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(19) **United States**(12) **Patent Application Publication****Valeriana**(10) **Pub. No.: US 2006/0243765 A1**(43) **Pub. Date: Nov. 2, 2006**(54) **PRESSURIZED PERSONAL HYDRATION
SYSTEM AND KIT****Publication Classification**(76) Inventor: **Peter V. Valeriana**, Palm City, FL (US)

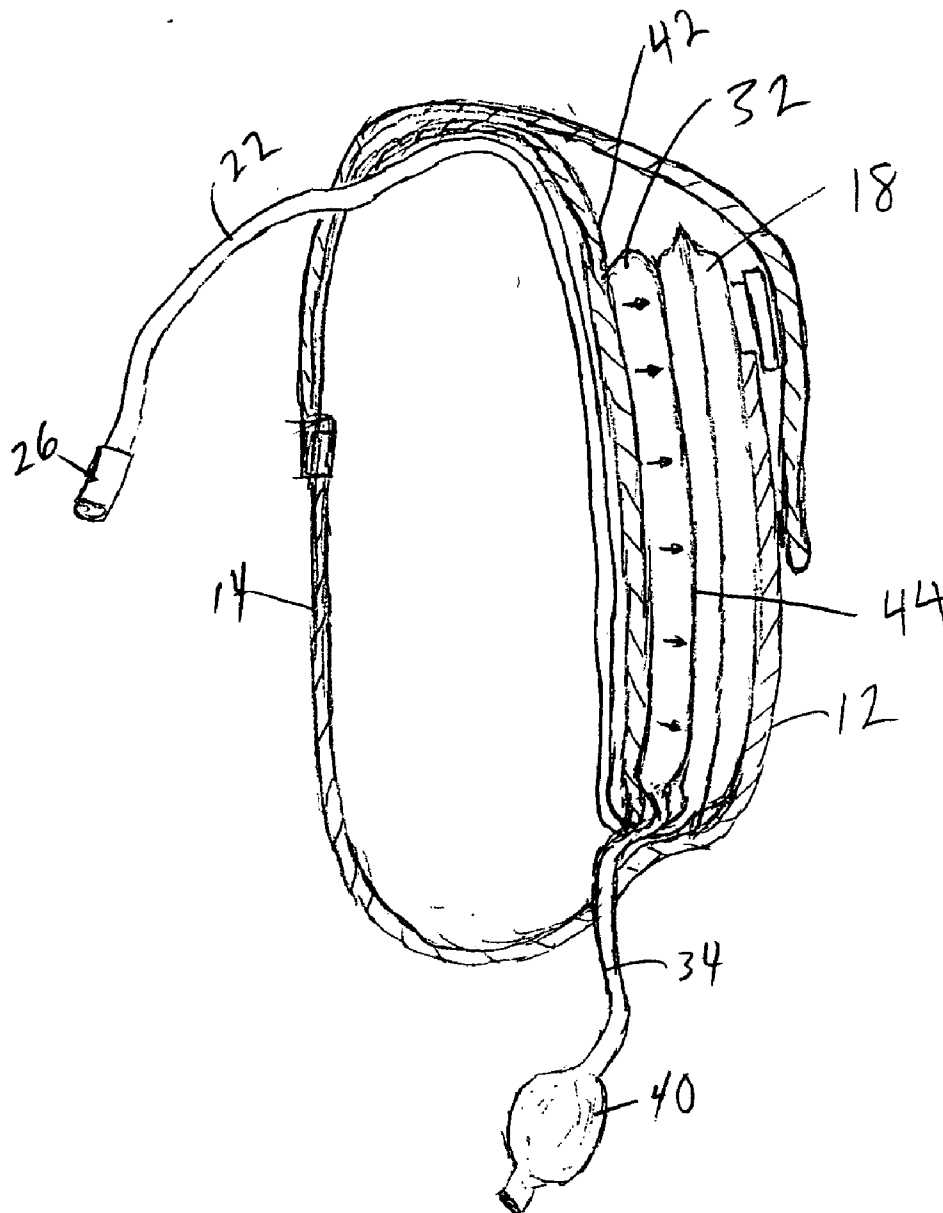
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(57)

ABSTRACT

The present invention relates generally to personal hydration systems. More specifically, the present invention relates to a pressurized personal hydration system and/or a kit for converting a pre-existing non-pressurized back or torso mounted hydration system into a pressurized hydration system.

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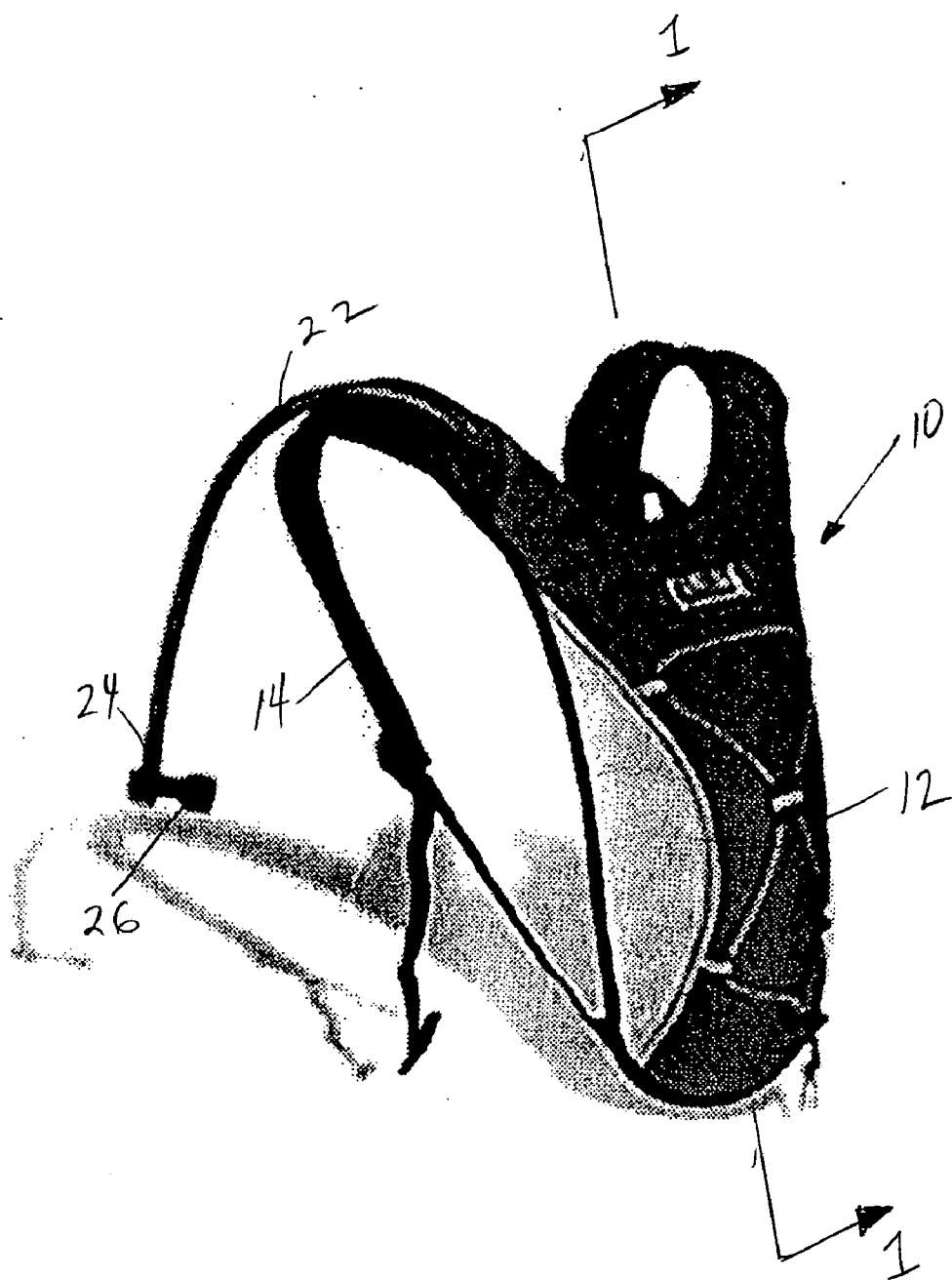


