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R. C. HABIG ET AL

2,558,215

DIAPER

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FIG. 1

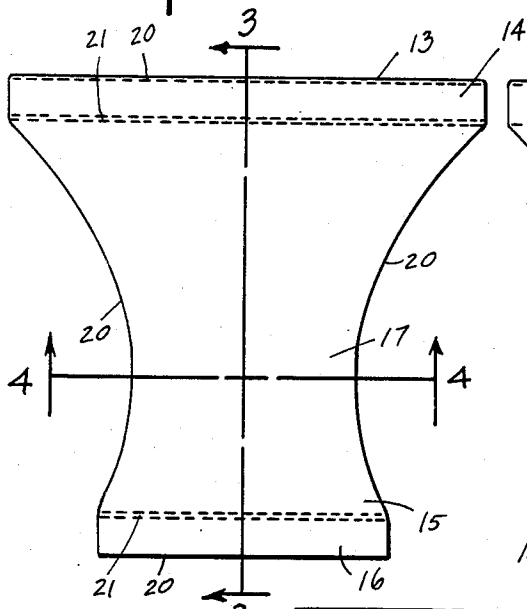


FIG. 2

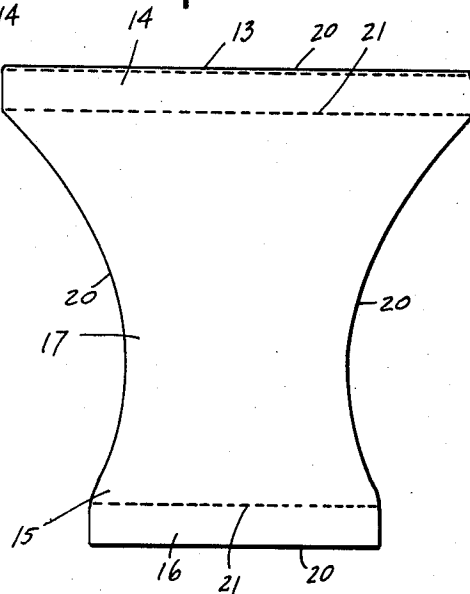


FIG. 3

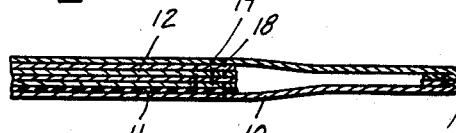
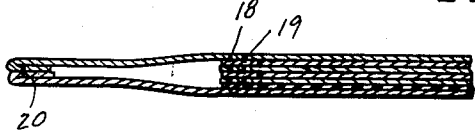


FIG. 5

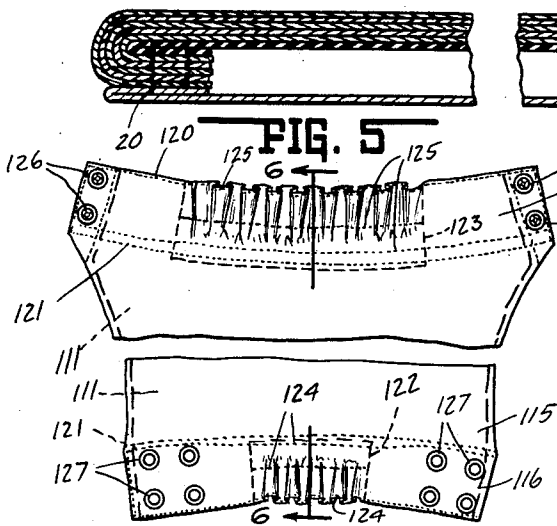
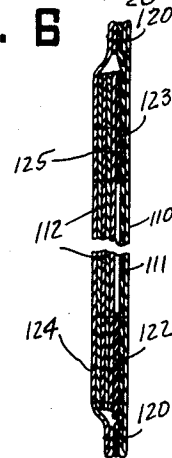


FIG. 6



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# UNITED STATES PATENT OFFICE

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2 Claims. (Cl. 128-287)

1

2

This invention relates to a unitary diaper.

The chief object of this invention is to provide a diaper that will serve the same purpose as a conventional diaper and a pair of rubber pants with the advantages thereof and none of the disadvantages.

The chief feature of the present invention resides in providing within a diaper a water repellent or moisture-proof material so that no part thereof can contact the infant's skin with the well-known deleterious results thereof.

The present diaper also provides an exterior surface of any suitable material. The interior surface material is of absorbent character. The three portions are permanently secured together in fixed relation and each is capable of boiling, washing and warm ironing without appreciable deterioration except normal wear and tear incident to use and laundering. The fixed association prevents displacement of the portions and the formation of creases and folds when the inner and outer surface materials are pre-shrunk. Creases and folds cause chaffing, another objection to be avoided.

Other objects and features of the invention will be set forth more fully hereinafter.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims.

In the drawings,

Fig. 1 is a plan view of a diaper looking at the absorbing side thereof.

Fig. 2 is a similar view looking at the exterior thereof.

Figs. 3 and 4 are transverse sections taken through the garment, the former being a longitudinal section and the latter a cross-wise section.

