Feb. 10, 1953 A. P. HARGRAVE 2,627,859

DIAPER PANTS

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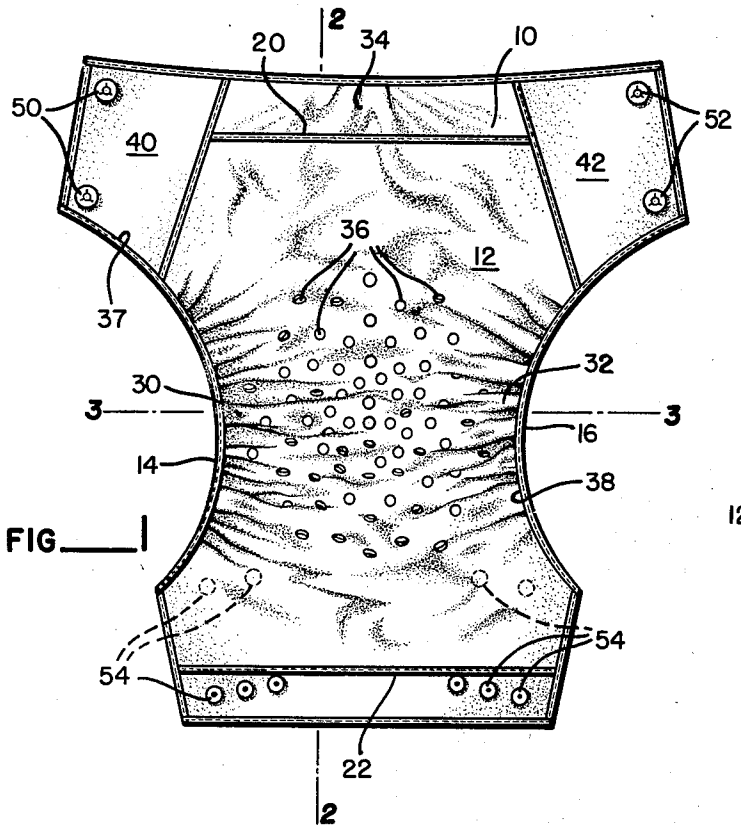


FIG. 1

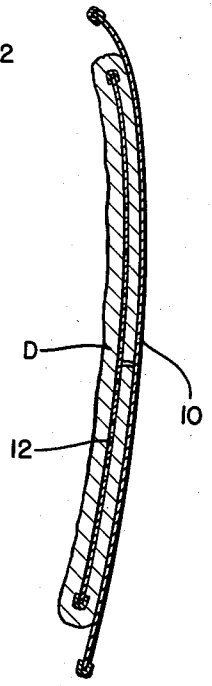


FIG. 2

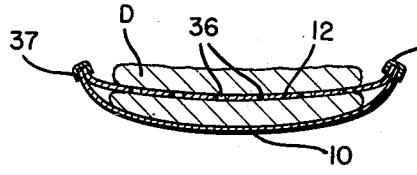


FIG. 3

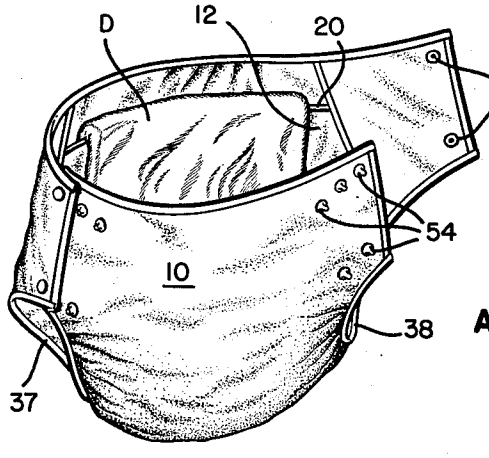


FIG. 4

ARTHUR P. HARGRAVE
INVENTOR

BY Smith & Tuck
ATTORNEYS

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DIAPER PANTS

Arthur P. Hargrave, Kirkland, Wash., assignor to Tot-Lines, Inc., Kirkland, Wash.