Figure 1

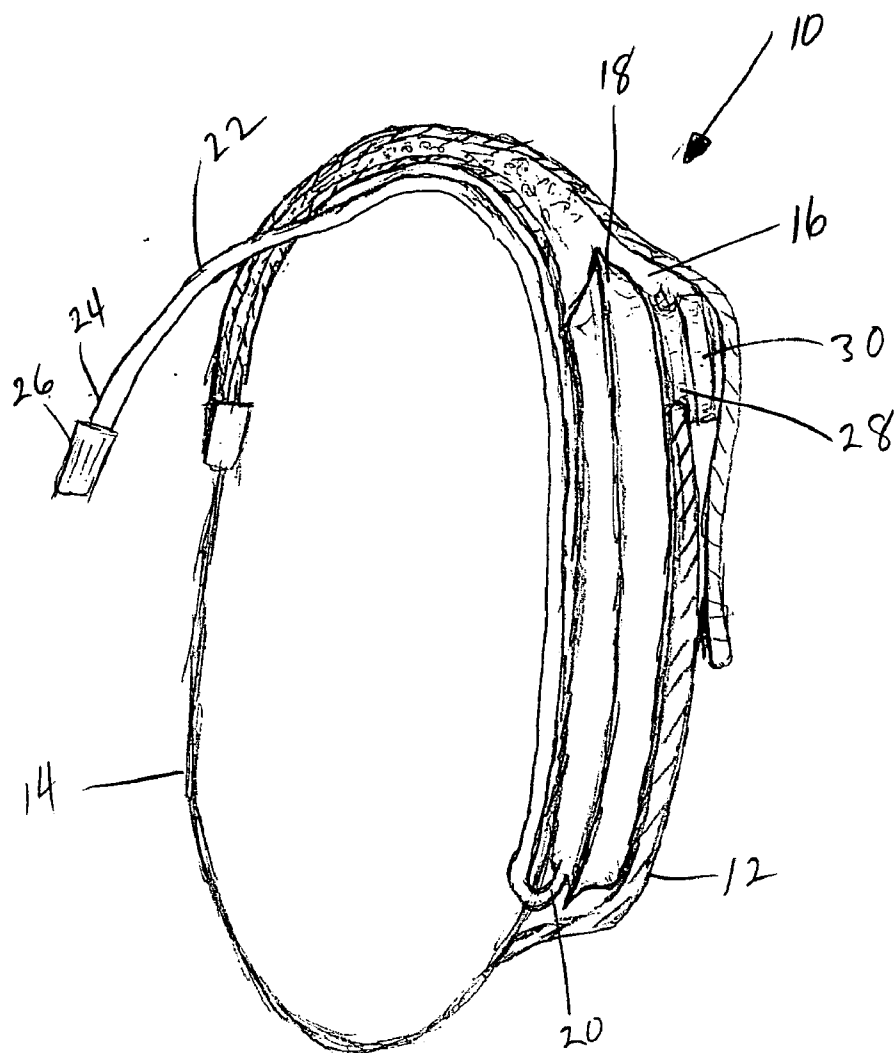


Figure 2

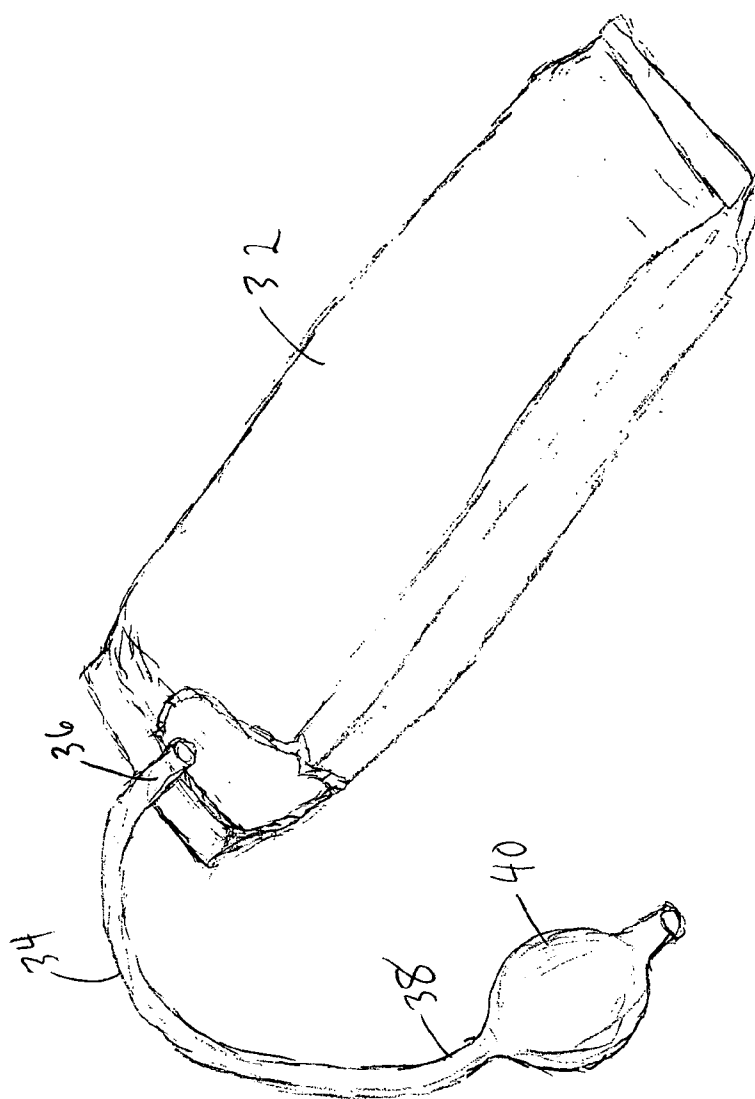


Figure 3

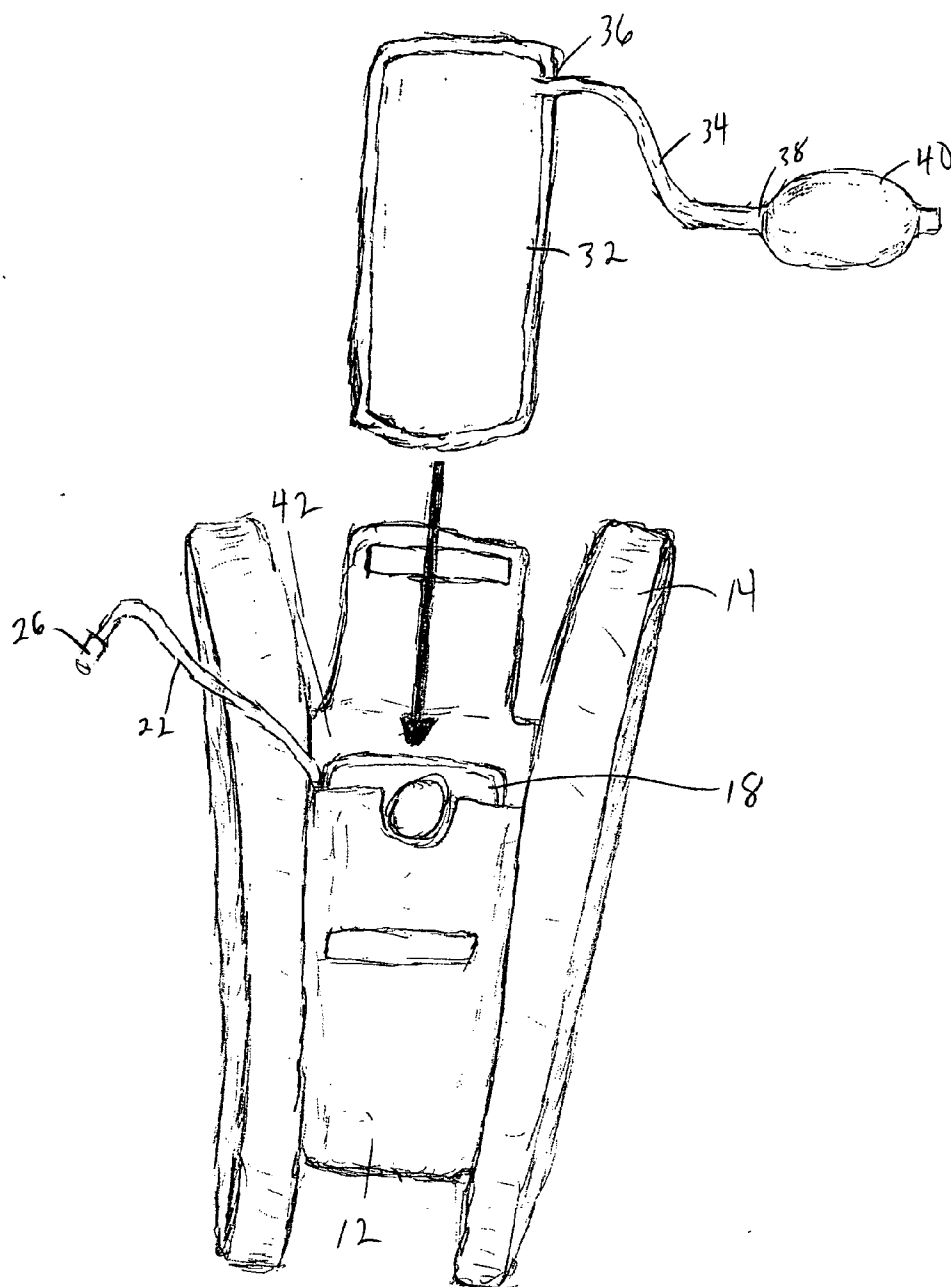


Figure 4

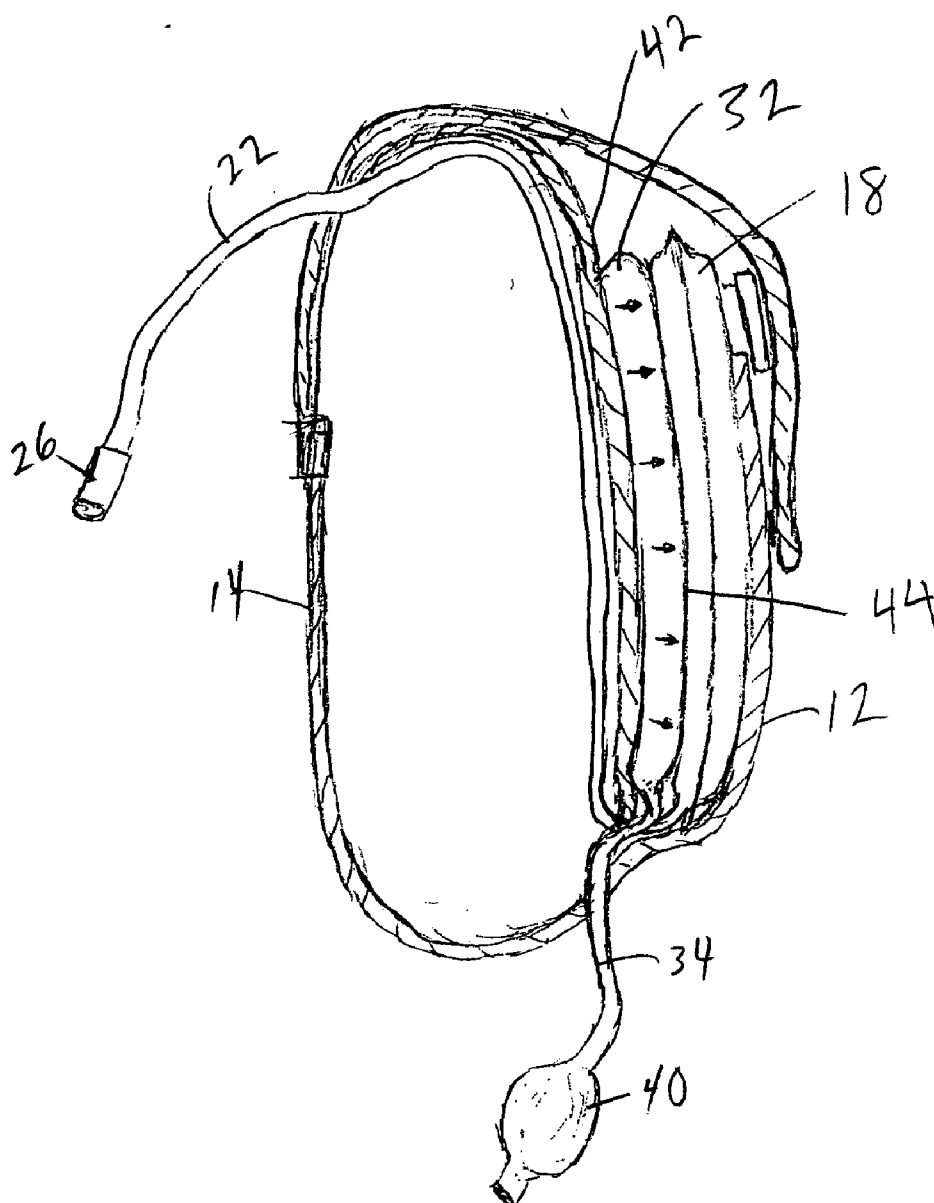


Figure 5

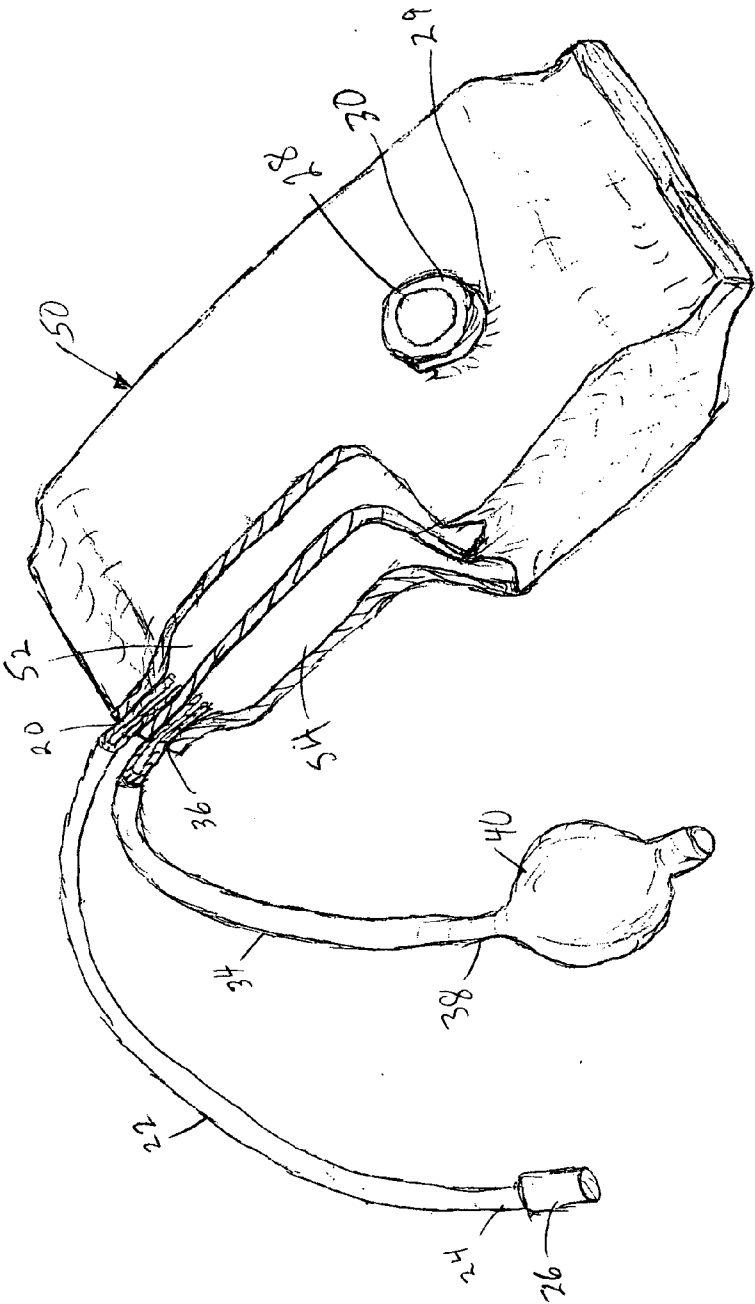


