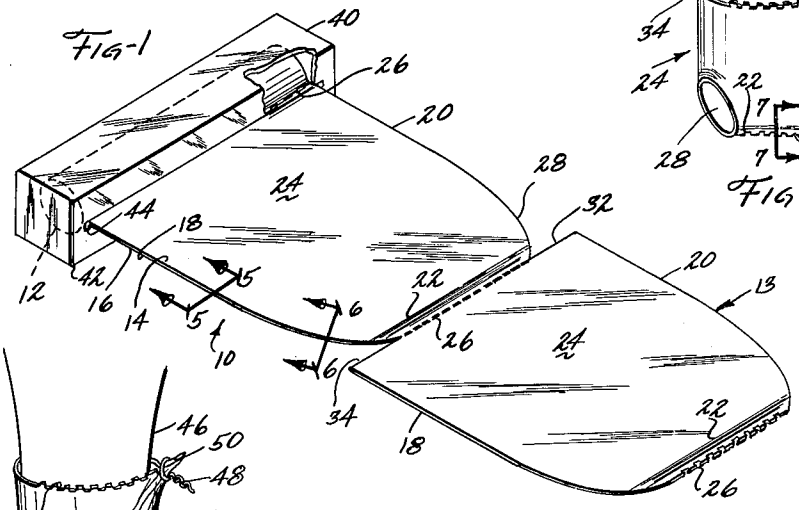
Dec. 28, 1965 J. L. MINES 3,225,918

BABY PANTS FOR COVERING DIAPERS

Filed May 18, 1964



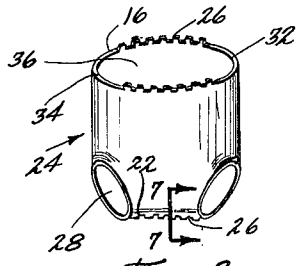


FIG-2

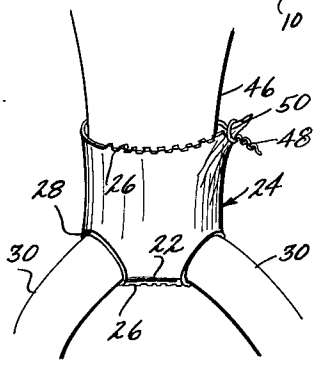


FIG-3

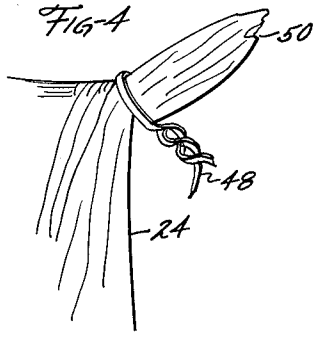


FIG-4

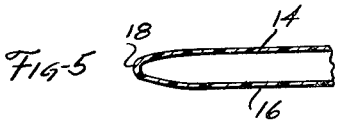


FIG-5

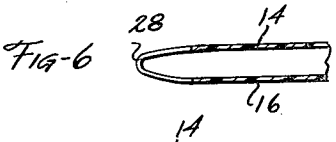


FIG-6

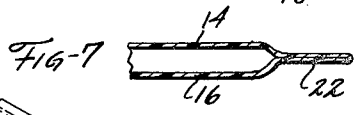


FIG-7

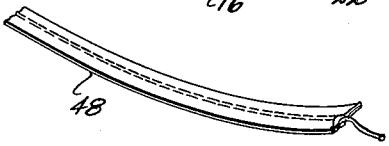


FIG-8

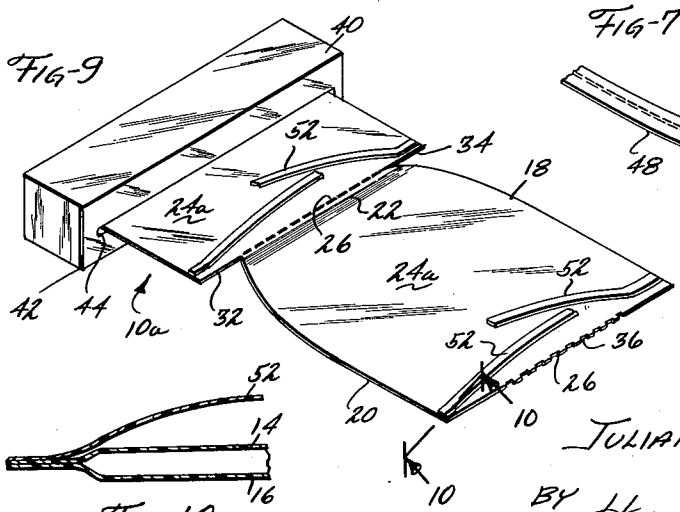


FIG-10

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BABY PANTS FOR COVERING DIAPERS

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5 Claims. (Cl. 206—58)

This invention relates to baby pants for covering diapers, and more particularly to new and useful baby pants for covering diapers which are of the disposable type.

Although many different types of baby pants are available for covering diapers, they do have certain disadvantages.

