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3,537,225

METHOD OF FORMING CONTAINER

Original Filed Jan. 22, 1965

2 Sheets-Sheet 1

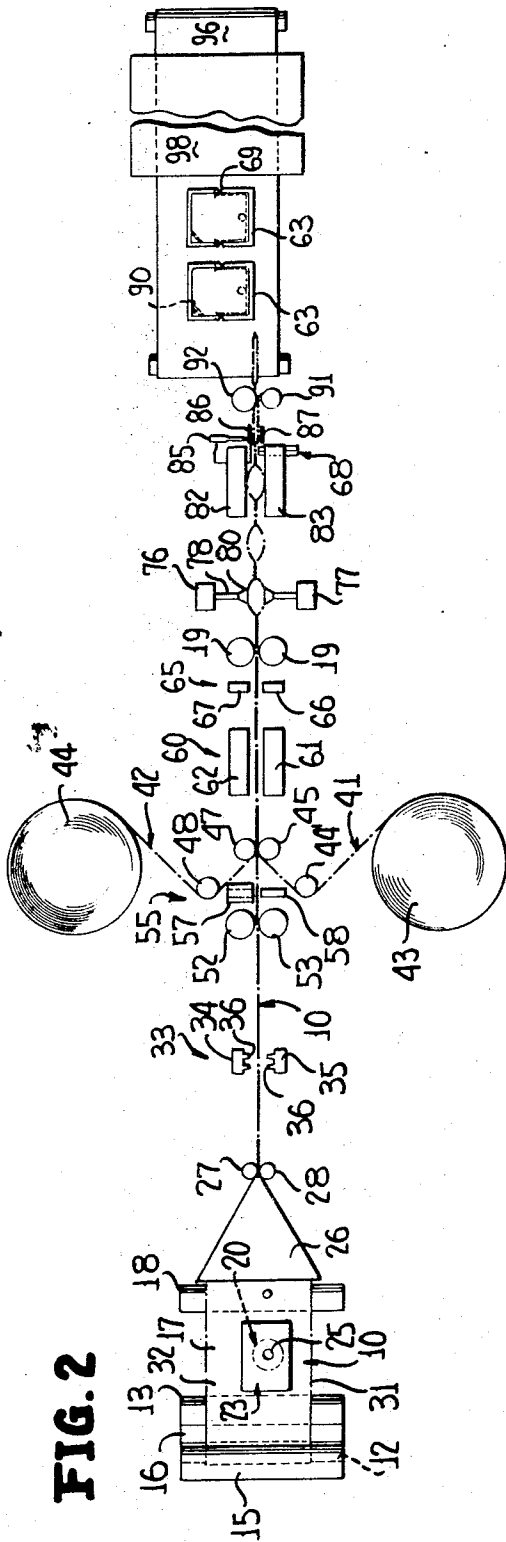


FIG. 2

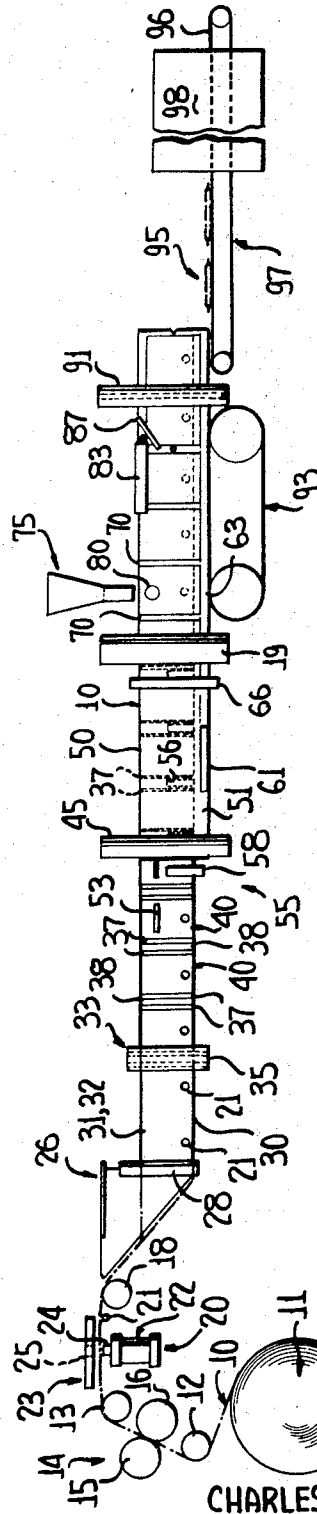


FIG. 1

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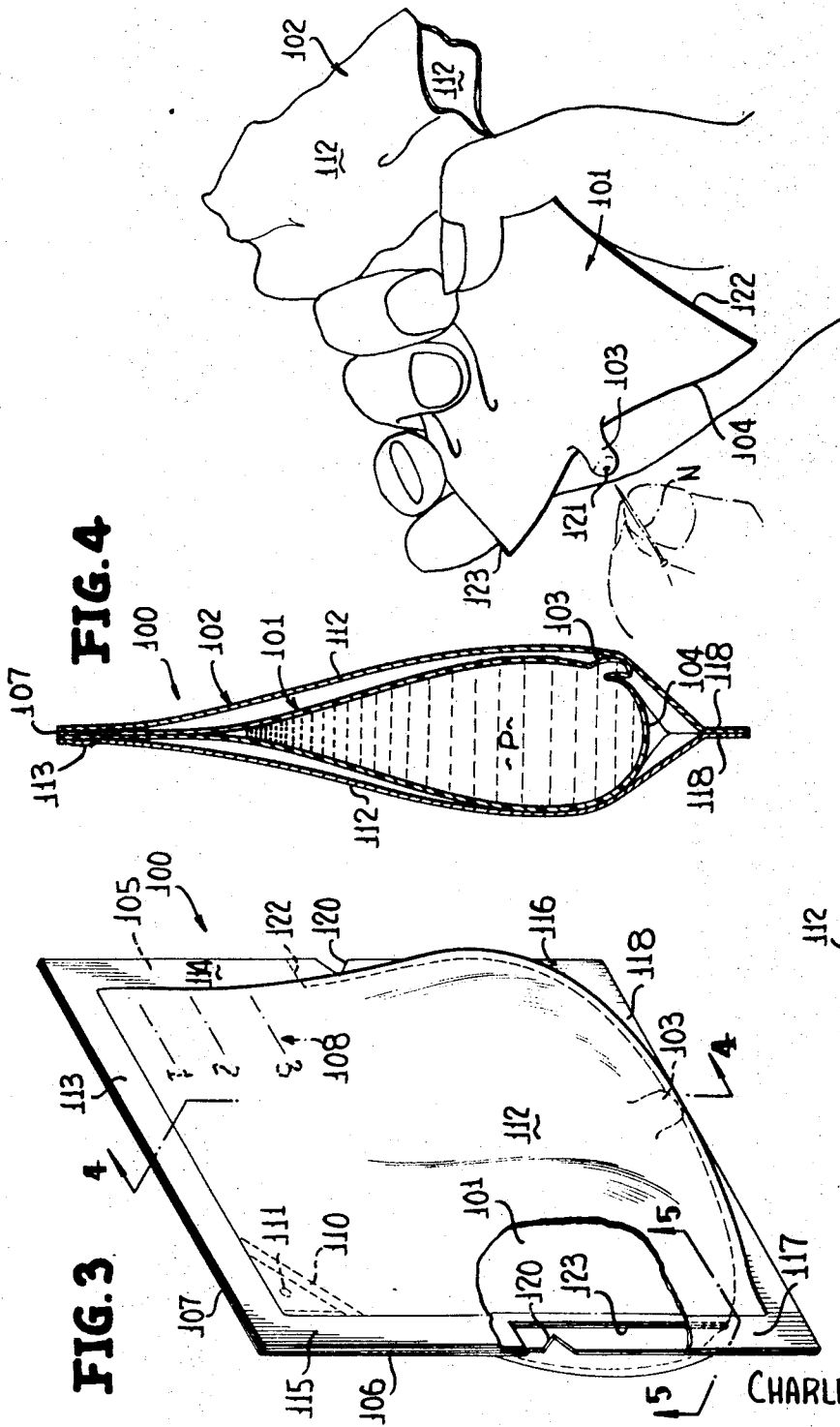


FIG. 6

FIG. 5

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METHOD OF FORMING CONTAINER

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Original application Jan. 22, 1965, Ser. No. 427,450, now Patent No. 3,386,604, dated June 4, 1968, Divided and this application Sept. 1, 1967, Ser. No. 665,098

Int. Cl. B65b 61/00

U.S. Cl. 53—14

17 Claims

ABSTRACT OF THE DISCLOSURE

Disclosed herein is a method of forming a pouch of flexible material, providing a dispensing nipple on the pouch and filling and sealing the pouch. The method includes the passage of a web of flexible material along a predetermined path, the distention of portions of the web to form nipples therein, the lengthwise folding of the web, the sealing of the folded together portions of the web on each side of the nipples and the severing of the web at the sealed together areas thereof. Further disclosed is a method of providing a protective covering in association with a pouch provided as set forth above including the entraining of two further webs into proximity with the first mentioned web and with each other to provide an hermetic encasement for the pouch.

