

July 6, 1965

H. L. CALLAGHAN

3,192,926

HYGIENIC DIAPER

Filed Nov. 13, 1962

2 Sheets-Sheet 1

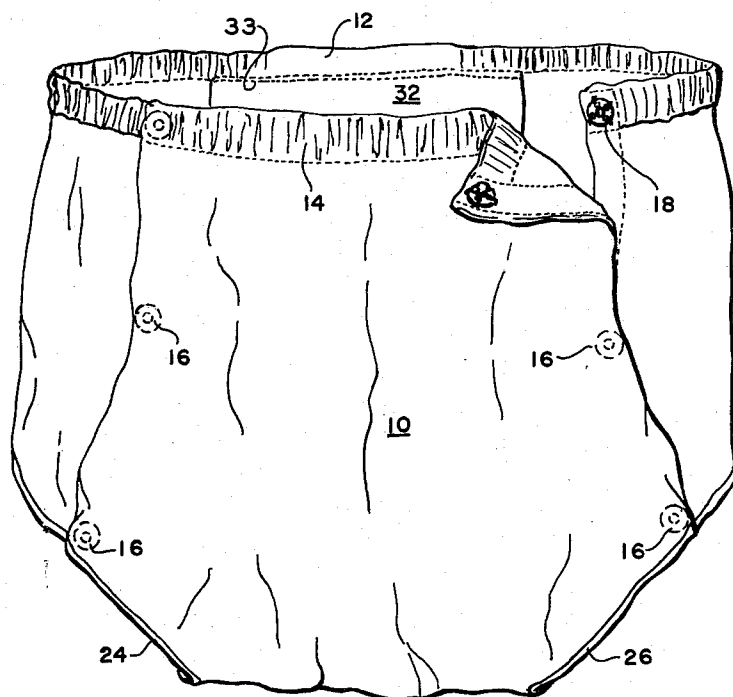
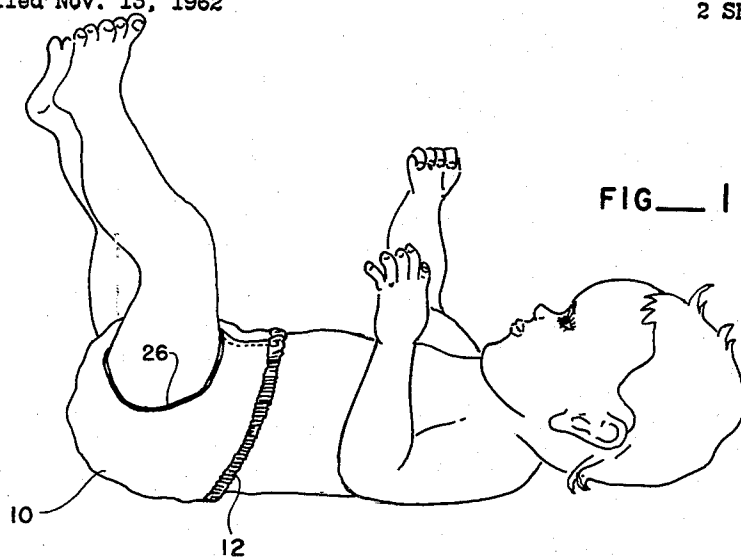


FIG. 2

HARRIET L. CALLAGHAN  
INVENTOR.