Fig. 5 is a view similar to Fig. 1 and of a modified form of the invention, the intermediate or central portion being broken away.

Fig. 6 is a sectional view thereof taken on line 6-6 of Fig. 5.

In Figs. 1 to 4 of the drawings, 10 indicates a pre-shrunk textile exterior surface sheet material. In the sectional views 11 indicates a sheet of water repellent material such as elastomeric polyvinyl chloride film or sheeting which material can be washed and warm ironed without deterioration. 12 indicates one or more thicknesses of absorbable material such as diaper cloth and the like. These only constitute the diaper.

The outline of such diaper, see Figs. 1 and 2, is a back portion 13 of considerable width at the free end or waist band portion 14. The front

portion 15 has a waist band portion 16. The two band portions may be suitably and detachably secured together by means not shown such as snap fasteners, safety pins, buttons and button holes, etc. The intermediate portion 17 is of the least width while the front portion is of less width than the back portion.

The reason why Figs. 1 and 2 are included is to illustrate the difference in sewings from the opposite sides. All the sewings appearing on the outside appear on the inside. Herein the blocking layer or sheet 11 is additionally secured at its ends to the inside layer 12 at 18 and 19. Thus this sheet is peripherally and permanently secured to the inside layer and is not coextensive therewith as shown. The two layers 10 and 12 are coextensive and are peripherally secured together and sewings 20 and 21 define the band portions.

In Figs. 5 and 6 there is illustrated a modified form of the invention. In this form there is embodied snap fasteners (which also can be applied to the previous form), waist band adhesive tapes interiorly disposed and a substantially coextensive blocking sheet.

In these figures numerals of the one hundred series designate parts identical or similar to parts previously designated in the other figures by the primary series of numerals.

Herein 122 and 123 indicate waist band tapes secured by sewings 124 and 125 respectively. Herein also blocking sheet 111 extends full length, see Fig. 6, and full width, see Fig. 5 of the garment. These extensions serve as waist band reinforcements. Herein band 114 is shown provided with one set of two pairs of snap fasteners 126, while band 116 is provided with two sets of two pairs of complementary snap fasteners 127. This form of the invention, to the extent of more blocking material, additional sewings and snap fasteners is more expensive than the previous form.

The particular shape of the garment readily lends itself to infant form fitting. Also all the sewings but one end can be effected in an inside out relationship, then the garment reversed and finally the open end sewed shut. This forms a finished garment with smooth outer edges and wherein the blocking sheet is not exposed for skin contact. The blocking sheet 11 is a flexible plastic sheet which is not injured by boiling, washing or warm ironing, nor when bleached by the usual laundry bleaching powders nor when subjected to soaps and soap powders and whether washed by hand or by machine.

But two sizes are required for universal use,

towit, one fitting infants with a waist line from 12 to 16 inches and a larger one from 16 to 22 inches. In the latter instance the front band is approximately 9 inches long and the back band about 15 inches long and a longitudinal overall length of about 15 inches and a cross-wise narrowest portion of about seven inches. The bands are about an inch and a half wide. The smaller garment is correspondingly smaller.

The foregoing specific description is to be understood as being illustrative of the preferred forms of the invention. Other forms thereof which will readily suggest themselves to persons skilled in this art are to be considered within the scope of the invention, reference being had to the appended claims for the definition thereof.

The invention claimed is:

1. As a new article of manufacture, a diaper comprising in a self-contained unitary structure, an outer front and back structure formed of flexible textile material having top and bottom band portions provided with substantially straight side edges and having the top band portion of greater width than the bottom band portion and an intermediate portion having its opposite side edges inwardly curved from the bottom of the outer edge of the top band portions to the top of the outer edges of the bottom band portions, an inner sheet of water absorbent material coextensive with the intermediate portion and a second inner sheet of moisture repellant and blocking launderable material at the rear of said first mentioned sheet having the same configuration as the intermediate front and back portion permanently secured at their side edges to the outer front and back portion by inside seams and permanently secured at their top and bottom edges to the front and back portions along a line spaced apart from the top and bottom edges of the band portions to leave said band portions formed solely of the textile material free from the water absorbent and moisture repellant material.

2. As a new article of manufacture, a diaper

comprising in a self-contained unitary structure an outer envelope comprising front and back portions formed of flexible textile material having top and bottom band portions having substantially straight side edges and having the top band portion of greater width than the bottom band portion and an intermediate portion having its opposite side edges inwardly curved from the bottom of the outer edge of the top band portion to the top of the outer edge of the bottom band portion, an inner sheet of moisture absorbent material coextensive in shape and size with the intermediate portion adjacent the front portion of the envelope and a second inner sheet of moisture repellant and blocking material behind said water absorbent material, coextensive in shape and size with the intermediate portion both sheets being permanently secured at their edges to the outer front and back portions by inner stitches and permanently secured at their top and bottom edges to the front and back portions along the line spaced apart from the top and bottom edges of the band portions to leave said band portions formed solely of textile material free from water absorbent and moisture repellant material and means for detachably connecting said top and bottom band portions at their edges.

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