This application is a division of my application Ser. No. 427,450, filed Jan. 22, 1965 and entitled Container and Method of Forming Same, now Pat. No. 3,386,604.

This invention relates to a novel method of forming a container and in particular to a novel method of forming a disposable infant-nursing bottle or pouch, and to a novel method of forming the pouch and a nipple thereof from a single web of flexible material.

An object of this invention is to provide a novel method of forming a pouch particularly adapted for dispensing a liquid product packaged therein.

A further object of this invention is to provide a novel method of forming a pouch of the type described by feeding a web of flexible material along a predetermined path, cold-forming or hot drawing a generally conical nipple in a portion of the web, folding the web longitudinally to bring opposite longitudinal edge portions thereof into aligned relationship opposite a folded portion, and heat sealing the web at each side of the nipple between the folded portion and the aligned edge portions whereby the pouch has an opening opposite the folded portion by means of which the pouch is charged with a dispensable product.

A further object of this invention is to provide a novel method of forming a dispensing pouch adapted to be charged with a dispensable product including the steps of feeding a first web of flexible material along a predetermined path, forming a generally conical nipple in a portion of the web, folding the web to bring opposite longitudinal edge portions thereof into aligned relationship opposite a folded portion of the web, heat sealing the web at each side of the nipple between the folded portion and the aligned edge portions thereby forming a pouch opened opposite the folded portion and sealed along sides adjacent thereto, applying a covering to the pouch and joining the covering to the pouch at least partially along the sealed sides thereof.

Still another object of this invention is to provide a novel method of forming a pouch including each of the steps immediately above-described, and in addition, notching the covering webs adjacent the folded portion of the pouch to provide means for facilitating the removal of the

covering webs upon the complete assembly and charging of the pouch.

With the above, and other objects in view that will hereinafter appear the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claims and the several views illustrated in the accompanying drawings.

In the drawings:

FIG. 1 is a schematic side elevational view of an apparatus for forming pouches in accordance with this invention, and particularly illustrates the formation of a plurality of nipples in a first web of flexible material, the formation of this web into a plurality of pouch portions, the application of second and third covering webs to opposite faces of the pouch portions and the subsequent charging, sealing and severing of the three webs.

FIG. 2 is a schematic top plan view of the apparatus of FIG. 1, and more clearly illustrates the steps performed during the assembling of the three webs to form pouches in accordance with this invention.

FIG. 3 is a side perspective view of a novel pouch of this invention, and illustrates a body of the pouch housed in a covering having notched side edge portions for facilitating the removal of the covering prior to a dispensing operation.

FIG. 4 is a sectional view taken substantially along line 4—4 of FIG. 3, and illustrates a nipple formed in the body of the pouch adjacent a bottom portion thereof.

FIG. 5 is a fragmentary enlarged sectional view taken along line 5—5 of FIG. 3, and illustrates the side edge connection of the pouch body and covering.

FIG. 6 is a perspective view of the pouch after the covering has been partially removed, and illustrates the formation of a dispensing opening in the nipple prior to a dispensing operation.

Referring in particular to FIGS. 1 and 2 of the drawings, a web 10 of flexible polymeric material is drawn from a spool 11 by conventional pull rolls 19 to define a left-to-right predetermined path of travel of the web 10. The web 10 is preferably composed of approximately 20–25 parts of ethylene-propylene copolymer rubber and approximately 75–80 parts of polypropylene containing approximately 25 parts per million of "Slip-Eze," a commercially available slip agent composed of the amides of several aliphatic fatty acids with the main constituent being oleamide. The thickness of the web 10 can be varied and is approximately 3 mil. The width of the web 10 is similarly variable depending upon the desired pouch height, and in accordance with this invention is approximately 11 inches wide.

The web 10 is drawn over the peripheries of a pair of idle rollers 12 and 13 between which is suitably mounted a printing mechanism 14. The printing mechanism 14 includes an impression roll or cylinder 15 and a printing roll or cylinder 16. Suitable mechanisms well known in the prior art are employed to effect the application of printing material onto the peripheral surface of the printing cylinder 16. The cylinders 15 and 16 are rotated in synchronism in a manner well known in the prior art to transfer the printing material from the printing cylinder 16 to the web 10. The web 10 is preferably printed with indicia which, during the performance of a dispensing operation to be described more fully hereafter, indicate the volume of material remaining in the pouch.