BY  
*Clarence M. Tuck*  
ATTORNEY

July 6, 1965

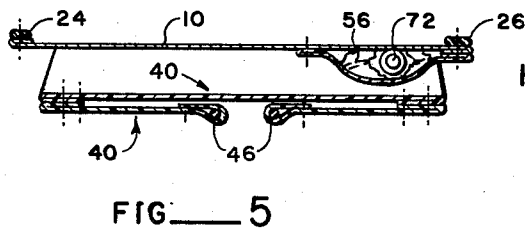
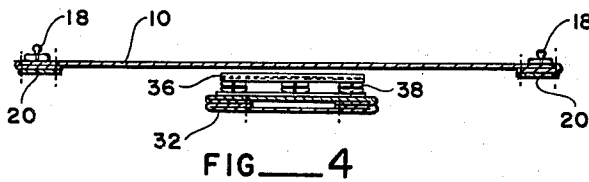
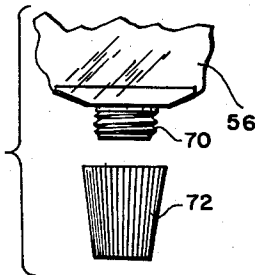
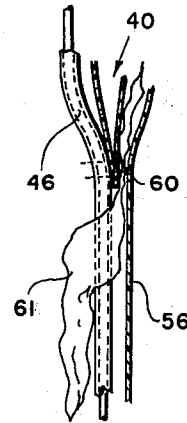
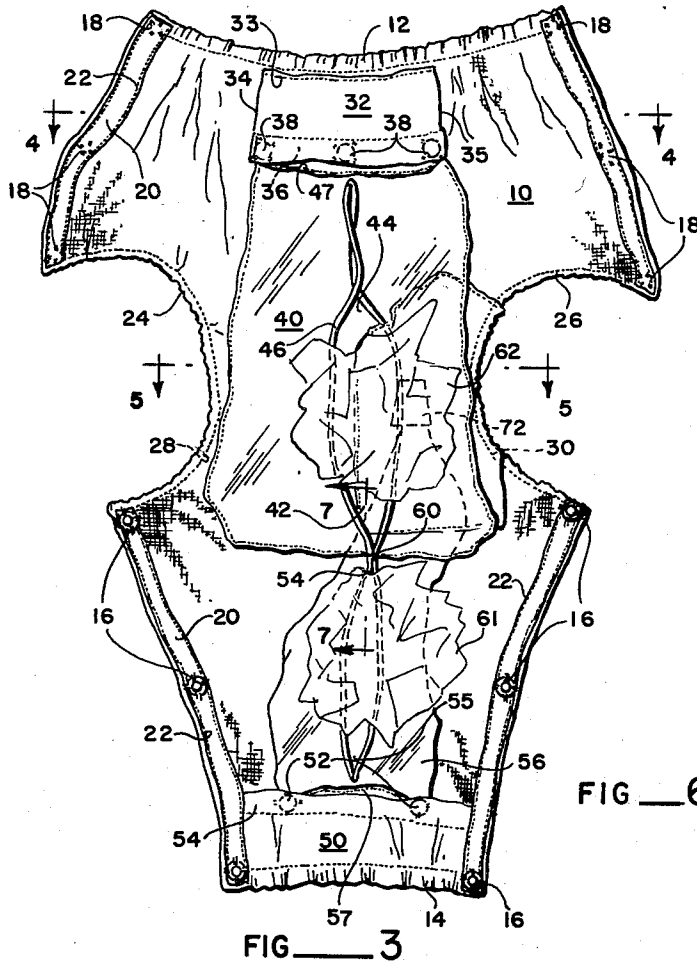
H. L. CALLAGHAN

3,192,926

HYGIENIC DIAPER

Filed Nov. 13, 1962

2 Sheets-Sheet 2



HARRIET L. CALLAGHAN  
INVENTOR.

BY  
*Clarence M. Tuck*  
ATTORNEY

1

3,192,926

## HYGIENIC DIAPER

Harriet L. Callaghan, 1111 Boren Ave., Seattle 1, Wash.

Filed Nov. 13, 1962, Ser. No. 236,995

3 Claims. (Cl. 128—286)

This present invention relates to the general art of sanitary devices to be worn by an individual and more especially it relates to a diaper or breech cloth to be worn by either children or adults who do not have full control of their organs of elimination. The invention contemplates a hygienic diaper having internally secured sacks of absorbent material which may be easily disposed of when soiled and replaced by fresh material.

There are many circumstances under which it is difficult to give adequate personal supervision or actual care in the way of personal assistance either to an adult who may be living in a nursing home or to a child in a child care institution where only a few attendants or nurses must watch over and care for a large number of persons. This present invention is conceived as an aid or solution under these circumstances and consists of an outer covering, preferably of soft, pervious cloth or knit material as distinct from rubber or plastic garments which interfere with the circulation of air and which become very uncomfortable, especially in warm climates.

The covering is preferably marginally puckered by elastic or similar material so that when worn it will fit closely around the margins. On the inner surface the covering is provided with two, preferably detachable, bags which hang downwardly from the waist band and which are made of impervious material. The bags are substantially filled with absorbent material which may be in the nature of certain of the absorbent papers or synthetic materials that are developed for such purposes or they may consist of certain cellulose materials which serve substantially as a sponge and which are inexpensive and are commercially disposable when the removable bags are emptied. Elastic material is employed to insure the proper positioning of the sacks or bags. This device has been found to serve a purpose not adequately served by many of the rubber urinals and the like that are currently available on the market.

A principal object of this present invention, therefore is to provide in a unitary structure a diaper-like cover for the crotch of the body and to have the same provided with removable discharge receiving sacks so that normally only these sacks and their contents need to be serviced.

A further object of this invention is to provide a diaper-like covering of pervious material which is so provided with marginal elastic as to cause the diaper to stay in its adjusted position on the body of the wearer.

A further object of this invention is to provide a plurality of lines of elastic so arranged as to insure the continued proper positioning of the waterproof sacks supported on the inside of the diaper.

Further objects, advantages and capabilities will be apparent from the description and disclosure in the drawings, or may be comprehended or are inherent in the device.

