R. PALMER.

RECTAL SYRINGE.

APPLICATION FILED JUNE 6, 1919.

1,373,018. Patented Mar. 29, 1921.

Fig: 1.

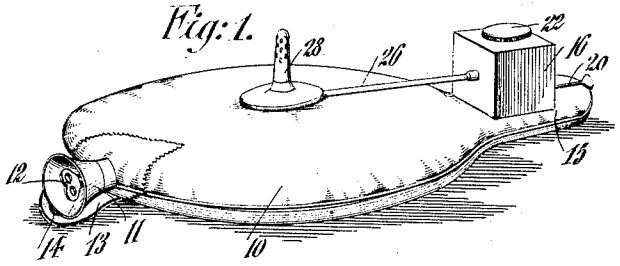


Fig: 5.

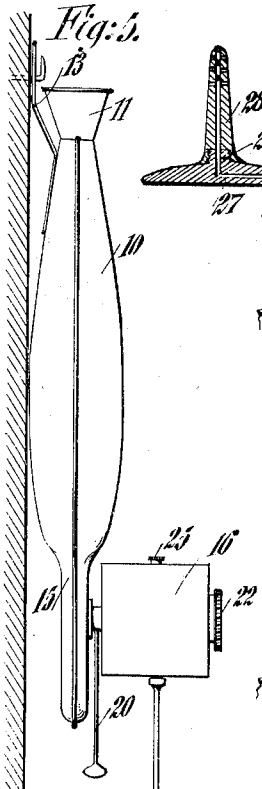


Fig: 2.

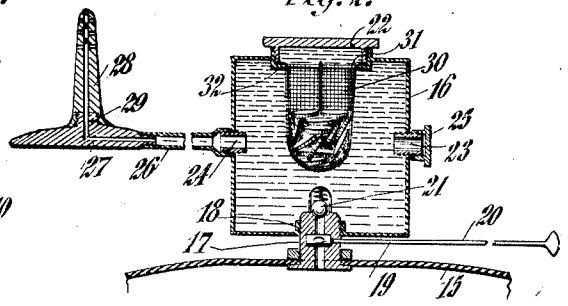


Fig: 3.

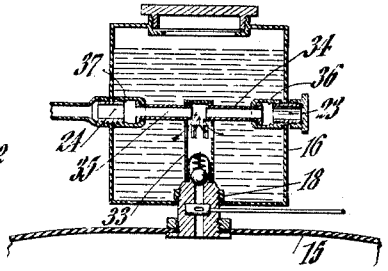


Fig: 6.

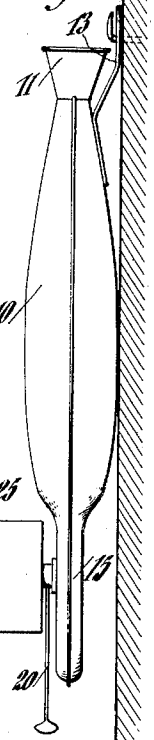


Fig: 4.

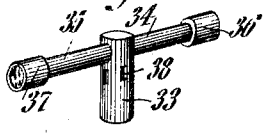
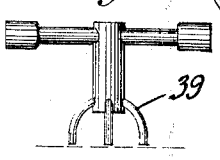


Fig: 4a.



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RECTAL SYRINGE.

1,373,018. Specification of Letters Patent. Patented Mar. 29, 1921.

Application filed June 6, 1919. Serial No. 302,189.

To all whom it may concern:

Be it known that I, RICHARD PALMER, a citizen of the United States, residing at Teaneck, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Rectal Syringes, of which the following is a specification.

The present invention relates to improvements in rectal syringes, and particularly such syringes of the type in which the nozzle rests upon a recumbent bag, the weight of the person using the same, causing the water to flow from the bag through the nozzle.

An object of the invention is to provide an improved syringe of this character wherein means will be provided which will permit other substances, such as medicinal tablets, oils or the like to be mixed with the liquid passing from the bag to the nozzle, without allowing such substances to come into contact with the rubber bag. A further object is to provide means by which the flow of liquid may be regulated or entirely stopped as desired.

