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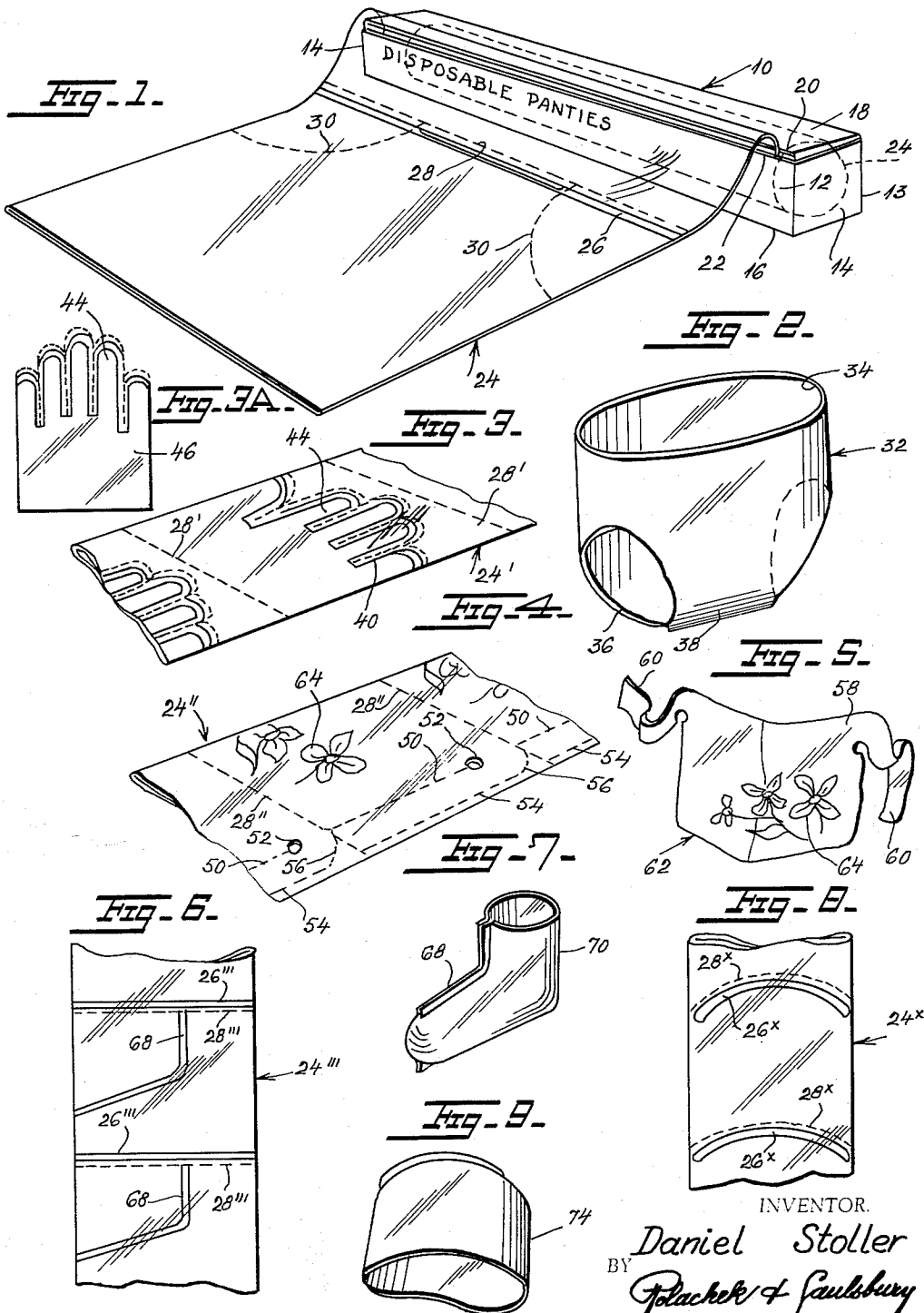
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SHEET MATERIAL STORING AND DISPENSING DEVICE