In the drawings:

FIGURE 1 is an illustrative view of my diaper means made in a size for an infant.

FIGURE 2 is a front view of my device illustrating a type of structure generally adaptable to various sizes.

FIGURE 3 is a plan view showing the inner surface of my diaper means and showing the detachable sacks in place.

FIGURE 4 is a cross-sectional view taken along the line 4—4 of FIGURE 3.

FIGURE 5 is a cross-sectional view taken along the line 5—5 of FIGURE 3.

2

FIGURE 6 is a bracketed, fragmentary view of the discharge end of the small sack used, the same being shown on an increased scale.

FIGURE 7 is a fragmentary view, on an increased scale, taken along the line 7—7 of FIGURE 3.

Referring to the drawings, throughout which like reference numerals indicate like parts, a form of my invention has been illustrated as being applied to an infant and this is a very considerable use for this device. However, this showing should be considered merely illustrative as the device has proven to be of material benefit to adults, particularly to the bedridden, infirm and aged.

Referring particularly to FIGURE 3 of the drawings, an outer covering 10 is provided. This covering is preferably made of pervious, soft and flexible material so that it is soft and comfortable and breathes, as distinct from the various plastic or waterproof treated materials, so often used under these conditions. This construction is possible because the areas where discharges from the body may occur are themselves adequately protected by removable waterproof bags which are of relatively small size so that they do not particularly create a heat or sweating condition.

In FIGURE 3, the covering is spread out flat so as to show the internal construction. After the showing of FIGURE 1, the waist band consists of two waist band portions 12 and 14, both of which are normally puckered by elastic material so that the band can expand as required to provide a snug fit around the waist. This fit is provided by the provision of snap fasteners at 16 in the front portion of the cover which coact with snap fasteners 18 in the back portion of the cover. Suitable reinforcements are provided as at 20 in all cases so as to reinforce the margins of the relatively soft covering materials and to insure that the snap fasteners will be maintained in place. The reinforcement is normally stitched in place to the covering 10 as is indicated at 22. The two arcuate cut-out portions 24 and 26 which join to make an encirclement for the legs of the wearer are similarly provided with elastic at 28 and 30 so that here again there is always an elastic holding the covering material snugly to the person using the device.

The back portion of the cover 10 is provided with a downwardly extending flap 32 which is stitched at its upper margin 33 and on the two sides at 34 and 35 so as to form a definite anchorage for the snap fastener tape indicated at 36. The snap fasteners themselves are indicated at 38. Coacting with the snap fasteners 38 are the other portions of the snap assembly which are secured to bag 40. Bag 40 is of considerable size as it is designed to take care of the excreta passed and to assist in localizing its retention, the bag has a slit on its longitudinal axis or its vertical axis as indicated in FIGURE 3. The slit should extend substantially from the points 42 to 44 and have around its margins the elastic cords 46 which tend at all times to close the slit, but because of the cut of the material a full closure cannot be achieved but will correspond substantially to the showing of FIGURE 3 as outlined by the elastic 46 and indicated between 42 and 44 of the drawing. This bag is preferably filled with absorbent material of sheet type such as some of the papers or cellulose materials generally used in sanitary absorbent devices so that normally any excreta will be retained by this expendable absorbent material rather than by any of the permanent portions of this device.

At the lower end, as viewed in FIGURE 3, which corresponds to the front portion of the diaper cover 10, a similar bag and flap arrangement is provided by the flap 50 which is stitched along three margins, with the margins having the snap fasteners 52 which are provided with a reinforcing tape 54, thus permitting the smaller sack 56 to be fastened to the snap fasteners 52. The sack 56 will

3

be inside the flap portion 50 as illustrated and as also corresponds to the method used in the larger sack 40. This bag, as in the case of the larger bag, is vertically or longitudinally slit from the points 54 to 55 and is marginally reinforced by elastic 46 which tends to close the same, but the material again is cut so that this closure cannot be completely achieved and further is filled by the absorbent material illustrated. This is shown at 61 in the case of the small bag and at 62 in the case of the large bag 40. Bag 56 is intended to accept and confine the discharge of urine and therefore a relatively long bag is provided having an end portion illustrated in fragmentary form in FIGURE 6, which is provided with a suitable closure for the discharge opening 70. A suitable means may be a plastic or rubber screw cap 72. The purpose of this arrangement is to provide a convenient way of removing any substantial accumulation of urine without the necessity of removing the diaper or rearranging it in any way.