A portion 17 of the web 10 is disposed in a generally horizontal plane between the roll 13 and a conventionally supported idler roll 18. A nipple forming mechanism 20 for cold-forming (or hot drawing) a plurality of longitudinally spaced nipples 21 to one side of a center line of the web 10 is located between the rolls 13, 18. Only the cold-forming mechanism 20 is illustrated and comprises a male die 22 and a female die 23. The male die

22 underlies the portion 17 of the web 10 and includes a vertically reciprocal rod or plunger 24 which is in axial alignment with an aperture or opening 25 in the female die 23 overlying the portion 17 of the web 10. The plunger 24 is part of a conventional hydraulically operated fluid motor (unnumbered) which includes a conventional piston and cylinder (both also unnumbered). Upon the introduction of fluid pressure into the cylinder, the plunger 24 is rapidly driven upwardly as viewed in FIG. 1 of the drawings toward and into the opening 25 of the female die 23. This upward ascent of the plunger 24 cold-forms each of the plurality of nipples 21. The cold-forming of the nipples 21 reduces the wall thickness in comparison to the thickness of the web 10 and imparts a generally conical or cylindrical configuration to each of the nipples. It should also be noted that the stressed condition of each of the formed nipples causes the same to hug the plunger 24 as the latter descends, thereby inverting each nipple 21 as is best shown in FIG. 1 of the drawings.

The diameter and length of the nipples 21 may vary and as an example, nipples have been cold-formed in accordance with this invention having a diameter of $\frac{3}{8}$ inch and a length of $\frac{7}{8}$ inch when a plunger corresponding to the plunger 24 having a $\frac{3}{8}$ inch diameter draws web material through a $\frac{5}{8}$ inch diameter opening in a female die a distance of approximately $1\frac{1}{2}$ of an inch.

After the nipples 21 have been formed in the web 10, the web 10 is drawn beneath and about a former 26 and between a pair of rolls 27, 28 conventionally supported in a generally vertical plane. The former 26 folds the web 10 along a bottom longitudinal fold line 30 to bring opposite longitudinal edge portions 31, 32 (FIG. 1) of the web 10 into alignment opposite the folded portion 30.

A heat sealing mechanism 33 is conventionally supported upstream of the rollers 27, 28 and comprises a pair of identical sealing members 34, 35 in aligned relationship on opposite sides of the folded web 10. The sealing members 34, 35 each include a pair of spaced sealing bar portions 36 (FIG. 2). The sealing members 34, 35 are reciprocated toward and away from each other in timed relationship to the advancement of the web 10 to form parallel lines of heat sealing 37 spaced by an unsealed portion 38 (FIG. 1) substantially midway between adjacent ones of the nipples 21 to form a plurality of connected pouches or pouch portions 40. The heat sealing temperature ranges approximately between 375 degrees F. to 400 degrees F., and each line of heat sealing 37 varies between $\frac{1}{16}$ inch to $\frac{1}{4}$ inch in width with $\frac{3}{16}$ inch being optimum.

The pouches 40, when completely fabricated, are preferably encased in a covering formed by applying second and third webs 41, 42 respectively of flexible covering material to opposite faces of the folded web 10, in a manner best illustrated in FIG. 2 of the drawings. The webs 41, 42 are each preferably constructed from Mylar, metallic foil, high density polyethylene or similar flexible material having a width in excess of the folded width of the web 10, as is best illustrated in FIG. 1 of the drawings. The second web 41 is drawn from a spool 43 (FIG. 2) supported conventionally in a vertical plane while the third web 42 is similarly drawn from an identical spool 44. Guide rolls 44 and 45, 47 and 48 guide the respective webs 41, 42 into overlying relationship to opposite faces of the folded web 10. Upper longitudinal edge portions 50 of the webs 41, 42 are in alignment with the edge portions 31, 32 of the folded web 10 while lower edge portions 51 project beyond the folded bottom portion 30 of the web 10 (FIG. 1).