Filed May 6, 1964

2 Sheets-Sheet 1



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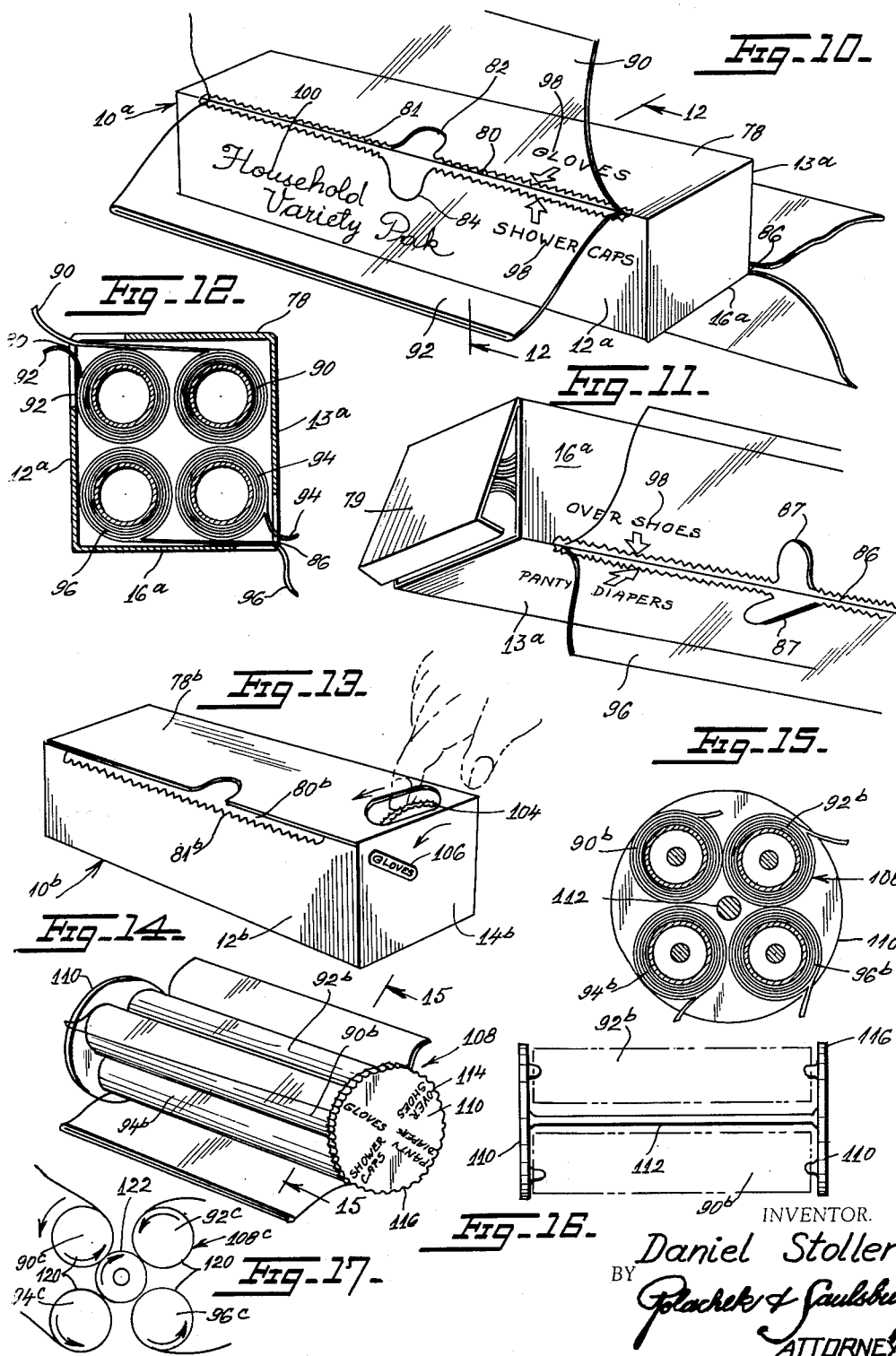
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SHEET MATERIAL STORING AND DISPENSING DEVICE

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This invention relates to a roll of tearable and disposable articles of wearing apparel and the like, the method of making the same and a package containing the roll.

Broadly the invention comprises a roll of transparent sheet material such as plastic, divided by score lines into a series of preshaped articles of wearing apparel and the like, a package containing the roll with means for tearing the articles off the roll along the score lines.