Figure 6

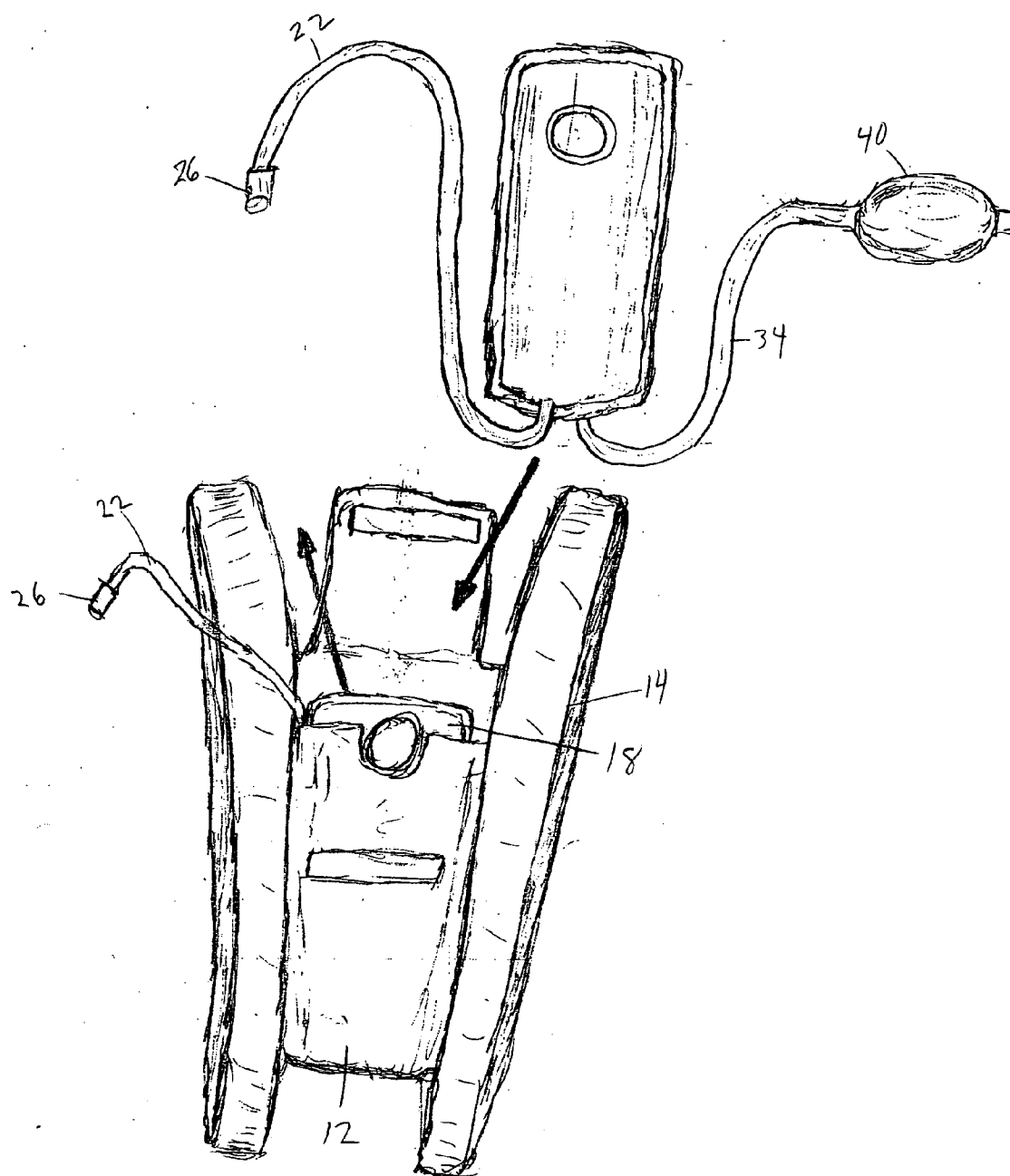


Figure 7

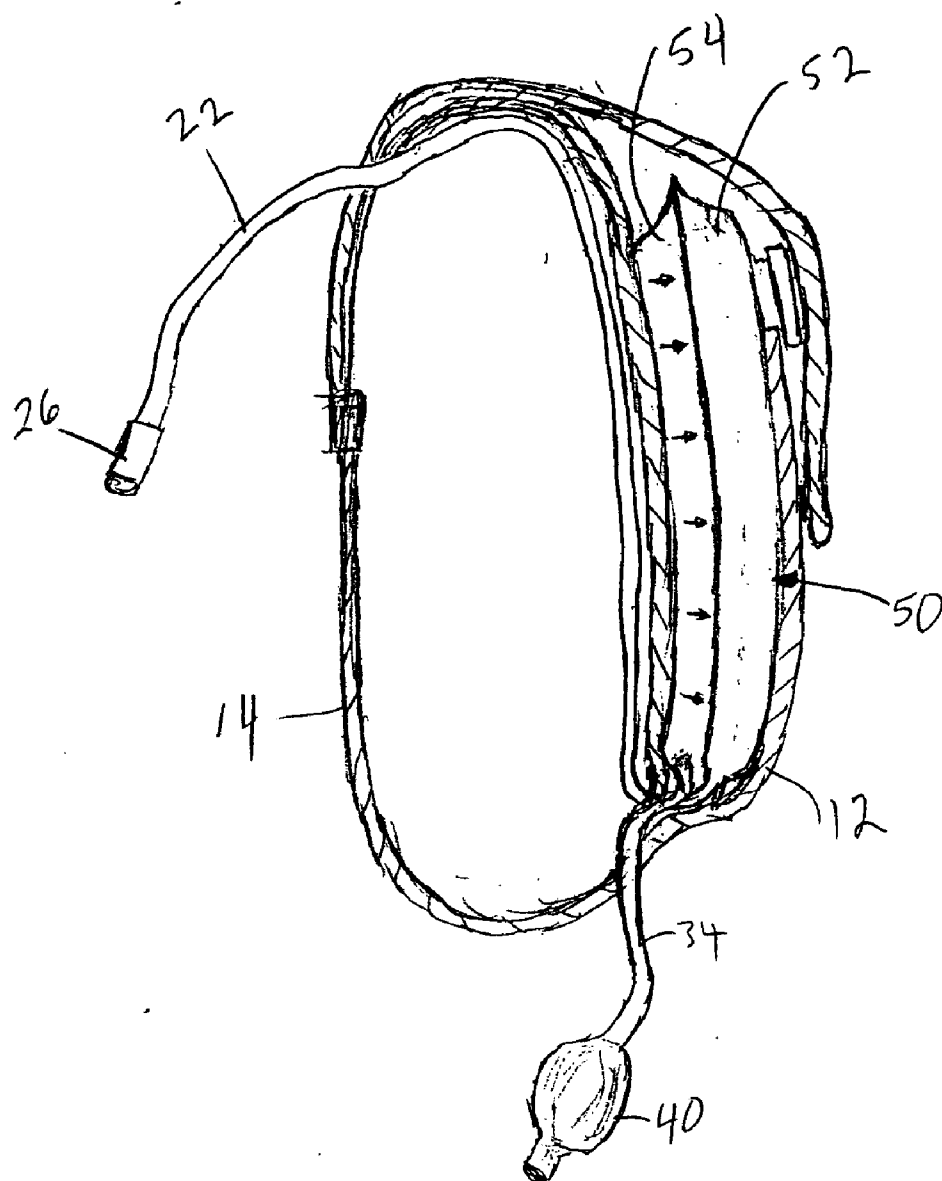


Figure 8

PRESSURIZED PERSONAL HYDRATION SYSTEM AND KIT

FIELD OF THE INVENTION

[0001] This invention relates generally to personal hydration systems. More specifically, the present invention relates to a pressurized personal hydration system and/or a kit for converting a pre-existing non-pressurized back or torso mounted hydration system into a pressurized hydration system.