The webs 41 and 42 are at least temporarily secured adjacent the edge portions 31, 32 of the folded web 10 by applying a strip or spot coating of adhesive material to the upper portions of each of the pouch portions 40 by a pair of conventional adhesive applicator rolls 52, 53 supported downstream of the area at which the webs 41,

42 are applied to the folded web 10 (FIG. 2). The adhesive is preferably of a pressure-sensitive type which unites the webs 10, 41 and 42 along the upper edge portions thereof upon the passage of these webs between the guide rolls 45, 47 which are preferably biased toward each other in a conventional manner to apply sufficient pressure to unite these webs solely for a purpose to be described fully hereafter.

Immediately before the rolls 45, 47 is a mechanism 55 for forming a plurality of cut-outs or notches 56 between each of the pair of parallel lines of heat sealing 37 of the web 10. The mechanism 55 is similar to the mechanism 20 and includes a female die 57 having a rectangularly shaped opening and a male die 58 in the form of a reciprocal plunger which is also generally rectangularly shaped (FIG. 1). The dies 57, 58 are suitably supported on opposite sides of the web 10 and upon reciprocation of the plunger 58 toward and into the opening (unnumbered) of the die 57 the cutouts 56 are formed. These cutouts facilitate the removal of the covering prior to a dispensing operation in a manner to be described fully hereafter.

After the notches 56 have been formed in the web 10 by the mechanism 55, the bottom edge portions 51 of the webs 41, 42 are joined to each other by a heat sealing mechanism 60 comprising a pair of reciprocal sealing members or sealers 61, 62 conventionally supported adjacent the bottom edges 51 of the respective webs 41, 42. As the sealers 61, 62 advance toward one another and contact the respective webs 41, 42 the webs 41, 42 are secured to each other but not to the web 10 along a relatively wide line of heat sealing 63 which is substantially equal to the distance between adjacent ones of the spaces 38, 38 of the pouches 40.

Another heat sealing mechanism 65 comprising a pair of vertically disposed sealers 66, 67 is positioned between the pull rolls 19, 19 and the sealing mechanism 60. The sealers 66, 67 are movable by conventional means (not shown) toward each other in timed relationship to the movement of the webs 10, 41 and 42 to form a vertical line of heat sealing 70 substantially midway between the spaced lines of heat sealing 37 to adhere the webs 10, 41 and 42 to each other on opposite sides of each of the nipples 21. The lines of heat sealing 70 extend completely from the upper edge portions 31, 32 and 50 to the lowermost edge portions 51 of the webs 41, 42 and through the seal 63, as is best illustrated in FIG. 1 to completely unite the webs 10, 41 and 42. It should be particularly noted that along the portion of the lines of heat sealing 70 at which the four plies of the webs 10, 41 and 42 overlap, these four plies are welded or joined together, but beneath the folded bottom edge 30 of the web 10, and at the notches 56, the lines of heat sealing 70 only join portions of the webs 41, 42 to each other, but not to the web 10.

A dispensing device 75 (FIG. 1) is supported above the webs 10, 41 and 42 for charging each of the pouches 40 with a predetermined quantity of preferably a dispensable liquid product, such as milk, infant formula, water or a similar liquid. Each pouch 40 is filled to approximately three-quarters of its capacity, and in the present example, this is approximately four ounces of liquid in each of the approximately four and one-half by five and one-half inch pouches. The dispensing is facilitated by means of a vacuum mechanism 76, 77 positioned on opposite sides of the webs immediately below the dispensing mechanism 75 and substantially in vertical alignment therewith. Each of the vacuum mechanisms 76, 77 is substantially identical and includes a reciprocal tubular plunger 78 terminating in a suction head 80. The tubular plunger 78 of each of the vacuum mechanisms 76, 77 is connected to a suitable vacuum source, such as a vacuum pump, and the tubular plungers 78 are reciprocated in unison with respect to each other and in synchronism with the advancement of the webs.

As the webs 10, 41 and 42 pass beyond the pull rolls

19, 19 the longitudinal edge portions 31, 32 and 50 respectively are substantially in abutting relationship and in this form prevent the introduction of a dispensable product into the pouches 40. However, as each of the pouches approach the vacuum mechanisms 76, 77 the plungers 78 are advanced toward each other to contact the respective webs 42, 41 adjacent the upper edge portions 50 thereof. The vacuum cups 80 grip these edge portions and, upon reciprocation of the plungers 78 away from each other, each of the pouches 40 is opened as is best illustrated in FIG. 2 to receive the product from the dispensing mechanism 75. The adhesive applied by the rolls 52, 53 holds the webs 10, 41 and 42 together, as was heretofore noted, so that the inner web 10 will travel along with the webs 41, 42 when subjected to the operation of the mechanisms 76, 77.

