

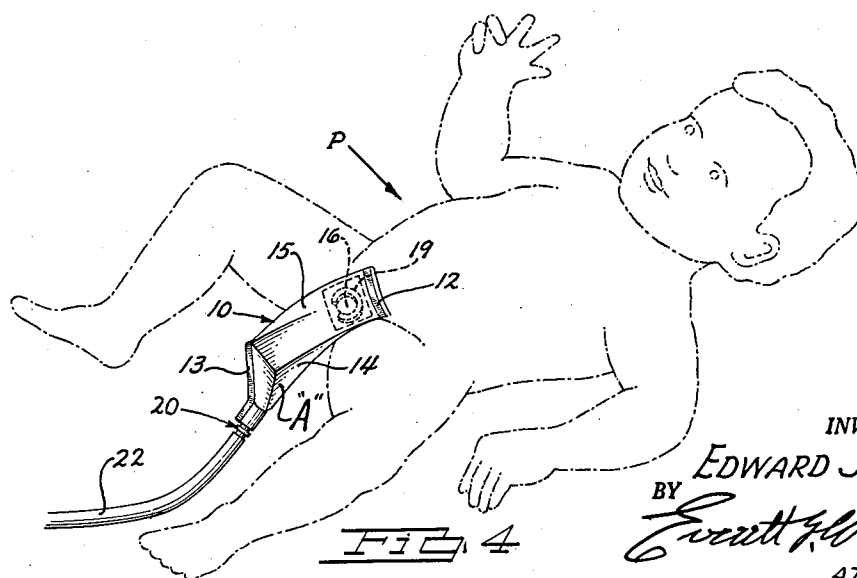
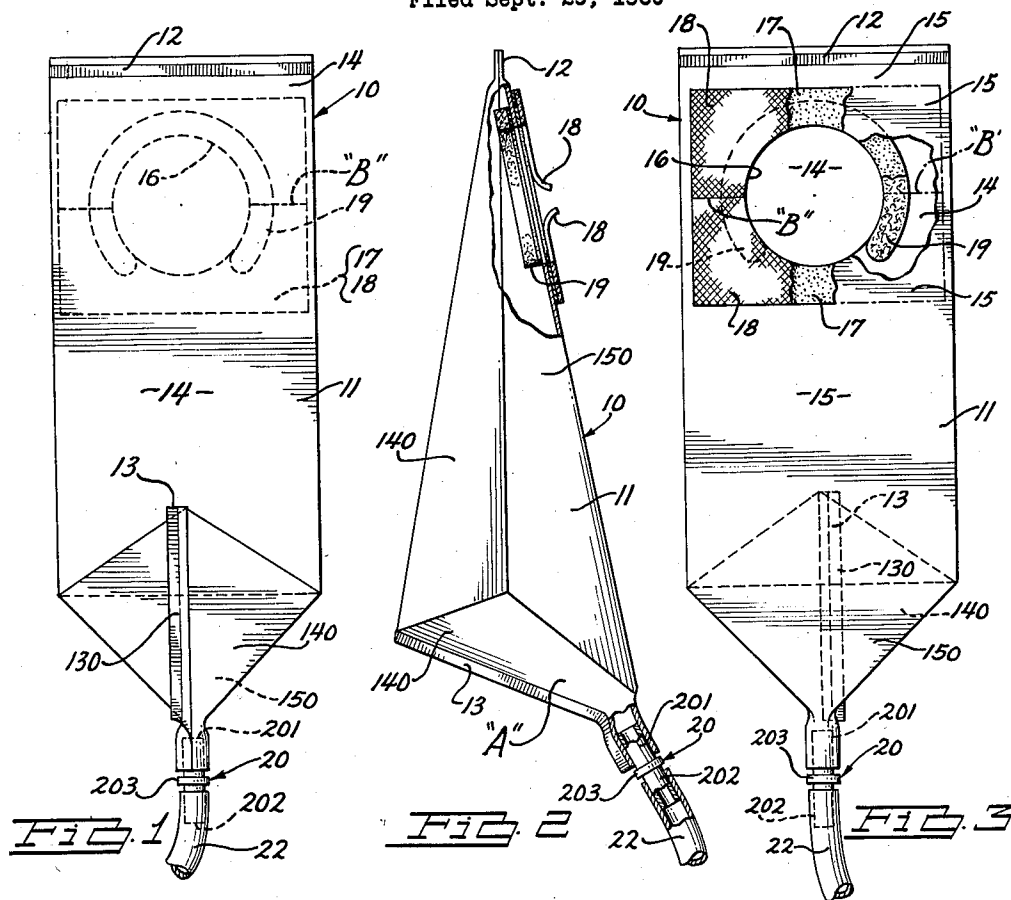
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LONG TERM URINE COLLECTORS