As these advantages are also desirable in a syringe of the fountain type wherein the bag is suspended at a height and the flow of water depends upon the force of gravity, I propose to provide means whereby my improved syringe may be convertible into this suspended type, commonly called the fountain syringe. It is a still further object to provide an improved form of bag which may be used with more comfort and convenience and controlled with greater ease than the previous types of such bags in use.

With these and other objects in view my invention is shown in the accompanying drawings and will be hereinafter more fully described, with reference thereto, and finally pointed out in the claims.

In the drawings.

Figure 1 is a perspective view of my improved invention.

Fig. 2 is a detail sectional view with parts broken away.

Fig. 3 is a similar view showing the same provided with an attachment to be used when a liquid is to be combined with the water.

Fig. 4 is a perspective view of the attachment.

Fig. 4ª shows a slightly modified form of attachment member.

Fig. 5 is a side view showing my invention used as a fountain syringe.

Fig. 6 is a similar view showing a slightly different manner of using the nozzle.

Similar reference characters indicate corresponding parts throughout the several figures of the drawings.

Referring to the drawings, and more particularly to Fig. 1 thereof, my invention comprises a bag 10, formed in the usual manner of rubber, and provided at one end with neck and funnel 11 fitted with a stopper 12, and a tab 13, having an eyelet 14 therein for hanging the same up when not in use or when used as a fountain syringe, as hereinafter more fully described. The other end of the bag is contracted as at 15, being of less width and thickness than the main body portion of the bag, and giving to the bag somewhat the appearance of a bicycle saddle.

A box or receptacle 16 is connected to the contracted end 15 of the bag, by means of a bushing 17, from which the receptacle may be readily detached when desired for purposes of cleaning, by means of the screw threads 18. A valve 19 for controlling the flow of water from the bag into the receptacle is provided in the bushing 17, the handle 20 of which is elongated, and extends forwardly of the receptacle where it may be manipulated with ease by the person using the syringe. A check valve 21 is provided on the upper end of the bushing which permits the flow of water under pressure into the receptacle, but prevents the return of the water in the receptacle to the bag, so that the same is free from any deteriorating effect the mixture in the receptacle might have on the rubber.

A cap 22 is provided on the upper side of the receptacle and is screw threaded thereon to make a water tight connection, and at the side there are provided bushings 23 and 24, the ends of which project into and outside of the receptacle and are screw threaded.

A closure cap 25 is screwed onto the exterior end of the bushing 23, and a tube 26 is screwed onto the exterior end of the bushing 24, which tube may be either flexible or stiff as desired. At the outer end of the tube 26, the base piece 27 of the nozzle 28 is secured, the base being of sufficient width to rest in upright position on the bag 10 without being otherwise secured. It will be noted that the nozzle 28 is detachable from

the base piece, being screwed thereon, the screw threaded projection 29 of the base being of a corresponding size to the threaded ends of the bushings 23 and 24.

A sack 30 of wire netting or the like is suspended within the receptacle being provided with hooked portions 31, which engage the annular flange 32 at the mouth of the receptacle. This sack 30 is adapted to contain medicinal tablets, or other suitable substances, it is desired to combine with the liquid in the bag.

In operation, the liquid in the bag under pressure caused by the weight of the person using the same, is forced through the bushing 17, the valve 19 of which is first opened, and the check valve is opened so that the water enters the receptacle 16 combining with the substance contained therein and in this combined state passes through the tube 26 and out of the nozzle 28. As the liquid passing through the receptacle is continually moving therethrough the medicinal substance combines gradually with all the liquid in the bag, resulting in a uniform mixture.