A principal object of the present invention is to provide a roll of sheet material preshaped and constructed into a continuous series of articles of wearing apparel and readily and successively tearable off the roll ready for use.

Another object of the invention is to provide a roll of two-ply sheet material preshaped in the form of a series of articles of wearing apparel and the like, divided by score lines, sealed at one end and open at the opposite end.

A further object of the invention is to provide a roll of flexible transparent plastic sheet material having tear or score lines at predetermined location for removing selected portions of the material of the roll and having predetermined portions of the material in line contact and sealed thereat in order to convert sections of the roll into articles of merchandise.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

FIG. 1 is a front perspective view of a package containing a roll of preshaped diaper panties embodying one form of the invention, part of the roll being withdrawn from the package ready for severing from the roll.

FIG. 2 is a front perspective view of a diaper panty severed from the roll and trimmed as it looks in use.

FIG. 3 is a top perspective view of a portion of a roll of preshaped gloves.

FIG. 3A is a top plan view of a completed glove.

FIG. 4 is a similar view of a portion of a roll of preshaped aprons.

FIG. 5 is a front elevational view of an apron severed from the roll of FIG. 4 and trimmed as it looks in use.

FIG. 6 is a top plan view of a portion of a roll of preshaped overshoes.

FIG. 7 is a top perspective view of an overshoe severed from the roll shown in FIG. 6 and trimmed as it looks in use.

FIG. 8 is a top plan view of a portion of a roll of preshaped caps.

FIG. 9 is a top perspective view of a cap severed from the roll of FIG. 8 and extended for use.

FIG. 10 is a front perspective view of a package containing a plurality of rolls of disposable preshaped articles of wearing apparel, said rolls embodying further embodiments of the invention, parts of two rolls being shown withdrawn from the package.

FIG. 11 is a fragmentary rear perspective view thereof, parts of two other rolls being shown withdrawn from the package, one end of the package being shown partly open.

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FIG. 12 is an enlarged cross-sectional view taken on the line 12—12 of FIG. 10.

FIG. 13 is a front perspective view of a package containing a plurality of rolls of disposable preshaped articles of wearing apparel embodying still another form of the invention, a finger of the user being shown in position to turn the rolls.

FIG. 14 is a top plan view of the roll assembly of FIG. 13.

FIG. 15 is a cross-sectional view taken on the line 15—15 of FIG. 14.

FIG. 16 is a side elevational view of the roll assembly of FIG. 14, the rolls being shown diagrammatically.

FIG. 17 is a diagrammatic end view of a roll assembly embodying still another modified form of the invention.

Referring in detail to the drawings, in FIG. 1 there is shown an elongated box or container 10, rectangular in configuration and cross section. The box is preferably made of light cardboard or any other suitable box material. The box body has a front wall 12, rear wall 13, end walls 14, 14 and bottom wall 16. The side and end walls define an open top which is closed by a hinged cover 18 with flap 20 tucked into the interior of the box against the front wall. The top edge of the front wall is formed with a knife edge 22.

Inside the box or container 10, there is a roll 24 of thin flexible transparent plastic sheet material in flat tubular formation. At spaced intervals therealong the material is sealed by heat and pressure along a transverse line as indicated at 26. Another score line 28 is formed inwardly of and closely adjacent to the line 26. This is to facilitate and guide tearing the material by means of the knife edge 22 on top of the front wall 12. At each long side of the roll of material, curved lines 30 are marked on the surface of the material, the lines starting at the sides and ending at the transverse line 28.

In use, the material of the roll is cut along lines 28 by means of the sharp top edge of the front wall. This severs the material along these lines, leaving the seal lines 26 positioned closely adjacent thereto. The severed material is then cut or trimmed along the curved lines 30. The opposite cut edges are then separated and the two-ply material constituting the envelope may be distended to a three-dimensional condition, forming an article of wearing apparel, the article taking the shape of a diaper panty 32 as shown in FIG. 2, with a body opening 34 and leg openings 36, the sealed end constituting the crotch portion 38.

In FIG. 3, a fragment of a modified form of roll 24' is shown which is adapted to be rolled and housed in the box or container 10. The body of roll 24' has a flattened tubular body similar to the body of roll 24 and at spaced intervals therealong guide lines in the form of score lines 28' are formed, across the surfaces of the material.