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LONG TERM URINE COLLECTORS

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The invention residing in U.S. Patent No. 2,877,769, issued March 17, 1959, to Edward J. Hill, the applicant herein, was directed specifically to pediatric urine collectors employable to take six, twelve, or twenty-four hour urine samples from infants and small children. The said invention has been extremely satisfactory for its purpose as evidenced by wide adoption and repeated use of the pediatric urine collector in many hospitals.

Regardless of the fact that catheterization of infants and small children is highly undesirable because of the danger of infection, the resort to catheterization oftentimes becomes a necessity when the bladder drains either continuously or frequently by periodic spurts out of control of the patient. Furthermore, with certain critically ill adult patients catheterization has adverse psychological effects creating extreme nervousness that should be avoided. In such instances the use of rubber sheets and frequently changed absorbent pads are generally employed to avoid catheterization, which media are quite unsatisfactory both to the patient and the hospital nursing staff.

With the foregoing in view, the primary object of the invention is to provide an extremely simple and highly effective long term urine collector which eliminates the necessity for catheterization, which is convenient and sanitary to use, and which substantially eliminates all discomfort to the patient while in use.

A further object of the invention is to provide a long term urine collector which is usable equally as well with either male or female patients.

Another object of the invention is to provide a long term urine collector that is susceptible to sanitary packaging and storage before use, that occupies little space either in storage or when applied to the patient, which is self-emptying by gravity, or which may be emptied at intervals by the application thereto of a suitable hand vacuum pump.

Other objects of the invention will become apparent by reference to the following detailed description taken in connection with the accompanying drawing, in which:

FIG. 1 is a front elevational view of a long term urine collector embodying the invention folded for storage and shipment in sanitary boxes or containers.

FIG. 2 is a side elevational view of the long term urine collector unfolded prior to application to the patient, and with the adhesive protector partially removed.

FIG. 3 is a rear elevational view of the long term urine collector in its folded condition.

FIG. 4 is a view in perspective indicating the application of the long term urine collector to an infant patient.

Referring now to the drawing wherein like reference numerals and characters refer to like and corresponding parts throughout the several views, the long term urine collector 10 illustrating the invention consists of a tubular pouch 11 preferably of transparent "Pliofilm" or some other heat sealable material provided with a transverse top seal 12 and a bottom seal 13 disposed normal to the top seal 12 and sloping downwardly from the front wall 14 to the rear wall 15 thereof so as to form the said tubular pouch 11 with an integral funnel "A" having its drainage point "B" at the bottom rear of the said pouch 11. It will be noted that the front wall 14 is somewhat shorter than the rear wall 15 so as to form the funnel "A."

This construction provides a urine collector pouch 11

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with a front wall 14 and a rear wall 15 foldable into a substantially flat assembly as shown in FIGS. 1 and 3 but unfoldable and expansible to provide at the lower end of the said pouch 11 the diagonally downwardly and rearwardly disposed funnel "A." In folding the pouch 11 into a flattened state, it is folded at its lower or bottom seal 13 into adjacent front and rear triangles 140 and 150 with the bottom seal 12 laterally folded over on itself at 130.

The upper portion of the back of the rear wall 15 of the said pouch 11 is provided with an adhesive 17 preferably of a type that is non-irritating to the skin. A suitable adhesive guard 18-19 preferably divided into upper and lower portions at "B" as shown in FIGS. 1, 2 and 3 is disposed over the adhesive 17 from which the said adhesive guard 18-19 is stripped just prior to the application of the long term urine collector to the patient. The rear wall 15, the adhesive 17 and the adhesive guard 18-19 are apertured at 16 to fit over and accommodate the genito-urinary organ of the patient, namely, the penis of the male or the vulva of the female, hereinafter termed the uro-genital organ or organs.

An arch shaped pad 19 of foam rubber or other suitable material is preferably adhered to the inside of the rear wall 15 of the pouch 11 around the major portion of the aperture 16 therein except the lower part thereof, which pad is particularly useful in preventing the front panel 14 from conforming to the vulva of a female patient when the long term urine collector is placed thereover.