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5 Claims. (Cl. 128—287)

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My invention relates to a diaper pant formed of waterproof material and providing a pouch for collection of moisture in the crotch of the garment and having improved means for securing an elongated diaper pad therein.

Perhaps due to the increased post-war birthrate there has been an increased interest in recent years in the improvement of diapers. Included in this development are various diaper pants. However these diaper pants have, generally, at least one of two faults, either (1) being so constructed that an unnecessary amount of time is spent in replacing diapers in the pant, or (2) not efficiently performing the function of preventing excess moisture from escaping from the diaper pant.

The objects of my invention include, therefore, to devise a diaper pant in which there is provision for quickly changing diaper pads, to provide a pouch of considerable extent in the crotch of the garment for the collection of excess moisture, to devise a diaper pant particularly adapted for an elongated pad, and to form a diaper pant of a more efficient and economical construction.

My invention will be best understood, together with additional objects and advantages thereof, by a reading of the following description, with reference to the drawings in which:

Figure 1 is a plan view of a specific embodiment of my diaper pant, the same being in a spread-out position;

Figure 2 is a longitudinal cross-section of the diaper pant on line 2—2 of Figure 1 with a diaper pad in position therein;

Figure 3 is a transverse cross-section of the diaper pant on line 3—3 of Figure 1 with diaper pad in place; and

Figure 4 is a perspective view of the diaper pant taken from above and looking at the front of the garment, the garment being partially fastened and the diaper pad being positioned in place.

The garment is formed essentially of two members, an outer cover member 10, and an inner liner member 12. Both members are elongated and have a major portion of their side edges concavely curved as shown at 14 and 16. These concavely curved edges are adapted to encircle the thighs of the infant. Liner 12 is shorter than cover 10 and has its end edges 20, 22 spaced from the ends of cover member 10.

By this construction diaper D may be positioned on liner 12, with its ends folded over the end edges 20, 22 of liner 12 and positioned between liner 12 and cover 10, as is shown in Figure 2. The diaper may be of an elongated disposable

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type or may be a conventional diaper folded into an elongated shape. It will be seen that, by providing means for positioning the diaper in this position, the maximum amount of material is positioned in the areas where the absorbent material is most needed. At the same time the diaper may be changed with the least possible delay as the soiled diaper may be lifted out of the pant and the new diaper positioned in place merely by tucking in the ends.

The major portion of the concavely curved side edges of cover 10 and liner 12 are gathered as shown at 30 and 32 in Figure 1. This forms a pouch running throughout the central portion of the cover 10 and liner 12. This pouch not only provides room for the double thickness of diaper D but also forms a reservoir which operates quite efficiently to collect moisture in excess of that which diaper D is able to absorb or to hold the moisture until diaper D may absorb the same. It will be noted that cover 10 also is gathered on its rear edge at 34. The pouch area of liner 12 has a multiplicity of openings 36 therethrough affording means for passage of moisture from the inside of liner 12 to between liner 12 and cover 10. The concavely curved edges 30 and 32 are secured by bindings, 37 and 38 respectively, which are sewn in place and form a substantially moisture-proof seal therebetween. It will be observed from Figure 3 that this prevents moisture collecting between cover 10 and liner 12 from escaping to the side.

Liner 12 and cover 10 are preferably formed of one of the flexible plastic materials such as polyvinyl acetate. This material is not uncomfortable to the skin, feeling about like nylon to the touch, is moisture proof and flexible, and is inexpensive and easy to fabricate into garments. The material is also slightly elastic and, when used for bindings 37, 38, forms a somewhat elastic edge to bind the thighs for sealing the garment at the side. The other free edges of the garment are likewise bound with the same type of plastic material. It will be evident that other plastic materials, rubber, or waterproofed fabric could be used in place of polyvinyl acetate.

In order to save material and conveniently to attach liner 12 in place, the rear corners of cover 10 are formed of separate pieces of this plastic material as at 40 and 42.

Ends 40 and 42 each carry a pair of female snap members, 50 and 52 respectively, and the opposite end of cover 10 carries preferably ten male snap members 54, arranged in groups of three and two, to afford means for adjustably

securing the diaper pant to the infant. The garment may be reinforced in the area of snaps **50**, **52**, **54**, as is common in working with this type of material.