After each of the pouches 40 has been charged a pair of heat sealing members 82, 83 suitably positioned adjacent the upper edge portions 50, 31, 32 of the webs are advanced toward each other to seal these edge portions and completely close each of the pouches 40. The sealing members 82, 83 are positioned in a horizontal plane above the plane of the adhesive applicator rolls 52, 53 and in this manner the adhesive applied by the rolls does not interfere with the sealing of the edge portions 50, 31, 32 by the members 82, 83.

Beneath the sealers 82, 83 is a mechanism 68 for forming a diamond-shaped cutout or notch 69 in the webs in alignment with an uppermost portion of the cutout 56. The mechanism 68 is identical to the mechanism 55 except for the diamond configuration thereof, and a further description is unnecessary for a complete understanding of the invention. The diamond-shaped notch 69 is of a width not greater than half of the total width of the seal produced at the station 55.

A hollow reciprocal needle 85 is then introduced through the web 42 into the interior of each of the pouches 40 at a corner thereof. The needle 85 is connected to a suitable source of vacuum and all air entrapped in the pouches 40 during the sealing thereof by the heat sealing members 82, 83 is withdrawn.

After the air is withdrawn from each of the pouches 40, a pair of angularly arranged heat sealing members 86, 87 are advanced toward each other to form a line of heat sealing 90 across the corner of each of the pouches and coverings to seal the same prior to the retraction of the hollow needle 85.

A conventional rotatable cutter 91 and backing roller 92 cooperates to sever the pouches and coverings along a line substantially midway between the lines of heat sealing 37 of the pouches 40. Between the time the pouches are charged and the time they are severed, a conveyor 93 provides the necessary support during this movement. However, upon the severance by the rotatable cutter 91 and the backing roller 92, the pouches and coverings forming a package generally referred to by the reference numeral 95 freely fall upon and are conveyed by an upper conveyor belt run 96 of a conveyor 97 into an autoclave 98. The autoclave 98 preferably includes two chambers (not shown), the first of which subjects the packages 95 to a live steam atmosphere of approximately ten pounds per square inch pressure for approximately twenty minutes. After a twenty minute time period, regulated by the speed of the conveyor 97, the packages pass from the first chamber to the second chamber (also not shown) of the autoclave 98. A pressure of approximately twelve pounds per square inch in an air atmosphere is maintained in the second chamber and the packages 95 remain therein until the packaged product is cooled below its boiling point. Each of the pouches 95 is then advanced beyond the autoclave 98 and the fabrication thereof is completed.

Referring to FIGS. 3 through 5 of the drawings, a novel package 100 corresponding to the packages 95 of FIGS. 1 and 2 is illustrated and includes an inner pouch 101 and a covering 102.

The pouch 101 includes a nipple 103 adjacent a folded bottom edge portion 104 substantially midway between adjacent heat sealed side edge portions 105, 106 which terminate at an uppermost heated sealed portion 107 (FIG. 4). The heat sealed side edge portions 105, 106 are respectively notched at 122, 123. The notches 122, 123 correspond to the notch 56 formed by the mechanism 55 of FIGS. 1 and 2 after the packages 95 have been each severed by the cutter 91 and back-up roll 92. That is, as was heretofore noted, the cutter 91 divides the packages medially between the parallel lines of heat sealing 37, 37 and thus divides each of the cutouts or notches 56 into the notches 122, 123 of the package 100.

Suitable indicia 108 in the form of inverted numerals is printed on the pouch 101 remote from the nipples 103. The numerals are preferably ounce markings which, when the package 100 is inverted from the position illustrated in FIG. 3 during a dispensing operation to a position at which the nipple 103 is uppermost, indicate the amount of product remaining in the pouch 101 and thus indirectly indicate the amount of product consumed.

A line of heat sealing 110 across the corner of the pouch 101 formed by the edge portions 106, 107 seals a needle opening 111 in the pouch 101 to prevent contamination of the product packaged therein, the seal 110 corresponding to that produced by the sealers 86, 87.

The covering web 102 comprises two substantially identical covering webs 112, 112 corresponding to the webs 41, 42. Each of the covering webs 112 has an edge portion 113 heat sealed to the edge portions 107 of the pouch 101 and opposite side edge portions 114, 115 heat sealed to the respective side edge portions 105, 106 of the pouch 101 above the notches 122, 123 but free of the pouch 101 and lower portions 116, 117 of the covering webs 112, 112. These lower portions 116, 117 of the covering webs 112, 112 are heat sealed only to each other and are identically V-notched at 120, 120. The notches 120 correspond to the diamond-shaped notches 69 formed by the mechanism 68 prior to the severance by the cutter 91 to form the individual packages 95. Bottom edge portions 118 of the covering webs 112 are also heat sealed only to each other and in this manner the lower portion of the pouch 101 is free of the covering 102 downwardly of the notches 120 and along the bottom seam 118.