One disadvantage resides in the fact that they are comparatively expensive to purchase and maintain in a serviceable condition.

Another disadvantage resides in the fact that they are sometimes irritating to a baby's skin.

Yet another disadvantage resides in the fact that they are inconvenient to use while traveling because of the necessity of maintaining them in a clean condition for repeated use.

In view of the foregoing factors and conditions characteristic of baby pants for covering diapers, it is a primary object of the present invention to provide new and improved baby pants not subject to the disadvantages enumerated above which may be disposed of after a single use.

Another object of the present invention is to provide disposable baby pants which are relatively nonallergic and nonirritating.

Yet another object of the present invention is to provide disposable baby pants of the type described which are easy to procure and inexpensive to use.

A further object of the present invention is to provide water-impervious, disposable baby pants which may be conveniently supplied in a continuous roll in a dispenser carton so that they may be detached therefrom individually for use.

According to the present invention, the baby pants may be made of polyethylene or other suitable material and are supplied on a continuous roll in a dispenser carton. The pants in the roll are formed from a continuous strip of a two-ply layer of polyethylene. The longitudinal edges of the separate plies are sealed together along a continuous seam. The material may then be heat-sealed at spaced intervals transversely to the longitudinal seams and perforated adjacent the heat-sealed portions. Openings may then be provided in the longitudinal seam for a short distance which extends into the heat-sealed portions. The openings are of sufficient size to receive an infant's thighs and terminate at the perforated portions. The continuous strip of polyethylene material may then be formed into a continuous roll and mounted in a dispenser carton. Then individual disposable baby pants may be torn from the carton along the perforated portion and used to cover a baby's diapers. The disposable baby pants may be retained in position on the baby by suitable tying tabs provided on the continuous roll or by separate tying means.

The continuous strip of polyethylene material may be formed in a roll in such a manner that the leading end thereof is the open end with the trailing end being the sealed end having the openings for the baby's legs or, alternatively, the sealed end may be the leading end with the open end the trailing end.

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. The present invention, both as to its organization and manner of operation, together with further objects and advantages thereof, may best be understood by reference to the following description, taken in connection with the accompanying drawings in which like reference characters refer to like elements in the several views.

In the drawings:

FIGURE 1 is a perspective view of a roll of disposable baby pants of the present invention shown in combination with a dispensing carton with the closed end of the baby pants constituting the leading end of the roll;

FIGURE 2 is a perspective view, on a reduced scale, of a single pair of disposable baby pants after being torn from the roll of FIGURE 1;

FIGURE 3 is a perspective view showing the baby pants of FIGURE 2 in position on a baby's torso and thighs;

FIGURE 4 is an enlarged detail of the tying means which may be used in conjunction with the baby pants shown in FIGURE 3;

FIGURE 5 is an enlarged, partial cross-sectional view taken along line 5—5 of FIGURE 1;

FIGURE 6 is an enlarged, partial cross-sectional view taken along line 6—6 of FIGURE 1;

FIGURE 7 is an enlarged, partial cross-sectional view taken along line 7—7 of FIGURE 2;

FIGURE 8 is an enlarged, perspective view of the tying means shown in FIGURE 4;

FIGURE 9 is a perspective view of a modification of the disposable baby pants and carton assembly shown in FIGURE 1; and

FIGURE 10 is an enlarged, partial cross-sectional view taken along line 10—10 of FIGURE 9.

Referring again to the drawings, and particularly to FIGURES 1–8, a roll of disposable baby pants constituting a first embodiment of the present invention, generally designated 10, includes a continuous roll 12 which may be formed by rolling up a continuous strip 13 of a suitable water-impervious material, such as polyethylene, having an upper layer 14 and a lower layer 16. The layers 14 and 16 are secured together along their longitudinal edges 18 and 20, respectively. This joining together may be accomplished by either taking a double width of material having a single thickness and folding it in half along its major axis to form the edge 20 and then heat-sealing the edge 18, by heat-sealing both the edges 18 and 20, or by extruding the material in tubular form. In either event, a continuous strip is formed having an encompassing side wall and open ends. Before this strip 13 is formed into the roll 12, the upper layer 14 is heat-sealed to the lower layer 16 at spaced intervals along the strip 13 forming transverse seams 22 extending transversely across the strip 21 between the edges 18 and 20. The spacing between the seams 22 defines the depth or length of the individual baby pants 24. A row of perforations 26 is then provided on the strip 13 adjacent each seam 22 and parallel thereto. The strip 13 may then be cut along the edges 18 and 20 in the vicinity of the seam 22 to provide openings 28 which accommodate the legs 30 of a baby. The strip 13 is also cut at right angles to the edges 18 and 20 inwardly toward the perforations 26 to form edges 32 and 34 which cooperate with the perforated portion 26 to form an open top 36 (FIGURE 2) for the baby pants 24. The continuous strip 13 may then be formed into the roll 12 and placed in a suitable dispensing carton 40.