The lower portion of the funnel "A" is wrapped around and adhered in sealed relationship to a tubular drainage connector 20 at the upper end 201 thereof. The lower end 202 of the drainage connector 20 frictionally accommodates in sealed relationship therearound a drainage tube 22 through which urine from the long term urine collector 10 is drained into a suitable container, not shown. The drainage tube 22 may be of any required length, and, in the event the patient is in a position that drainage of urine therethrough by gravity is not practicable, a bulb or other type drainage pump (not shown) may be attached to the free end of the drainage tube 22, and urine collected in the long term urine collector 10 may be withdrawn therefrom. The said drainage connector 20 is preferably provided with an outer circumferential rib 203 between the upper and lower ends thereof for gripping the same when applying the drainage tube 22 to the lower end 202 thereof or when removing it therefrom.

In applying the long term urine collector 10 to the patient P, the skin around its uro-genital organ is thoroughly cleaned and dried. The said urine collector 10 is removed from its sanitary shipping or storage container, not shown, and is expanded from its folded attitude shown in FIGS. 1 and 3 to its application attitude shown in FIG. 2. At this time, the nurse may enlarge the aperture 16 in the rear wall 15 of the pouch 11 if required to completely encircle the uro-genital organ of the patient. The upper adhesive protector 18 is preferably first removed from the rear wall 15 of the pouch 11, and the upper portion of the said rear wall 15 of the pouch 11 is then adhered to the patient's torso just above its uro-genital organ after first disposing the said organ within the said aperture 16. The bottom adhesive protector 18 is then removed from the rear wall 15 of the pouch 11, and the remaining portion of the said rear wall 15 is pressed against the patient's skin surrounding the lower portion of its uro-genital organ.

As indicated in FIG. 4, when the long term urine collector 10 is in use, the upper seal 12 of the pouch 11 is generally horizontally disposed with respect to the patient's torso, and the bottom seal 13 is generally vertically disposed. This prevents chafing of the patient's legs as it moves from one position to another in bed. The pad 19

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prevents the upper portion of the front panel 14 of the pouch 11 of the long term urine collector 10 from tending to seal over the vulva of a female patient when the said long term urine collector is in use. The urine drainage tube 22 is disposed by the nurse in the proper direction according to the most comfortable posture the patient desires to assume, or according to the posture of the patient permitted by the doctor or surgeon. The urine collecting container, not shown, into which the free end of the urine drainage tube is positioned may be located in any convenient place below the elevation of the patient. However, as hereinbefore indicated, if gravity drainage from the long time urine collector is not practicable, then urine which collects therein may be vacuum pumped therefrom through the free end of the drainage tube.

Although but a single embodiment of the invention has been disclosed and described in detail, it is obvious that many changes may be made in the size, shape, arrangement and detail of the various elements of the invention as defined by the appended claims.

I claim:

1. A long term urine collector comprising a foldable pouch including a front wall shorter than the rear wall thereof and having a transversely sealed upper end and a sealed lower end disposed normal to the said upper end and sloping downwardly from said front wall to said rear wall forming an integral funnel at the bottom thereof, and a drainage tube connected in sealed relationship through the bottom of said funnel, the said rear wall having an aperture therein adjacent the top of said pouch.

2. A long term urine collector comprising a foldable pouch including a front wall shorter than the rear wall

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thereof having a transversely sealed upper end and a sealed lower end disposed normal to said upper end and sloping downwardly from said front wall to said rear wall forming an integral funnel at the bottom thereof, a drainage tube connected in sealed relationship through the bottom of said funnel adjacent the rear wall thereof, the said rear wall having an aperture therein near the top of said pouch, and adhesive means on the rear of said pouch around the said aperture therein for securement of the rear wall of said urine collector to a patient around its uro-genital organ.

3. A long term urine collector comprising a foldable pouch including a front wall shorter than the rear wall thereof having a transversely sealed upper end and a sealed lower end disposed normal to the said sealed upper end and sloping downwardly from said front wall forming an integral funnel at the bottom thereof, a drainage tube fitting connected in sealed relationship through the bottom of said funnel adjacent the rear wall thereof formed to accommodate a drainage tube, the said pouch having an aperture in the rear wall thereof to accommodate a patient's uro-genital organ, an adhesive area on the rear wall of said pouch around said aperture therein for securement of said pouch to the patient's torso around its uro-genital organ, a removable protective shield over said adhesive area, and a pad adhered to the inside of the rear wall of said pouch substantially surrounding the aperture therein.

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