In accordance with this form of the invention, the material of the body between the guide lines 28', adjacent one end of the space therebetween, is formed on both surfaces thereof with elongated looped depressions 40 formed by heat and pressure, the depressions thereby forming seals and defining protuberances therebetween, constituting finger stalls 44. Five of such stalls are formed to accommodate the five fingers of the hand of the user.

In use, the material of the roll 24' is cut along the lines 28' by means of the sharp top edge of the front wall of the box 10. This severs the material along these lines. Next, the material of the roll is trimmed along the outer edges of the depressions 40. The plies of material at the opposite end of the section of the roll are unattached and may be separated to open three-dimensional condition thereby transforming the section into a glove 46.

FIGS. 4 and 5 illustrate a fragment of another modified form of flattened tubular roll 24" which is formed with transverse guide and score lines 28" spaced therealong, forming sections therealong. Every section is formed with aligned score lines 50, in both surfaces thereof, parallel to and closely spaced from one long edge of the roll. The lines 50 extend from one cross line 28" to a point closely spaced from the opposite cross line 28" and terminates at that point in and intersects with a hole 52. Said section is also formed with aligned score lines 54 in both surfaces, adjacent said one long edge of the roll. Lines 54 extend from one cross line 28" to the opposite score line 28" but is curved at said opposite score line as indicated at 56.

In use, the material of the roll 24" is first cut along the transverse lines 28" to sever the section from the roll. The material of the severed section is next cut along the lines 54 which opens up the section and forms the body 58 of the apron. Next, the material along the lines 50 is cut thereby forming the apron strings 60. By unfolding the material of the cut section, a completed apron 62 such as shown in FIG. 5 is formed. The outer surface of the material of the roll 24" may be printed with ornamental designs 64.

Referring now to FIGS. 6 and 7, herein is shown a fragment of yet another modified form of flattened tubular roll 24"". At spaced intervals along the roll, the material is sealed by heat and pressure along a transverse line as indicated at 26"". Another score line 28"" is formed close to the line 26"". In the section of the roll, between adjacent score lines 28"", the material of the section is pressed and heated forming a substantially L-shaped seal 68 along a line extending from a point adjacent midwidth the roll to a point along one long edge of the roll slightly beyond the midheight of said one long edge.

In use, the material of the roll 24"" is cut along the transverse lines 28"" severing the section from the roll. The material of the severed section is then trimmed along the outer edge of the L-shaped seal 68 on both surfaces of the roll. This trimming permits the material to be opened to a three-dimensional condition to produce an overshoe 70 as shown in FIG. 7, the L-shaped seal 68 constituting the instep of the shoe.

FIGS. 8 and 9 illustrate yet another modified form of flattened tubular roll 24x and shower cap 74 shaped therefrom. At spaced intervals along roll 24x, on each surface thereof, the material is sealed by heat and pressure along a slightly curved transverse seal line 26x. A score line 28x is formed parallel to and close to the seal line 26x.

In use, the material of the roll 24x is cut along the adjacent transverse score lines 28x severing the section from the roll. This leaves one end of the section open and the other end is sealed by the seal 26x thereby forming the cap 74, forming a three-dimensional article of wearing apparel.

Referring now to the modification of the invention shown in FIGS. 10 to 12, inclusive, herein is shown an elongated box or container 10a somewhat similar in shape and construction to box 10 but without the top flap, the top being closed by a top wall 78. End flaps 79, however, are formed in the box. A slot 80 is formed along the juncture between the top wall 78 and front wall 12a and the long edges are formed with sharp teeth 81. At the center of the slot 80, the top and front walls 78 and 12a are formed with aligned notches 82 and 84, respectively. A slot 86 with opposed notches 87 similar to slot 80 is formed along the juncture between the rear wall 13a and bottom wall 16a.

Inside the box or container 10a, there is a plurality of rolls 90, 92, 94, 96 of thin flexible transparent plastic sheet material in flat tubular formation. The material of the rolls is preshaped to form various articles of merchandise. For example, the material of roll 90 is preshaped to form gloves, such as the material of roll 24'; the material of roll 92 shower caps such as the material of roll 24x; the material of roll 94 overshoes such as the material of roll 24""; and the material of roll 96 diaper panties such as the

material of roll 24. The front wall 12a may carry indicia 98 identifying the various articles adapted to be formed by the material inside and may carry advertising indicia 100.