BACKGROUND INFORMATION

[0002] Knowledge regarding the importance of hydration during physical activity is at an all time high. Many physical activities are undertaken in the heat of summer and/or the bitter cold of winter. As a result, the person completing the physical activity experiences a large amount of fluid loss during the activity. In order for the person to comfortably and safely complete the physical activity, he or she will need to replenish the fluids lost or suffer a serious case of dehydration, cramps or both.

[0003] Additionally, physical activities are often completed in potentially dangerous environments. In this type of environment, it is important that the person keep his or her hands directed at completing the activity. For example, a mountain biker needs to keep his hands on the handlebars at all times to reduce the propensity for accidents. Likewise, other activities such as snow skiing, rock climbing and canoeing also require focused use of the person's hands.

[0004] Present hydration devices used for physical activities generally include water bottles or back and torso hydration systems. Water bottles generally include a cylindrical container with a lid. The lid includes a valve which may be opened with the user's mouth or fingers. Thereafter, the bottle must be tipped back or squeezed to force the water out of the bottle into the user's mouth. After drinking, the valve is manually closed and the bottle is returned to its storage mount until the next use.

[0005] These devices suffer from a number of disadvantages. For example, using a water bottle forces the person to remove at least one hand from the handlebars, ropes, oars etc. in order to grasp and drink from the water bottle. Further, such an action distracts the person's attention from the task at hand, not only hurting his performance but also threatening his safety and the safety of those around him.

[0006] Personal hydration systems currently available include flexible water bladders constructed to be worn on the back or torso of the user. One end of a flexible tubing connects to the bottom of the flexible bladder, the opposite end of the tubing is coupled to a bite valve which can be opened by the user's mouth for use like a straw to draw fluid out of the bag. Such systems are available from manufacturers such as CAMELBAK Products LLC of Petaluma, Calif., as well as others.

[0007] While these systems are not as cumbersome to operate as the water bottles, they do however provide similar distractions. These systems require the user to grasp the end of the tubing with the bite valve, place it in his or her mouth and draw the water from the back or torso area to the mouth. Drawing the water through the extended tube interrupts the person's concentration and breathing rhythm. Because of the

distracting nature of these systems, the user may choose not to drink, resulting in dehydration and poor performance.

[0008] Therefore, because it would be beneficial if the fluid was more easily accessible, what is needed in the art is a kit for converting the flexible back and/or torso mounted non-pressurized hydration systems into pressurized hydration systems. A person is much more likely to drink more fluid, and stay better hydrated, if the fluid is easily accessible. Additionally, the liquids should be available to the person any time he or she desires a drink without distraction.

[0009] Furthermore, because the weight being carried by the person exercising is critical, it is important that the pressurized hydration system be as light as possible and not weigh much more than the fluid itself.

[0010] There are numerous patents directed to systems, devices and methods for dispensing liquids to people for exercise or competition. Most of these have designs which are specifically directed to a particular application, such as bicycling or running.

[0011] For example, Edison et al., U.S. Pat. No. 5,060,833, discloses a water system that allows a bicyclist to drink liquids. The system has a collapsible container of water or other liquid stored within a flexible back pack that is removably secured at a location between the shoulders of the bicyclist. A resilient mouthpiece adapted to be held in the mouth of the bicyclist is connected to the container by a length of tubing. The mouthpiece is a valve device and has a cylindrical sidewall that forms a chamber. A spring biased valve element located inside the chamber normally prevents flow therethrough. When the opposed sidewalls of the chamber are compressed between the teeth liquid may be drawn from the container through the tubing and into the mouth of the bicyclist.

[0012] McCook, U.S. Pat. No. 5,282,557, discloses a harness supported liquid refreshment bag adapted to be carried on the back of a person. A tube extending from the bag to the front of the person enables the latter to draw liquid refreshment during ambulation. In one alternative embodiment, a supplementary reservoir means are provided having a passage connected to the bag and manually activatable valve means for selectively enabling a person to transfer the contents of the supplemental reservoir to the bag during running or other physical activity.

[0013] Gardener et al., U.S. Pat. No. 6,032,831, teaches a personal hydration system with an improved mouthpiece for use in providing fluid for delivery to a user. The mouthpiece includes a neck that is adapted to be mounted on a supply tube to a hydration system and which is joined to a resilient head. The head includes a dispensing face with a pair of lips that define a normally closed slit, through which fluid is dispensed from the mouthpiece.

[0014] Forsman et al., U.S. Pat. No. 6,675,998, discloses a hydration system with an improved fluid reservoir. A drinking tube extends from an outlet port of the reservoir and includes a distal end upon which a mouthpiece may be mounted. In some embodiments, the reservoir includes a relatively large-diameter fill port. In some embodiments, the reservoir includes a closure member with a handle for selectively sealing the input port. In some embodiments, the reservoir includes a wrench assembly that enables the user to more easily open and close the input port and/or to

position the reservoir for filling. In some embodiments, the hydration system includes a pack into which the reservoir is received, and in some embodiments, the pack includes a hanger assembly adapted to support the reservoir within the pack.

[0015] In general, these devices require the user to draw or force liquid from the devices to achieve hydration. As described above this action often distracts the person exercising or competing from the task at hand, which may prevent proper hydration during the activity.

[0016] It is also known in the prior art to provide hydration systems which include pumps, CO₂ cartridges or elastic containers to force liquid out of the container. These systems are generally complex in nature and require the entire system to be purposely built for each activity. Many of the systems, require complex mounting hardware and modification of the bicycle or other device for proper operation, resulting in high costs to consumers.

[0017] For example, Cushing, U.S. Pat. No. 4,911,339, discloses a liquid dispensing apparatus, suitable for mounting on a bicycle which provides the rider of the bicycle a way to refresh himself without having to stop and dismount the bicycle. In a preferred embodiment, the apparatus includes a cylindrical housing containing a supply of liquid. The liquid is dispensed through a length of flexible tubing, leading from the housing to a nozzle which is disposed on the handle bars of the bicycle. A pleated bellows is disposed at the bottom of the housing and forms a chamber for holding compressed air. Each inward stroke of the bellows forces air into the chamber so as to hold the contents under pressure. Adjacent the nozzle, and integrally connected thereto is a hand operated valve which, in its normal state is closed. Depressing the valve forces the liquid out of the container, through the tubing and nozzle, to the rider.

[0018] Allemang, U.S. Pat. No. 5,326,124, discloses a water delivery apparatus which may be adapted to be mounted for use on a bicycle. The device includes a diversion valve that allows liquid to be selectively delivered through the sprayer or to a mouthpiece which may be placed in a bicycle rider's mouth. This apparatus operates with an existing standard water bottle for a bicycle and alleviates the possibility of having a stream of water misdirected, distracting the rider.