A dispensing operation is initiated by tearing either of the side edge portions 116, 117 of the covering 102 which is facilitated in the well known manner by the V-shaped notches 120. The pouch 101 is not ruptured during this severing because the same is unattached along the bottom edge portion 118 and the side edge portions 116, 117 as is best illustrated in FIGS. 3-5 of the drawings.

After the covering webs 112, 112 have been severed they are drawn to a position shown in FIG. 6 to fully expose the nipple 103. Complete peeling of the covering webs 112, 112 is unnecessary, and it is merely sufficient to remove a sufficient portion of the covering webs 112, adjacent the nipple 103 to expose the nipple and prevent the rougher severed edges of the webs 112, 112 from contacting the face of an infant during a dispensing operation.

A hole 121 (FIG. 6) is then pierced in the end of the nipple 103 with a sterile pin or similar sharp pointed tool. As was heretofore noted, the packaged product P is preferably milk, distilled water, or infant formula, and the nipple is then placed into the infant's mouth as slight pressure is exerted on the exterior of the pouch 101. This causes a flow of liquid through the hole 121 and at this point, the infant has adjusted the nipple to its mouth and starts a sucking action which continues until the infant's hunger is satisfied or the contents of the pouch are exhausted. Upon the completion of the dispensing or feeding operation, the package is discarded.

While a preferred embodiment of the invention has been thus far described, variations in the method of forming the packages, and thus altering the package construc-

tion are considered within the scope of this invention. For example, it may be desirable or unnecessary to provide the folded web 10 with the covering sheets or webs 41, 42 and the steps associated with the application of these webs to the folded web 10 may be eliminated. The individual uncovered pouches thus produced can, for example, be manually packaged in a separately fabricated outer pouch which is afterwards sealed in a manner in which the inner pouch is completely free of the outer pouch or covering.

During a dispensing operation performed in the manner heretofore described, the configuration of the nipples 21, 103 is maintained by applying manual pressure to the respective pouches 40 and 101. This is necessary because of the relatively thin wall construction of both the pouches and the nipples. However, it is also within the scope of this invention to provide means for maintaining the configuration of the nipples other than by the application of manual pressure to the pouches. One such means may be, for example, a mechanism disposed adjacent the nipple forming mechanism 20 for injecting a predetermined quantity of plastic foam material into each nipple 21, and permitting the plastic material to foam and expand in situ. When fully set such foam material would partially or fully fill the nipples 21 and adhere thereto. A sufficient distance can be provided between the mechanism for injecting the foamable plastic material into each of the nipples 21 and the roll 18 to permit complete setting prior to the passage of each nipple 21 beyond the roll 18 and out of the generally vertical plane thereof. The roll 18 could be provided with a circumferential groove deeper than the length of the nipples 21 and wider than the diameter of these nipples to provide a relieved area through which the nipples 21 freely pass during the movement of the web 10 over the periphery of the roll 18.

In lieu of the injection of foamable plastic material into the nipples 21, porous inserts corresponding to the internal configuration of the nipples 21 could be inserted into and bonded to each of the nipples 21. Such other alternatives as tubular inserts similarly insert into and bonded to each of the nipples 21 can also be employed in lieu of the porous inserts noted above.

The hollow needle 85 (FIG. 2) and the heat sealing members 86, 87 can also be eliminated and replaced by other suitable pouch vacuumizing means. For example, the area occupied by the heat sealing members 82, 83 can be completely enclosed within a vacuum chamber so that the charged pouches 40, upon passing therethrough, would become vacuumized and thereafter be immediately heat sealed by the heat sealing members 82, 83. Alternatively, a roller or other suitable mechanism can be provided at each side of the web 10 which would squeeze the charged pouches 40 during the passage thereof through the tight portions of the rolls sufficiently to raise the liquid level of the package contents until the liquid product begins to overflow and at which time the heat sealing members 82, 83 would be actuated to seal the upper edge of the pouches. Still another alternative is to provide, immediately before the heat sealing members 82, 83, a superheated steam line for injecting steam into the charged pouches 40 to thereby flush the air therefrom, the heat sealing operation following immediately thereafter.