When it is desired to use another liquid, such as oil, with the liquid contained in the bag, the sack 30 is removed from the receptacle and an attachment shown in Figs. 3 and 4 is placed therein. This attachment consists of an upright tubular member 33 closed at the top and adapted to be engaged snugly over the cage of the check valve 21, and against the upper side of the bushing 17. Laterally extending tubular portions 34 and 35 are provided at the upper end of the tubular member 33, which are connected at their outer ends to the inner threaded portions of the bushings 23 and 24 respectively, by means of interiorly threaded slidable sleeves 36 and 37. Openings 38 are provided in the tubular member 33, through which the liquid in the receptacle is gradually drawn by the passage of the liquid from the bag and carried therewith. In the slightly modified construction shown in Fig. 4ª, a number of tubular extensions 39 are provided on the tubular member 33 which extend approximately to the bottom of the receptacle. By placing a clamp on the tube 26 or having a valve therein which may be closed before use of the syringe, the liquid is prevented from entering the tubular member 33. When the valve is opened and the liquid passes out of the bag 10 a siphoning effect is produced which causes the liquid in the receptacle to be gradually and uniformly mixed with said liquid passing from the bag.

When it is desired to use the invention as a fountain syringe, the bag 10 is suspended at a height by means of the tab 13 as indicated in Fig. 5, the cap 25 is removed from the bushing 23 and placed upon the bushing 24 from which the tube 26 is removed, or if desired the receptacle may be merely turned, a half turn on the bushing 17 which will bring it into the correct position. A tube 40 is screwed to the bushing 23, or 24, if the receptacle is turned and the tube 26 and nozzle are secured to the end of the tube.

If desired the nozzle 28 may be removed from the base and placed upon the end of the tube. It is unnecessary in this case to remove the tube 26 from the receptacle, the opening of the same being closed by screwing the cap 25 on the threaded projection 29 of the base.

My improved invention is simple and effectual in use, and all of the parts may be kept in a thoroughly sanitary condition, which is highly essential in a device of this character. The form of the bag will prove especially desirable, permitting the same to be used in a natural and comfortable position, and enabling a convenient and positive control of the flow of liquid.

I have illustrated and described a preferred and satisfactory form of my invention, but it is obvious that changes may be made therein within the spirit and scope thereof, as defined in the appended claims.

I claim:

1. A bag comprising a body portion adapted to contain a liquid and having a central sustaining part, said body portion provided with a filling neck extending from one part thereof and a projecting portion at another part adapted to fit between the legs, and a nozzle in communication with the projecting portion and adapted to rest upon the central sustaining portion of the bag body.

2. A bag comprising a body portion in the form of a saddle seat to provide a forwardly projecting portion for engagement between the legs and acting as a support, a nozzle adapted to be placed in communication with the interior of the projecting portion, and controlling means supported on the projecting portion.

3. In a syringe, a receptacle having a forwardly projecting portion adapted to contain a liquid, a nozzle adapted to rest on the receptacle, and intermediate means mounted on said projecting portion and adapted to contain a substance to be mixed with the liquid, and means connecting said nozzle and said intermediate means, and said intermediate means and said projecting portion of the receptacle.

4. In a syringe, a bag adapted to contain a liquid having means to fill the same and provided with a forwardly-projecting portion in communication with the bag, a medicament holder on the forwardly-projecting portion in communication therewith and receiving liquid therefrom, a nozzle in communication with the medicament holder and receiving

liquid mixed with the medicament, and means to control the flow of the admixed liquid to the nozzle associated with the holder.

5. In a syringe, a receptacle having a forwardly projecting portion and adapted to contain a liquid, a nozzle, and a holder for a substance to be mixed with the liquid mounted on and communicating with said forwardly projecting portion and having means whereby the nozzle may be connected to either the rear or forward parts of the holder accordingly as the receptacle is used as a seat or is suspended at an elevation.

6. In a syringe, a receptacle having a forwardly projecting portion and adapted to contain a liquid, a nozzle, and a holder for a substance to be mixed with the liquid mounted to turn on and communicating with said forwardly projecting portion.

In testimony that I claim the foregoing as my invention, I have signed my name hereunder.

RICHARD PALMER.