the ends of the neck to the walls of the receptacle, and at the sides thereof the neck is secured to the wall by the projecting partition portions 17 and 18, shown more particularly in Fig. 7.

It will be seen with reference to Fig. 4 that the neck 14 is relatively long, and when in extended position, as when it is ready for filling, as shown in Figs. 4 and 5, projects from the opening at the upper end of the receptacle 10 through the closure 11. This neck forms the primary closure of the water-tight receptacle, and, as will be hereinafter explained, is of flexible material and adapted to be folded or rolled and tucked within the upper portion of the bag 10 so that it will not only be leak-proof but will be concealed from sight.

It will be noted, of course, that the lower end of the neck 14 is some distance below the upper end of the bag 10, so that considerable space is provided between the shoulders or projections 17 and 18, as shown in Fig. 7, and the top closure of the bag, thus providing a space in the form of a pocket within which the neck 14 may be disposed when folded. In order that the folding operation may be effected conveniently, and in order that it may be locked in place after being folded, a lock bar is provided which is shown more especially in Fig. 9. This lock bar consists of a pair of end members 19 and 20 provided with angularly disposed portions 21 and 22 forming hooks in connection with the portions 19 and 20. The members 19 and 20 are joined by a flat bar 23, and also extending between them is a rod 24 which may be inserted through a tubular boss 25 carried upon the side of the neck 14. This rod may be conveniently passed through the boss or sleeve 25, and thereafter secured by riveting to the members 19 and 20 in order to secure the lock bar to the neck. The position of the lock bar when secured in place is shown in Fig. 2, from which it will be seen that the bar 23 rests against the wall of the neck above the tubular boss or sleeve 25, and that the end members 19 and 20 lie just beyond the side edges of the neck 14, as the length of the bar 23 and rod 24 correspond substantially with the width of the filling neck.

On the inner surface of the walls of the receptacle 10 adjacent the upper end thereof and within the space above the members 15 and 16 a pair of hooks or catch members 26 are provided, these members being preferably formed of rubber and being molded upon the wall of the bag or receptacle 10, which is of the same material. As shown in Fig. 4, one of these hooks or catch members is provided adjacent each side edge of the bag. Upon the opposite wall of the bag and located substantially opposite but slightly above the members 26 are a pair of stop members 27, which may also be molded integrally with the bag wall. The members 26 and 27 are designed to cooperate with the lock members 19 and 20 to hold the neck in closed position within the mouth of the receptacle and below the closure 12.

The bag is filled with water or ice through

the filling neck 14 when the latter is in the position shown in Figs. 2, 4 and 5. It being desired to close the bag, the members 19 and 20 are grasped between the fingers and the lock bar is turned downwardly away from the observer, as shown in Fig. 2, or to the right, as shown in Fig. 5, so as to roll or fold up the flexible neck 14. As shown, it is designed that the lock bar be given one and a half complete turns, or three half turns, at the end of which movement the neck will be folded or rolled into the position shown in Figs. 7 and 8, and the hook members originally at the upper edges of the members 19 and 20 will lie in reverse position at the lower edges of these members, so as to engage below the hooks or catch members 26, as shown in Fig. 8. The upper ends of the members 19 and 20, as shown in this figure, will abut against the stops 27, and thus this member will be effectively held in position and the neck 14 will be prevented from unrolling. The walls of the neck will be tightly pressed together in this position so that there will be no danger of leakage regardless of the position in which the bag may be, and the folded neck, as apparent from Figs. 7 and 8, will lie within the upper portion of the receptacle below the closure 12, so that the latter may be closed and the folded neck completely concealed from view. The bag will then have the appearance shown in Figs. 1 and 6.

In order that our device may be employed as a fountain syringe as well as a hot water bag and ice bag, we have provided in one of the walls a means for connection with a tube, which connection will lead to the interior or chamber of the bag. As one means of accomplishing this result, there is formed upon one of the walls of the bag, and in this instance adjacent the upper end thereof, a valve housing 28 within which is mounted a valve plug 29. This plug is provided with a laterally extending flange 30 adapted to seat in a corresponding recess in the body 28 to hold the plug in place, and is also provided with an opening 31 extending inwardly from the exterior thereof part way through the valve body. From the bottom of this opening to the inner end, the valve member is split longitudinally into two parts, as shown at 32.

A nipple member 33, connected at the end of a rubber syringe tube 34 of the usual form, is designed to be inserted through the opening 31 and between the inner portions of the valve 28 through the split 32. As shown, for example in Fig. 10, this will cause the inner end portions of the valve member to be spread apart so that the nipple 33 will communicate with the interior of the receptacle. As will also be apparent from Fig. 7, when the nipple is withdrawn, the portions of the valve body on opposite sides of the split 32 will return to tightly abutting relation so as to effectively seal the valve opening against leakage. In another aspect there is provided a means automatically operable by the insertion of a nipple-equipped syringe tube into a socketed portion on or associated with the bag wall, for opening communication between the bag interior and the passage in the tube.