[0019] Holmes, U.S. Pat. No. 5,358,142, discloses a mouth-pressurized drinking bag which includes a collapsible inner bladder for holding a beverage, such as water. A long tube has a proximal end communicably attached to the lowest portion of the bladder, and a distal end extending away from the dispenser. A closure clamp is disposed near the distal end of the tube. A highly elastic outer case substantially and snugly surrounds the bladder. The bladder can be filled through a funnel temporarily disposed at the distal end of the tube. The filled bladder can be pressurized by blowing air through the tube, so that the bladder and the elastic outer case are expanded. After the bag is filled and pressurized, the clamp is closed. When a drink is desired, the clamp is released so that the beverage will be automatically forced by the pressurized inner bladder to flow outwardly through the tube and to the user's lips.

[0020] Bekkedahl, U.S. Pat. No. 5,755,368, discloses a liquid dispensing apparatus installed on a bicycle for use by

a person operating the bicycle, or a liquid dispensing apparatus worn by a person while operating inline skates. In the preferred embodiment, a carbonated drink in a container is shaken by the bouncing of the bicycle while moving which pressurizes the container. A tube leading from the container to a mouthpiece allows a person to take a drink. Another embodiment provides a pumping bulb to supply the pressure. A third embodiment uses a CO₂ cartridge to supply the pressure. In another embodiment for inline skates, a carbonated drink in a container is shaken by the skater to supply the pressure which forces the liquid to the mouthpiece thereby allowing a person using inline skates to take a drink.

[0021] Regalbuto, U.S. Pat. No. 5,735,440, discloses a fluid dispensing apparatus mounted to and supported by a bicycle. One embodiment of the invention incorporates one or a plurality of serially connected pressurized water reservoir assemblies, a dual piston-in-cylinder water pump assembly, a manually operated water pump lever assembly, an assembly of multiple independent, manually-activated triggers, and multiple independently aimable nozzles. The reservoir, pump, and trigger assemblies are mounted to and supported by frame members of the bicycle. The nozzles are mounted to the trigger assembly, a point on the frame, or to the helmet or body parts of the rider. The rider pressurizes the container with a hand pump and thereafter can selectively release the water through a series of tubes to nozzles for drinking or cooling the rider.

[0022] Porter, U.S. Pat. No. 4,815,635, discloses a water supply apparatus utilized in conjunction with a bicycle to enable a rider to receive either a spray of cooling water or a stream for drinking purposes. A diaphragm-type pump supplies the water. Plural reservoirs enable a plurality of liquids to be transported and utilized, such as water for cooling the rider and a sucrose solution for energy.

[0023] Hillerson, U.S. Pat. No. 6,196,474, discloses a pressurized cycling water spraying apparatus. The apparatus includes a reservoir having an interior adapted to contain a fluid, an electric generator adapted to generate electric power from the rotation of the wheel, and an electric air pump powered by the electric generator and adapted to pressurize the interior of the reservoir by a flow of air from the pump through an air tube and into the reservoir. Pressurized fluid is conveyed from the reservoir through a first tube to a fluid valve adapted to block or pass the pressurized fluid. With the valve in an open position, fluid is further conveyed through a second fluid tube to a spray nozzle adapted to provide a stream of fluid to the rider of the cycling device.

[0024] It is also known in the medical art to pressurize bags of intravenous fluids for delivery to the human body. These devices are generally aimed at delivering a precise and steady flow of liquid over an extended period of time. These devices typically include large accumulators and flow restrictor valves for the precise consistency required and are not suitable for exercise and/or competition fluid delivery requirements.

[0025] Examples of these devices are shown in Beall et al., U.S. Pat. No. 3,153,414, Hinck et al., U.S. Pat. No. 4,090,514, Leibinsohn, U.S. Pat. No. 4,507,116, and Laing, U.S. Pat. No. 5,059,182.

[0026] Such prior art systems have not met all of the needs of manufacturers to provide a product that can be easily

manufactured, packaged and shipped; or the needs of consumers requiring economical and versatile kits for modifying their pre-existing personal hydration systems. Paramount among such needs is an easy to assemble kit which can be easily assembled by an average person without the complex and difficult to assemble mechanisms associated with the prior art.

[0027] There are also commercial considerations that must be satisfied by any viable pressurized personal hydration system or kit; considerations which are not entirely satisfied by state of the art products. The pressurized personal hydration system or kit for converting a non-pressurized hydration system into a pressurized personal hydration system must be formed of relatively few component parts that are inexpensive to manufacture by conventional techniques.

[0028] In addition, there are ergonomic needs that a pressurized hydration system must satisfy in order to achieve acceptance by the end user. The system must be easily and quickly assembled using minimal hardware, and requiring a minimal number of tools. Further, the system must not require excessive strength or specialized knowledge to assemble. Moreover, the system must assemble together in such a way so as not to detract from the internal storage volume of the resulting pressurized personal hydration system or otherwise negatively affect the utility of the pressurized personal hydration system.

[0029] The present invention is directed to a pressurized personal hydration system and kit for converting a pre-existing non-pressurized personal hydration system into a pressurized personal hydration system to overcome the drawbacks of the prior art in order to provide an exercising or competing person with cool liquids at any time, without compromising his or her concentration or safety.

BRIEF DESCRIPTION OF THE INVENTION

[0030] The present invention provides a pressurized personal hydration system or kit for converting a non-pressurized personal hydration system into a pressurized hydration system. The pressurized personal hydration system includes an enclosure made from flexible material, preferably adapted to be secured to the back or torso of the user. The enclosure typically includes an opening for insertion of a first bladder and a second bladder positioned in a juxtaposed relationship within the enclosure. In the preferred embodiment, the first bladder is constructed to contain a supply of liquid. A first end of a liquid supply tube is fluidly attached to the first bladder while the second end of the liquid supply tube includes a mouth operated valve. The mouth operated valve is generally constructed and arranged to be operated by an operator's mouth to control the flow of liquid flowing from the first bladder to the operator's mouth. The second bladder includes a pressure supply tube, the pressure supply tube having a first end fluidly coupled to the second bladder and a second end fluidly coupled to a hand-operable pumping bulb. In this manner, pumping of the bulb inflates the second bladder, pressurizing the supply of liquid in the first bladder; selective operation of the mouth operated valve releases a portion of the pressurized supply of liquid for hydration of the person.

[0031] In an alternative embodiment the pressurized hydration system assembly may include a compartmental bladder. The compartmental bladder includes a first com-

partment and a second compartment positioned juxtaposed with respect to each other within the enclosure. The first compartment is constructed and arranged to contain a supply of liquid and includes a liquid supply tube having a first end and a second end. The first end of said liquid supply tube is fluidly coupled to the first compartment while the second end of the flow tube includes a mouth operated valve constructed and arranged to be held in a person's mouth. The second compartment includes a pressure supply tube, the pressure supply tube includes a first end fluidly coupled to the second compartment and a second end fluidly coupled to a hand-operable pumping bulb. This construction insures the juxtaposed positioning of the compartments and thus insures pressurization of the first compartment.

[0032] The kit for converting a non-pressurized personal hydration system into a pressurized hydration system generally includes the second bladder as described above. The second bladder includes a pressure supply tube, the pressure supply tube having a first end fluidly coupled to the second bladder and a second end fluidly coupled to a hand-operable pumping bulb. The second bladder may be placed in a juxtaposed relationship with a first liquid bladder in a pre-existing personal hydration system. In this manner, operation of the pumping bulb inflates the second bladder, pressurizing the supply of liquid in the first bladder and selective operation of the mouth operated valve releases a portion of the pressurized supply of liquid for hydration of an operator.