From the foregoing, it will be seen that novel and advantageous provisions have been made for carrying out the desired end. However, attention is again directed to the fact that additional variations may be made in this invention without departing from the spirit and scope thereof as defined in the appended claims.

I claim:

1. The method of forming a pouch adapted to be charged with a dispensable product comprising the steps of providing a web of flexible material, forming a nipple in a portion of the web, folding the web to bring opposite longitudinal edge portions thereof into aligned relationship, forming a seal at each side of the nipple between the

fold and the aligned edge portions, and removing a portion of the web in the area of the seal.

2. The method according to claim 1 wherein said step of forming a nipple comprises distending a portion of the web to a thickness less than the thickness of the remainder of the web.

3. The method according to claim 2 wherein said step of forming a seal at each side of the nipple comprises heat sealing together the folded together portions of the web fully across the web from the aligned edge portions to the fold therein.

4. The method according to claim 2 wherein the step of forming a nipple comprises forming a plurality of nipples at web portions spaced along the length of the web in the direction of travel thereof.

5. The method according to claim 4 wherein the step of joining together the web portions comprises joining together the web portions at points along the web lying between adjacent nipples.

6. The method according to claim 2 wherein said step of forming a nipple comprises distending a portion of the web to a thickness less than the thickness of the remainder of the web.

7. The method of forming and charging a pouch comprising the steps of providing a web of flexible material, forming a nipple in a portion of the web, folding the web to bring opposite edge portions thereof into aligned relationship, joining together the web portions from the aligned edge portions to the fold at each side of the nipple to form a pouch opened at the edges opposite the longitudinal fold, introducing a dispensable product into the pouch, securing an exterior flexible pouch covering to the pouch and joining the edges of the pouch opposite the longitudinal fold to completely encase the product in the pouch.

8. The method according to claim 7 wherein the step of securing an exterior covering comprises joining two further webs to the pouch on each side thereof at the place of joiner of the portions from the aligned edge portions to the fold, and a further step of sealing the two further webs to the pouch at the edges thereof opposite the longitudinal fold to hermetically encase the pouch.

9. The method of forming a pouch adapted to be charged with a dispensable product comprising the steps of feeding a first web of flexible material along a predetermined path, forming a nipple in a portion of the web, folding the web to bring opposite longitudinal edge portions thereof into aligned relationship opposite a folded portion of the web, heat-sealing the web at each side of the nipple between the folded portion and the aligned edge portions thereby forming a first pouch portion opened opposite the folded portion and sealed along sides adjacent thereto, applying second and third webs to opposite faces of the first pouch portion, and joining the second and third webs to the first pouch portion at least along the sealed sides thereof.

10. The method according to claim 9 further comprising the step of securing the second and third web to each other adjacent the folded portion of the first web.

11. The method of forming a pouch adapted to be charged with a dispensable product comprising the steps of feeding a first flexible sheet material web along a predetermined path, forming a nipple in a portion of the first web, folding the first web to bring opposite longitudinal edge portions thereof into aligned relationship opposite a folded portion of the first web, sealing the first web at each side of the nipple between the folded portion and the aligned edge portions feeding second and third flexible sheet material webs along the predetermined path at opposite sides of the first web and securing the second and third web to the faces of the first web on opposite sides of the folded portion.

12. The method according to claim 11 wherein the step of securing the second and third webs to the faces of

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the first web comprises securing the second and third webs to the first web adjacent the aligned edge portions thereof, and further comprising the step of securing the second and third webs to each other adjacent the folded portion of the first web.

13. The method according to claim 11 wherein said steps of securing the second and third webs comprises securing the second and third webs to the folded first web along part of the distance between the aligned edge portions and the fold, and including the further step of securing the second and third webs one to the other along the remainder of the distance between the aligned edge portions of the fold.

14. The method according to claim 13 further comprising the step of removing a portion of the first web in area thereof sealed at each side of the nipple, the step of securing the second and third webs one to the other comprising bringing the second and third webs into contact in the space provided by said step of removing a portion of the first web.

15. The method according to claim 13 further comprising the step of notching the second and third webs in a secured together portion thereof.

16. The method according to claim 11 further com-

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prising severing the first, second and third webs at the sealed together portions of the first web on each side of the nipple.

17. The method as defined in claim 1 including the step of completely encasing the pouch in a cover with at least a portion of the cover adjacent the removed area of the seal being unsecured thereto whereby rupture of the cover to gain access to said pouch may be effected without rupturing the pouch.

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