

Aug. 18, 1964

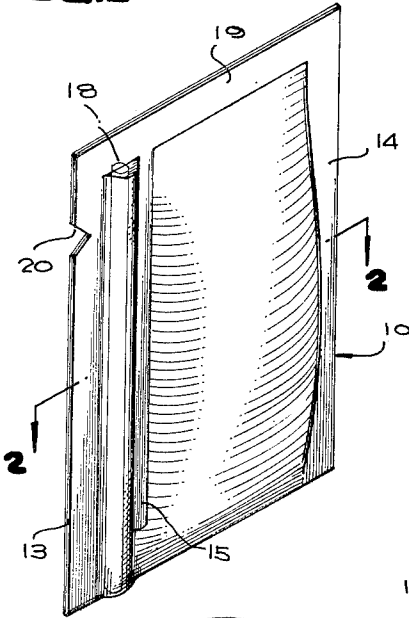
O. A. FRESHOUR

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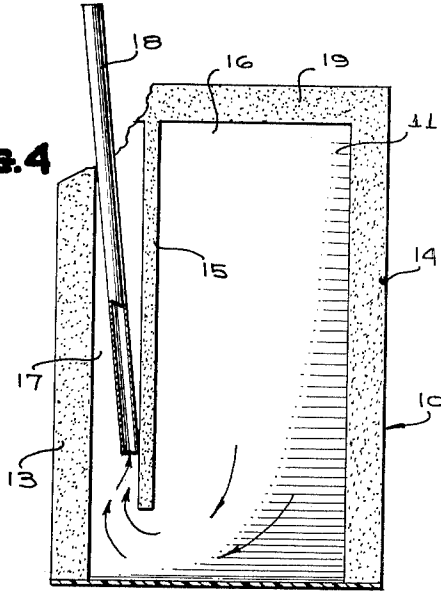
LIQUID FILLED POUCH WITH STRAW

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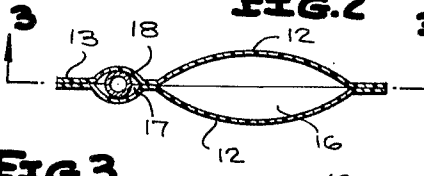
**FIG. 1**



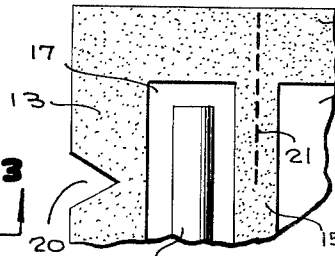
**FIG. 4**



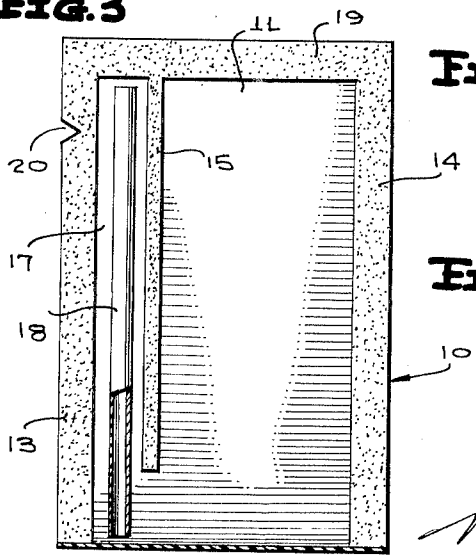
**FIG. 2**



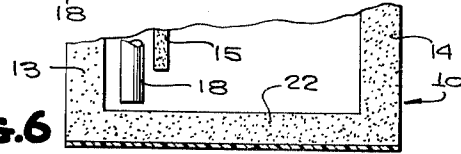
**FIG. 5**



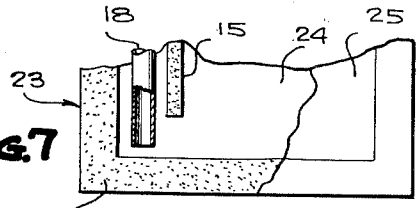
**FIG. 3**



**FIG. 6**



**FIG. 7**



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**LIQUID FILLED POUCH WITH STRAW**

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1 Claim. (Cl. 229-7)

This invention relates in general to new and useful improvements in dispensing containers, and more specifically to a novel liquid filled pouched having a straw therein for effecting the dispensing of the contents thereof.