The supporting end of each of bags 40 and 56 is provided with a tape, as 47 in the case of bag 40, and 57 in the case of bag 56. This tape, in addition to positioning and securing the snap fastener component used on the bag, also engages the end of the doubled elastic cord 46 so that the elastic is in effect stretched between the two rows of the fasteners, those in the back portion indicated generally at 38 and those in the front indicated at 52. Between the two openings occurring in the large bag and the small bag, however, the elastic 46 is brought together and stitched or tied at 60 so as to provide the two openings, one in each of the large and small bags. This arrangement in effect ties the two bags together so that they can be handled as a unit. The bags themselves may be made of any impervious materials. Certain of the plastic filled materials may be used or some of the more commonly used lightweight moisture repellent fabrics which, because of their fiber content, prevent tearing, an important requirement for this present use.

It is believed that it will be clearly apparent from the above description and the disclosure in the drawings that the invention comprehends a novel construction of hygienic, protective diaper.

Having thus described my invention,

I claim:

1. A hygienic diaper of elongated form, comprising: (a) an outer covering of pliable material having a substantially reduced transverse crotch portion and a front and a rear portion; (b) said crotch portion having elastic edging means on both sides of said crotch portion for holding said diaper snugly to the wearer; (c) the longitudinal edges of each of the front and rear portions having reinforcement material; (d) coacting fasteners secured in said reinforcement material to provide a panty type garment when secured in place on a human body; (e) a heading, transversely disposed, at each end of said outer covering; (f) elastic means passing through each of said headings and secured under tension at each longitudinal margin of said outer covering and causing a puckering of covering material; (g) said elastic means at each end of said outer covering coacting to provide a stretchable waist portion for said diaper; (h) a rear flap secured at the end margin of the rear end of said covering and a front flap secured to the front end margin of said covering by stitching disposed longitudinally of said covering and stitching transversely of said covering, leaving the flap margin most remote from the ends of said covering unsecured; (i) a plurality of fasteners on said unsecured flap margins; (j) a relatively large, transparent, liquid-tight bag secured to said rear flap and a smaller liquid-tight bag secured to said front flap by said fasteners, said large and said small bags being joined together near said crotch portion; (k) said bags having longitudinal openings to substantially be over the discharge openings of the human

4

wearing said diaper; (l) a disposable, absorbent stuffing for said bags and (m) elastic means on each side of said openings and disposed to normally tend to close said openings.

2. A hygienic diaper of elongated form, comprising: (a) an outer covering of pliable material having a substantially reduced transverse crotch portion and front and rear portions having reinforcement material; (b) said crotch portion having elastic edging means for closely engaging the legs of a wearer; (c) coacting fasteners secured in said reinforcement material at said front and rear portions to provide a panty type garment when secured in place on a human body; (d) a heading, transversely disposed, at each end of said outer covering; (e) elastic means passing through each of said headings and secured under tension at each longitudinal margin of said outer covering and causing a puckering of covering material; (f) said elastic means at each end of said outer covering coacting to provide a stretchable waist portion for said diaper; (g) a rear flap secured at the end margin of the rear end of said covering and a front flap secured to the front end margin of said covering; (h) a plurality of fasteners on said unsecured flap margins; (i) a relatively large, transparent, liquid-tight bag secured to said rear flap and a smaller liquid-tight bag secured to said front flap by said fasteners; (j) said bags being secured together at their inner ends and having longitudinal openings to substantially be over the discharge openings of the human wearing said diaper; (k) a disposable, absorbent stuffing for said bags and (l) means on each side of said openings and disposed to normally tend to close said openings.

3. A hygienic diaper of elongated form, comprising: (a) an outer covering of pliable material having a substantially reduced transverse crotch portion and front and rear portions having reinforcements; (b) said crotch portion having elastic edging means under tension on both sides of said crotch portion; (c) coacting fasteners secured in said reinforcements to provide a panty type garment when secured in place on a human body; (d) a heading, transversely disposed, at each end of said outer covering; (e) elastic means at each end of said outer covering of said headings and secured under tension at each longitudinal margin of said outer covering and causing a puckering of said covering material to provide a stretchable waist portion for said diaper; (f) first flap means secured at the end margin of the rear end of said covering and second flap means secured to the front end margin of said covering and a plurality of fasteners on said first and second flap means; (g) a relatively large, liquid-tight bag secured to said rear end means and a smaller bag secured to said front end margin by said fasteners; (h) said bags being joined together at their inner ends and having longitudinal openings to substantially be over the discharge openings of the human wearing said diaper; (i) a disposable, absorbent stuffing for said bags and (j) elastic means on each side of said openings and disposed to normally tend to close said openings.

#### References Cited by the Examiner

##### UNITED STATES PATENTS

2,016,355	10/35	Alsop	128—288
2,545,216	3/51	Toussie	128—287
2,654,367	10/53	Turnham	128—283
2,713,341	7/55	Chambers	128—286
2,837,095	6/58	Stevenson	128—283
2,956,564	10/60	OHara	128—287
3,103,930	9/63	Collett et al.	128—286

RICHARD A. GAUDET, *Primary Examiner.*  
JORDAN FRANKLIN, *Examiner.*