[0033] In an alternative embodiment the pressurized hydration kit may include a compartmental bladder. The compartmental bladder is constructed to include a first compartment and a second compartment positioned juxtaposed with respect to each other. The first compartment is constructed and arranged to contain a supply of liquid and includes a liquid supply tube having a first end and a second end. The first end of said liquid supply tube is fluidly coupled to the first compartment while the second end of the flow tube includes a mouth operated valve constructed and arranged to be held in a person's mouth. The second compartment includes a pressure supply tube, the pressure supply tube includes a first end fluidly coupled to the second compartment and a second end fluidly coupled to a hand-operable pumping bulb. Assembly of the kit requires the liquid bladder within a pre-existing personal hydration system to be removed from the enclosure. After removal, the compartmental bladder is inserted into the enclosure and positioned similarly to the bladder being replaced. This construction insures the juxtaposed positioning of the compartments and thus insures pressurization of the first compartment.

[0034] Accordingly, it is an objective of the present invention to provide a pressurized personal hydration assembly.

[0035] It is a further objective of the present invention to provide a kit to convert a pre-existing non-pressurized personal hydration system into a pressurized personal hydration system.

[0036] Yet a further objective of the present invention is to provide a pressurized hydration system kit that may be easily and quickly assembled using minimal hardware, and requiring a minimal number of tools.

[0037] Still yet a further objective of the present invention is to provide a pressurized hydration system and kit that

assembles together in such a way so as not to detract from the internal storage volume of the resulting pressurized personal hydration system or otherwise negatively affect the utility of the pressurized personal hydration system.

[0038] Another objective of the present invention is to provide a pressurized personal hydration system and kit which allows an end user to customize a new or pre-existing personal hydration system to suit an individual application.

[0039] Other objectives and advantages of the present invention will become apparent from the following description taken in conjunction with the accompanying drawings wherein are set forth, by way of illustration and example, certain embodiments of this invention. The drawings constitute a part of this specification and include exemplary embodiments of the present invention and illustrate various objects and features thereof.

BRIEF DESCRIPTION OF THE FIGURES

[0040] **FIG. 1** is a perspective view of a pre-existing back mounted water hydration system;

[0041] **FIG. 2** is a section view taken along line 1-1 of **FIG. 1**;

[0042] **FIG. 3** is a perspective view, illustrating one embodiment of the pressure bladder utilized in the instant invention;

[0043] **FIG. 4** is a rear view illustrating installation of one embodiment of the instant invention;

[0044] **FIG. 5** is a section view taken along line 1-1 of **FIG. 1**, illustrating the installed position of the pressure bladder shown in **FIG. 3** of the instant invention;

[0045] **FIG. 6** is a perspective view, partially sectioned, illustrating one embodiment of a compartmentalized pressure bladder of the instant invention;

[0046] **FIG. 7** is a rear view illustrating installation of the compartmentalized pressure bladder shown in **FIG. 6**;

[0047] **FIG. 8** is a section view taken along line 1-1 of **FIG. 1**, illustrating the installed position of the pressure bladder shown in **FIG. 6** of the instant invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0048] While the present invention is susceptible of embodiment in various forms, there is shown in the drawings and will hereinafter be described a presently preferred embodiment with the understanding that the present disclosure is to be considered an exemplification of the invention and is not intended to limit the invention to the specific embodiments illustrated.

[0049] **FIGS. 1 and 2** which are now referenced illustrate perspective and section views of a pre-existing back mounted personal hydration system, generally referenced as **10**. The pre-existing personal hydration systems generally include an enclosure **12** made of flexible material. The enclosure is constructed to include one or more adjustable straps **14** which allow the enclosure to be secured to a user's back or torso area. The enclosure also includes at least one aperture **16** for insertion of a first bladder **18**. The enclosure is also provided with a suitable means of closure for the

aperture such as, hook and loop, snaps, ties or other means well known in the art. The first bladder is constructed to contain a supply of liquid. A first end **20** of a liquid supply tube **22** is fluidly attached to the first bladder while the second end **24** of the liquid supply tube includes a mouth operated valve **26**. The mouth operated valve is generally constructed and arranged to be operated by an operator's mouth to allow the liquid to be drawn from the first bladder to the operator's mouth. To permit refilling, the first bladder also includes a fill port **28** and a cooperating closure member **30**.

[0050] Referring to **FIG. 3-5**, one embodiment of a kit for pressurizing the fluid contained in a first bladder of a pre-existing personal hydration system is illustrated. The kit includes a second bladder **32**. The second bladder is constructed from a flexible and/or elastic material such as plastic, rubber, silicone or the like. It should be noted that while the second bladder is illustrated as being generally rectangular in shape, the size and shape of the bladder may vary depending upon the enclosure into which the bladder will be placed and the volume of liquid that the first bladder is designed to hold. Typically, the first bladder will be constructed to hold between 25 and 200 ounces of liquid and the second bladder will preferably be constructed to contain a similar volume of compressed air. In the most preferred embodiment, the bladder is sized and shaped to fit in a parallel and juxtaposed position with respect to the first bladder **18** as shown in **FIGS. 4 and 5**. The second bladder includes a pressure supply tube **34** for supplying pressurized gas to the second bladder. The pressure supply tube includes a first end **36** fluidly coupled to the second bladder and a second end **38** fluidly coupled to a hand-operable pumping bulb **40**. The pressure supply tube may be integrally formed or otherwise fixedly attached to the bladder, or alternatively may be removeable and reattachable to the second bladder by means well known in the art.

[0051] Referring to **FIGS. 4 and 5**, installation of the kit shown in **FIG. 3** is illustrated. Installation of the kit comprises opening the enclosure aperture **16** (**FIG. 2**) and sliding the second bladder **32** between an inner enclosure surface **42** and the most forward surface **44** of the first bladder **18** so that the second bladder sets juxtaposed to both surfaces. After insertion of the second bladder the aperture can be re-secured. Pressurizing the personal hydration system merely requires several squeezes of the hand-operable pumping bulb **40** to inflate the second bladder **32**. Thereafter the liquid may be released from the first bladder **18** by operation of the mouth operated valve **26**. In this manner liquid from the first bladder is forced through the liquid supply tube to the user's mouth.

[0052] Referring to **FIG. 6**, an alternative embodiment of the instant invention is illustrated. In this embodiment the pressurized hydration kit includes a compartmental bladder **50**. The compartmental bladder is constructed to include a first compartment **52** and a second compartment **54** positioned juxtaposed with respect to each other. The first compartment **52** is constructed and arranged to contain a supply of liquid and includes a liquid supply tube **22** having a first end **20** and a second end **24**. The first end of the liquid supply tube is fluidly coupled to the first compartment while the second end of the liquid supply tube includes a mouth operated valve **26** constructed and arranged to be held in a person's mouth. For filling the compartment, the first com-

partment also includes a fill port **28** through which fluid may be added or removed from the first compartment and a cooperating closure member **30**. The fill port should be suitably sized to allow cleaning of the internal surfaces of the first compartment. As shown, the fill port may include a neck **29**. The neck may be integrally formed with the compartmental bladder or alternatively may be joined to the compartmental bladder via a suitable sealing process. Suitable sealing processes include, but should not be limited to, adhesives, heat sealing, welding, and suitable combinations thereof. The closure member **30** preferably forms a water-tight seal with the fill port **28**. Engagement between the neck and the sealing member may be provided with threads, bayonet mounts and the like. The sealing member may also include a gasket, sealing ring, o-ring or any other sealing device well known in the art for creating water-tight closures.

[0053] The second compartment **54** includes a pressure supply tube **34**, the pressure supply tube includes a first end **36** fluidly coupled to the second compartment and a second end **38** fluidly coupled to a hand-operable pumping bulb **40**. The compartmental bladder should be suitably flexible and may be constructed of, but should not be limited to, various plastics, rubbers, silicones and the like. It should be noted that while the compartmental bladder is illustrated as being generally rectangular in shape, the size and shape of the bladder may vary depending upon the enclosure into which the bladder will be placed and the volume of liquid that the first compartment is designed to hold. Typically, the first compartment will be constructed to hold between 25 and 200 ounces of liquid and the second compartment will preferably be constructed to contain a similar volume of compressed air.