In use, the material of the desired article to be formed, for example, the material of roll 90 for making gloves is pulled through the proper slot, to wit, slot 80 until the cross score line of the roll is over the serrations or teeth 81 when the material is pulled across the teeth and cut off from the roll. The severed section of the roll is then trimmed as aforesaid to form the glove 46 as shown in FIG. 3A. The material of roll 92 is also pulled through slot 80, cut and trimmed to form the shower cap 74. The material of roll 94 is pulled through slot 86, cut and trimmed to form the overshoe 70, and the material of roll 96 is pulled through slot 86, cut and trimmed to form the diaper panty 32.

Another modified form of the invention is shown in FIGS. 13 to 16, inclusive. This form comprises an elongated box 10b similar in shape and construction to box 10a of FIG. 10 but with only a single slot therein between the front wall 12b and top wall 78b as indicated at 80b. At one end of the box, the top wall 78b is formed with an opening 104 parallel to the end edge of the box. The adjacent end wall 14b is formed with an elongated closed slot disposed at an angle to the top edge of the end wall and serving as a window 106.

Inside the box there is a roll assembly indicated at 108. The roll assembly consists of discs 110, 110 on the ends of a round rod 112. The discs support four spaced rolls 90b, 92b, 94b, 96b of material preshaped to form various articles of merchandise. For example, roll 90b has material preshaped to form gloves such as the material of roll 24'; roll 92b has material preshaped to form shower caps such as the material of roll 24x; roll 94b has material preshaped to form overshoes such as the material of roll 24""; and roll 96b has material preshaped to form diaper panties such as the material of roll 24. One of the discs 110, the disc adjacent the end wall with the window 106, has indicia 114 opposite the rolls identifying the article on the respective roll, which indicia appears through the window 106. The peripheral edge of the disc 110 bearing the indicia 114 is knurled as indicated at 116 to facilitate turning the roll assembly by the finger of the operator.

In use, the roll assembly is turned by means of the knurled disc 110 until the desired roll of material is in position to pass outwardly through the slot 80b. When the name of the desired article appears in window 106, the material is properly positioned for this purpose. By continued turning of the said disc, the roll of material will be dispensed and a section may be torn off at the cross guide lines by means of the cutting edge 81b on the top edge of the front wall 12b. The severed section of the roll is trimmed to form the desired article.

In FIG. 17, a modified form of roll assembly 108c is shown wherein the rolls 90c, 92c, 94c, 96c, all carry spur gears 120 on one end thereof in continuous mesh with a pinion 122 suitably interposed therebetween. Turning of the pinion 122 by means of an extension thereon actuates the rolls simultaneously rotating all of them for dispensing the material thereon.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. A sheet material storing and dispensing device comprising an elongated rectangular container which is adapted to have predetermined lengths of sheet material withdrawn therefrom and severed from selected ones of a plurality of rolls of sheet material stored therein, said container comprising: a pair of opposed top and bottom

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walls, a pair of opposed front and rear walls and a pair of end closure flaps; an elongated slot formed in said container at the junction of said top wall and said front wall thereof through which sheet material is adapted to be withdrawn and severed from certain rolls of sheet material stored within said container, and a similar elongated slot formed in said container at the junction of the bottom and rear walls thereof through which sheet material is adapted to be withdrawn and severed from other rolls of sheet material stored within said container; one of said closure flaps being swingable to open position to permit the insertion of rolls of sheet material into said container.

2. A sheet material storing and dispensing device as defined by claim 1 in which the edges of the said walls defining said slots are provided with cutting teeth.

3. A sheet material storing and dispensing device as defined by claim 2 in which the said top and front walls are provided with opposed aligned notches at the edges thereof defining said elongated slot, and in which the said bottom and rear walls are provided with opposed aligned

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notches at the edges thereof defining said similar elongated slot.

4. A sheet material storing and dispensing device as defined by claim 1 in which the said top and front walls are provided with opposed aligned notches at the edges thereof defining said elongated slot, and in which the said bottom and rear walls are provided with opposed aligned notches at the edges thereof defining said similar elongated slot.

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