The dispenser carton 40 is provided with a front wall 42 which may be opened to facilitate inserting the roll 12 into the carton 40. The front wall 42 is provided with a passageway 44 through which the strip 13 may be threaded. The wall 42 may then be closed to retain the roll 12 in position in the carton 40. The passageway 44 also serves as a cutting edge for severing an individual pair of pants 24 from the roll 12 along the perforations

26. The pants 24 may then be opened as shown in FIGURE 2 and placed on a child by inserting his legs 30 through the openings 28 and drawing the pants 24 up over his torso 46 (FIGURE 3). The pants 24 may be retained in position on the child's torso 46 by a suitable band, such as the band 48 shown in FIGURE 8, which may be twisted around an ear 50 formed by gathering the excess material in pants 24, as shown in FIGURE 4.

When the child's diapers are changed, the disposable baby pants 24 may be thrown away and a new pair may be quickly and conveniently torn from roll 12. The roll 12 is formed in such a manner that the sealed edge 22 of the strip 13 is the leading end of the roll as it issues from the carton 40.

Referring now to FIGURES 9 and 10, a roll of disposable baby pants constituting a second embodiment of the present invention, generally designated 10*a*, is identical to the roll 10 except that the roll is formed in such a manner that the open end 36 is the leading end and suitable bands or straps 52, which may be made of the same material as the baby pants 24*a*, are heat-sealed adjacent the open end 36 to facilitate securing the baby pants 24*a* in position on a baby to cover its diapers.

While the particular baby pants herein shown and described in detail are fully capable of attaining the objects and providing the advantages hereinbefore stated, it is to be understood that they are merely illustrative of the presently preferred embodiments of the invention and that no limitations are intended to the details of construction or design herein shown other than as defined in the appended claims.

What is claimed is:

1. In combination, a continuous roll of disposable baby pants comprising, a continuous strip of water impervious material having an upper layer and a lower layer joined together along their longitudinal edges; said strip having transverse parallel seams provided at spaced intervals along its length, said seams securing said upper layer to said lower layer and extending across the said strip intermediate the longitudinal edges thereof, said strip having openings in the longitudinal edges immediately adjacent said seams to provide leg openings, and said strip having means for separating it into sections adjacent said openings.

2. In combination, disposable baby pants comprising, a dispenser carton having a front wall, said front wall having a passageway provided therein, and a roll of a continuous strip of water impervious material mounted in said carton, said strip extending through said passageway to the exterior of said carton, said strip comprising upper and lower layers of said material, the upper layer being joined to said lower layer along the longitudinal edges of said strip, said upper layer also being joined to said lower layer to form seams at spaced intervals transversely across said strip intermediate the said longitudinal edges, said longitudinal edges being arcuately cut away adjacent said transverse seams to provide openings in the said strip for a child's legs, and said strip having means to facilitate having segments constituting baby pants to be severed from the said roll along transverse lines adjacent to said arcuate cut aways to provide baby pants open at the top and bottom leg openings.

3. In combination, a continuous roll of disposable baby pants comprising, a continuous strip of water impervious material having an upper layer and a lower layer joined together along their longitudinal edges; said strip having transverse parallel seams provided at spaced intervals along its length, said seams securing said upper layer to said lower layer and extending across the said strip intermediate the longitudinal edges thereof, said strip having openings in the longitudinal edges immediately adjacent said seams to provide leg openings, and said strip having means for separating it into sections adjacent said openings, said separating means including means defining a row of perforations in said strip at the area of said leg openings.

4. In combination, a continuous roll of disposable baby pants comprising, a continuous strip of water impervious material having an upper layer and a lower layer joined together along their longitudinal edges; said strip having transverse parallel seams provided at spaced intervals along its length, said seams securing said upper layer to said lower layer and extending across the said strip intermediate the longitudinal edges thereof, said strip having openings in the longitudinal edges immediately adjacent said seams to provide leg openings, and said strip having means for separating it into sections adjacent said openings, said separating means including means defining a row of perforations in said strip at the area of said leg openings, said combination including tabs attached to said strip at spaced intervals adjacent said perforations to facilitate tying the separated pants to a baby.

5. In combination, disposable baby pants comprising, a dispenser carton having a front wall, said front wall having a passageway provided therein, and a roll of a continuous strip of water impervious material mounted in said carton, said strip extending through said passageway to the exterior of said carton, said strip comprising upper and lower layers of said material, the upper layer being joined to said lower layer along the longitudinal edges of said strip, said upper layer also being joined to said lower layer to form seams at spaced intervals transversely across said strip intermediate the said longitudinal edges, said longitudinal edges being arcuately cut away adjacent said transverse seams to provide openings in the said strips for a child's legs, and said strip having means to facilitate having segments constituting baby pants to be severed from said roll along transverse lines adjacent to said arcuate cut aways to provide baby pants open at the top and bottom leg openings, said severing facilitating means including means defining a row of perforations in said strip in the region of said cutouts to facilitate separating individual baby pants from said roll.

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