Although the invention in all of its aspects is not limited to the particular type of connection between the receptacle and the syringe tube 34, the preferred form of connection which is illustrated will be found quite advantageous, as the valve 29 is a self-closing valve, and no screw stopper or other closing device is required which may become lost in the use of the article. It is

only necessary to insert the nipple 33 in position within the valve to establish the proper connection of the tube 34 so as to adapt the device for use as a syringe, and likewise it is only necessary to withdraw this nipple and the valve 29 will be self-sealing against leakage, and the device will be ready for use as a hot water bag or ice bag.

Adjacent its lower end the wall of the bag 10 may be provided with a thickened portion 35 through which an opening 36 is provided, so that the bag may be suspended from a nail, hook or the like, the opening 36 through the side wall of the bag communicating with an opening or slot 37 formed in the bottom or lower edge of the bag, also within the thickened portion 35. In case a hook is used, the lower end thereof may be accommodated in the slot 37. This provision obviates the necessity of any projecting tab or the like which would not conform to the lines of the bag itself.

Our improved bag as herein shown has a neat, attractive appearance inasmuch as when closed it presents the shape of a shallow rectangular body with rounded corners and rounded edges. The bag is streamlined as distinguished from one having unsightly projections, and yet it has satisfactory leak-proof closure means, syringe-tube-connecting means, and suspension provisions.

While we have shown and described a preferred embodiment of our invention, it will be understood that it is not to be limited to all of the details shown, but is capable of modification and variation within the spirit of the invention and within the scope of the appended claims.

This application is a continuation of our application, Serial No. 74,108, filed April 13, 1936.

What we claim is:

1. A water bottle or the like having a receptacle, a flexible filling neck communicating with the receptacle, a bar connected to the neck and adapted to roll up the material thereof when the bar is rotated to close the neck against leakage, said bottle having a pocket within which said rolled neck may be disposed, and means within the pocket to engage a part of said bar to prevent unrolling of the neck.

2. A water bottle or like receptacle having a liquid-holding body, a pocket above said body provided with an opening leading into the receptacle, closure means for said opening, a foldable filling neck of flexible material communicating with said body and disposed within said pocket, a bar secured to said neck and adapted to fold the same when the bar is rotated, projecting members on the end of said bar, and means upon the wall of the bottle within said pocket to engage said projecting members to prevent unfolding of the neck.

3. A water bag having a partition below its upper end providing a pocket above and a receptacle below said partition, said bag being provided with an opening into said pocket, a flat filling neck of less width than the partition secured to said partition to extend above said partition and communicating with the receptacle, said neck being projectible through said opening and retractible into the pocket to lie between the partition and the opening when retracted,

and means to close said opening after the filling neck is retracted therein to conceal the neck from view.

4. A bag of the class described comprising a hollow body having an opening extending along its top edge and downwardly at the sides thereof, means to close said opening, a receptacle provided within said body as a part thereof and having a filling neck projectable through and retractable within said opening, said neck being foldable to close the neck and to lie within said body above said receptacle whereby it is concealed from view when said opening is closed, and means within the body above said receptacle to hold said neck in folded position.

5. A container of the class described comprising a hollow rubber body having an opening extending along its top edge, means to close said opening, a rubber receptacle provided within said body as a part thereof and having a neck projectible through and retractable within said opening, a member secured to said neck operable to fold the same to a position where the neck is within the body, and means within the body cooperating with said member to hold the neck in folded position in the space above said receptacle.

6. A water bag having a partition below its upper end providing a pocket above and a receptacle below the partition, said bag being provided with an upper slit opening into said pocket, a filling neck joined to the partition and projectible through the slit and retractable into said pocket, and means operable after the filling neck has been retracted to draw together the edges of the slit.

7. A water bag having a neckless outer body or casing, a pocket adjacent one margin of the body closed at the sides and ends by walls of the body, the top of the pocket presenting a slit, a water chamber within the body being defined in part by the bottom of the pocket, a protractible and retractable filling neck of reduced width as compared to the body having its base communicating with the water chamber in a region spaced substantially inwardly from the above-mentioned margin, said neck being foldable within the pocket without bulging the body, and means for drawing and holding together the wall portions at opposite sides of said slit so that the neck after retraction can be completely housed and concealed and the bag margin fully closed.

8. A water bag having a neckless outer body or casing, a pocket closed at the sides and ends by walls of the body and having a bottom within the body, there being a water chamber within the body below the pocket bottom, a protractible and retractible filling neck having its base communicating with the water chamber adjacent the pocket bottom, said neck when retracted lying above the pocket bottom, the top of the pocket presenting a slit in the bag, and means for fastening together the portions of opposite sides of the slit so that the slit is closed at all points in its length and the retracted filling neck completely concealed.

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