From this description the various advantages of this structure will be seen including provision for quick changing of diapers in the diaper pant, the folding of the diaper to provide a double thickness of absorbent material in the central portion of the garment, and the forming of a pouch for collection of excess moisture.

Having thus described my invention, I claim:

1. A diaper pant, comprising: an outer cover member formed of an elongated sheet with a major portion of its sides concavely curved; an inner liner, positioned inside of said cover member, formed of an elongated sheet with a major portion of its side concavely curved, said liner being shorter than said cover member and having its end edges spaced from the end edges of said cover member and free from said cover member, whereby an elongated diaper pad may rest on said inner liner with its ends inserted between said liner and cover member, the central portion of said liner being substantially the same size as the central portion of said cover member, said cover member and said liner having their concavely curved sides in said central portions gathered and fixedly secured together in a substantially moisture-proof manner forming a pouch of considerable extent, said liner having a multiplicity of perforations therethrough in the area of said pouch permitting moisture to pass therethrough to said cover member; said cover member and liner being formed of flexible, moisture-proof material; and fastening means in the corners of said cover member for fastening said pant about the lower body and thighs of an infant.

2. A diaper pant, comprising: an outer cover member formed of an elongated sheet having its central portion reduced in width relative to its end portions; an inner liner, positioned inside of said outer member, formed of an elongated sheet having its central portion reduced in width relative to its end portions, said liner being shorter than said outer member and having its end edges spaced from the end edges of said outer member and free from said outer cover member whereby an elongated diaper pad may rest on said inner liner with its ends folded over said end edges of said liner and inserted between said liner and cover member, said outer member and said liner having a major portion of their side edges intermediate their ends gathered and secured together forming a pouch of considerable extent, said liner having a multiplicity of perforations therethrough in the area of said pouch permitting moisture to pass therethrough to said outer member; and said cover member and liner being formed of flexible moisture-proof material.

3. A diaper pant, comprising: an outer cover member formed of an elongated sheet having generally an hour-glass shape; an inner liner, positioned inside of said outer member, having a closely similar shape to said cover member except being shorter; said cover member and liner being secured together near their side edges only forming together a tube shaped pocket open at its ends, whereby an elongated diaper may be laid on said liner with its ends folded over the end edges of said liner and inserted in said tube shaped pocket; said cover member and liner being gathered along at least a major portion of said side edges intermediate the end portions forming a bulging portion of considerable extent in said tube shaped pocket for collection of moisture, said liner having a series of openings in its central portion permitting moisture to pass therethrough; and said cover member and liner being formed of flexible, moisture-proof material.

4. A diaper pant, comprising: an outer cover member forming a pant having leg openings; an elongated inner liner, positioned inside of said cover member, having one end positioned below the forward top edge of said cover member and having its other end positioned below the rear top edge of said cover member, the end edges of said liner being free from said cover member, whereby an elongated diaper pad may rest on said inner liner with its ends folded over said end edges of said liner and inserted between said liner and cover member, said cover member and said liner being gathered and secured together near the edges of said leg openings on the crotch sides thereof forming a pouch of considerable extent in the central portion of said liner and cover member and said liner having a multiplicity of openings therethrough in the area of said pouch permitting moisture to pass therethrough to said cover member; said cover member and liner being formed of flexible, moisture-proof material.

5. A diaper pant, comprising: an outer cover member forming a pant having leg openings; an elongated inner liner of a length less than that of the outer cover member and positioned therein with its end margins spaced from and unconnected to the ends of the cover members, whereby an elongated diaper pad may rest on said cover and be folded over said end margins to thereby be positioned against slipping; said cover and liner members being secured together along their side margins and gathered in the crotch area of the leg openings and forming a pouch of considerable extent in the medial portion of said cover; said liner being perforate in the crotch area to permit the seepage of moisture into said pouch; said cover and liner members being formed of flexible, moisture-proof sheet material.

ARTHUR P. HARGRAVE.

No references cited.