[0054] Referring to **FIGS. 7-8**, assembly of the alternative embodiment kit is illustrated. Assembly of the kit requires the first bladder **18** within a pre-existing personal hydration system **10** to be removed from the enclosure **12**. After removal, the compartmental bladder **50** is inserted into the enclosure and positioned similarly to the first bladder **18** being replaced. The aperture of the enclosure is thereafter secured. Pressurizing the personal hydration system merely requires several squeezes of the hand-operable pumping bulb **40** to inflate the second compartment **54**. Thereafter the liquid may be released from the first bladder **18** by operation of the mouth operated valve **26**. In this manner liquid from the first bladder is forced through the liquid supply tube to the user's mouth. This construction insures the juxtaposed positioning of the compartments and thus insures pressurization of the first compartment.

[0055] All patents and publications mentioned in this specification are indicative of the levels of those skilled in the art to which the invention pertains. All patents and publications are herein incorporated by reference to the same extent as if each individual publication was specifically and individually indicated to be incorporated by reference.

[0056] It is to be understood that while a certain form of the invention is illustrated, it is not to be limited to the specific form or arrangement herein described and shown. It will be apparent to those skilled in the art that various changes may be made without departing from the scope of the invention and the invention is not to be considered limited to what is shown and described in the specification.

[0057] One skilled in the art will readily appreciate that the present invention is well adapted to carry out the objectives and obtain the ends and advantages mentioned, as well as those inherent therein. The embodiments, methods, procedures and techniques described herein are presently representative of the preferred embodiments, are intended to be exemplary and are not intended as limitations on the scope. Changes therein and other uses will occur to those skilled in the art which are encompassed within the spirit of the invention and are defined by the scope of the appended claims. Although the invention has been described in connection with specific preferred embodiments, it should be understood that the invention as claimed should not be unduly limited to such specific embodiments. Indeed, various modifications of the described modes for carrying out the invention which are obvious to those skilled in the art are intended to be within the scope of the following claims.

What is claimed is:

1. A pressurized personal hydration system comprising:

an enclosure made of flexible material, said enclosure including at least one opening for insertion of a first bladder and a second bladder, said second bladder positioned juxtaposed to said first bladder within said enclosure, wherein said first bladder is constructed and arranged to contain a supply of liquid, said first bladder including a liquid supply tube having a first end and a second end, said first end of said liquid supply tube fluidly coupled to said first bladder, said second end of said flow tube including a mouth operated valve constructed and arranged to be held in a person's mouth, said second bladder including a pressure supply tube, said pressure supply tube having a first end fluidly coupled to said second bladder, said pressure supply tube having a second end fluidly coupled to a hand-operable pumping bulb;

whereby operation of said pumping bulb inflates said second bladder, pressurizing said supply of liquid in said first bladder, whereby selective operation of said mouth operated valve releases a portion of said pressurized supply of liquid for hydration of an operator.

2. The pressurized personal hydration system in accordance with claim 1 wherein said enclosure is constructed and arranged to attach to the back of a user.

3. The pressurized personal hydration system in accordance with claim 2 wherein said enclosure is a backpack.

4. The pressurized personal hydration system in accordance with claim 1 wherein said enclosure is constructed and arranged to attach to the torso of a user.

5. The pressurized personal hydration system in accordance with claim 4 wherein said enclosure is a fanny-pack.

6. A pressurized personal hydration system comprising:

an enclosure made of flexible material, said enclosure including at least one opening for insertion of a compartmental bladder, said compartmental bladder including a first compartment and a second compartment positioned juxtaposed to said first compartment within said enclosure, wherein said first compartment is constructed and arranged to contain a supply of liquid, said first compartment including a liquid supply tube having a first end and a second end, said first end of said liquid supply tube fluidly coupled to said first compartment, said second end of said flow tube including a mouth

operated valve constructed and arranged to be held in a person's mouth, said second compartment including a pressure supply tube, said pressure supply tube having a first end fluidly coupled to said second compartment, said pressure supply tube having a second end fluidly coupled to a hand-operable pumping bulb;

whereby operation of said pumping bulb inflates said second compartment pressurizing said supply of liquid in said first compartment, whereby selective operation of said mouth operated valve releases a portion of said pressurized supply of liquid for hydration of an operator.

7. The pressurized personal hydration system in accordance with claim 6 wherein said enclosure is constructed and arranged to attach to the back of a user.

8. The pressurized personal hydration system in accordance with claim 7 wherein said enclosure is a backpack.

9. The pressurized personal hydration system in accordance with claim 6 wherein said enclosure is constructed and arranged to attach to the torso of a user.

10. The pressurized personal hydration system in accordance with claim 9 wherein said enclosure is a fanny-pack.

11. A kit for converting a pre-existing non-pressurized personal hydration system into a pressurized personal hydration system, wherein said pre-existing personal hydration system includes an enclosure made of flexible material, said enclosure including at least one opening for insertion of a first bladder, said first bladder including a liquid supply tube having a first end and a second end, said first end of said liquid supply tube fluidly coupled to said first bladder, said second end of said flow tube including a mouth operated valve constructed and arranged to be held in a person's mouth, wherein said kit comprises:

a second bladder, said second bladder constructed and arranged to be positioned juxtaposed to said first bladder within said enclosure, said second bladder including a pressure supply tube, said pressure supply tube having a first end fluidly coupled to said second bladder, said pressure supply tube having a second end fluidly coupled to a hand-operable pumping bulb;

whereby operation of said pumping bulb inflates said second bladder pressurizing a supply of liquid in said first bladder, whereby selective operation of said mouth operated valve releases a portion of said pressurized supply of liquid for hydration of an operator.

12. The pressurized personal hydration system in accordance with claim 11 wherein said enclosure is constructed and arranged to attach to the back of a user.

13. The pressurized personal hydration system in accordance with claim 12 wherein said enclosure is a backpack.

14. The pressurized personal hydration system in accordance with claim 11 wherein said enclosure is constructed and arranged to attach to the torso of a user.

15. The pressurized personal hydration system in accordance with claim 14 wherein said enclosure is a fanny-pack.

16. A kit for converting a pre-existing non-pressurized personal hydration system into a pressurized personal hydration system, wherein said pre-existing personal hydration system includes an enclosure made of flexible material, said enclosure including at least one opening for insertion of a first bladder, said first bladder including a liquid supply tube having a first end and a second end, said first end of said liquid supply tube fluidly coupled to said first bladder, said second end of said flow tube including a mouth operated valve constructed and arranged to be held in a person's mouth, wherein said kit comprises:

a compartmental bladder, said compartmental bladder including a first compartment and a second compartment positioned juxtaposed to said first compartment within said enclosure, wherein said first compartment is constructed and arranged to contain a supply of liquid, said first compartment including a liquid supply tube having a first end and a second end, said first end of said liquid supply tube fluidly coupled to said first compartment, said second end of said flow tube including a mouth operated valve constructed and arranged to be held in a person's mouth, said second compartment including a pressure supply tube, said pressure supply tube having a first end fluidly coupled to said second compartment, said pressure supply tube having a second end fluidly coupled to a hand-operable pumping bulb;

whereby said first bladder is removed from said enclosure and replaced with said compartmental bladder;

whereby operation of said pumping bulb inflates said second compartment pressurizing said supply of liquid in said first compartment, whereby selective operation of said mouth operated valve releases a portion of said pressurized supply of liquid for hydration of an operator.

17. The pressurized personal hydration system in accordance with claim 16 wherein said enclosure is constructed and arranged to attach to the back of a user.

18. The pressurized personal hydration system in accordance with claim 17 wherein said enclosure is a backpack.

19. The pressurized personal hydration system in accordance with claim 16 wherein said enclosure is constructed and arranged to attach to the torso of a user.

20. The pressurized personal hydration system in accordance with claim 19 wherein said enclosure is a fanny-pack.

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