Recent developments have been made in the packaging of liquids in flexible packages. However, such packaging of liquids has presented a dispensing problem in that it is, of course, unsanitary to clip off a corner of a flexible package and drink the contents directly therefrom. On the other hand, attempts have been made to provide flexible packages with straws. These have presented opening problems as well as dispensing problems. For example, a prior solution to the problem has been to provide the package with a straw having a sharpened upper end. Since the product packaged within the package is generally consumed by children, the sharpened upper end of the straw presents an injurious hazard both while opening the package and consuming the contents thereof. Also, after discarding the empty container, the child is prone to retain the sharpened straw which is considered to be a dangerous and undesirable toy.

In view of the foregoing, it is the primary object of this invention to provide a novel liquid filled pouch which is provided with a straw and which pouch is constructed in a manner so that it may be readily opened and the straw projected therefrom for the purpose of dispensing the contents of the pouch and with the straw having a square cut end so as to prevent any possibility of injury to the user.

Another object of this invention is to provide a novel liquid filled pouch which includes a main compartment for the liquid and a dispensing compartment which has the dispensing straw disposed therein, the lower portions of the two compartments being in communication for the flow of liquid from the main compartment into the dispensing compartment, and the pouch being provided with means for tearing off an upper portion of the dispensing compartment only whereby the straw may be removed from the pouch without spilling the contents thereof.

Still another object of this invention is to provide a novel liquid filled pouch having a dispensing straw therein, the pouch being formed of heat sealable flexible sheet material and in addition to being peripherally sealed, the pouch is provided with a heat sealing line extending vertically thereof adjacent one side edge and terminating above the bottom of the pouch to divide the pouch into two separate compartments, one of the compartments being relatively large and being a main liquid receiving compartment, and the other of the compartments being relatively small and serving as a dispensing compartment with the dispensing straw disposed therein.

A further object of this invention is to provide a novel liquid filled pouch which is formed of two panels of heat sealable flexible sheet material, the panels being connected together about the peripheral edges thereof to form the sealed pouch, and the panels being further heat sealed together to divide the pouch into two compartments, with one of the compartments being relatively small as compared to the other, and a straw disposed therein, and the pouch in the vicinity of the smaller compartment having a notch in the side edge thereof to facilitate the tearing away of the upper corner of the smaller

compartment to facilitate the projection of the straw therefrom.

Still another object of this invention is to provide a liquid filled pouch which is formed of a very flexible heat sealable sheet material, and the pouch being divided into two compartments having the lower portions thereof in communication with each other, one of the compartments being relatively small and having a dispensing straw disposed therein, the pouch being provided with means for tearing off an upper portion of the smaller compartment to provide an opening through which the straw may be pushed, and the pouch being of sufficient flexibility so that the lower portion of the smaller compartment may be pushed upwardly to force the straw out through the open upper end thereof.

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 drawing:

In the drawing:

FIGURE 1 is a perspective view of the liquid filled pouch with straw formed in accordance with this invention.

FIGURE 2 is an enlarged horizontal sectional view taken along the line 2-2 of FIGURE 1, and shows the specific cross-section of the pouch.

FIGURE 3 is an enlarged vertical sectional view taken along the line 3-3 of FIGURE 2, and shows the specific details of the pouch including the specific sealing thereof.

FIGURE 4 is a view similar to FIGURE 3, showing the upper corner of the dispensing compartment of the pouch torn away and the straw of the pouch projecting up out of the pouch in position for dispensing the liquid from the pouch.

FIGURE 5 is an enlarged fragmentary sectional view similar to FIGURE 3, showing the upper corner only of the pouch and shows the specific details of the pouch opening means.

FIGURE 6 is an enlarged vertical sectional view through the lower portion of a slightly modified form of pouch construction.

FIGURE 7 is a view similar to FIGURE 6, and shows still another slightly modified form of pouch construction.

Referring now to the drawings in detail, it will be seen that there is illustrated in FIGURE 1 a liquid filled pouch formed in accordance with the invention, the pouch being generally referred to by the numeral 10. As is best shown in FIGURES 2 and 3, the pouch 10 is formed of two panels 11 and 12 of flexible heat sealable material. The heat sealable material is preferably a laminate of polyethylene and cellophane with the polyethylene being on the inside of the pouch. However, a heavy polyethylene film alone could be used, and another possible alternative is a polyester film and a polyethylene film laminate.

Although the pouch 10 will be considered as being formed of two panels 11 and 12, it is to be understood that the two panels 11 and 12, as is clearly shown in FIGURE 3, may be folded from a single sheet. When the panels 11 and 12 are folded from a single sheet, as is shown in FIGURE 3, the pouch 10 is formed by providing lines 13 and 14 of heat sealing along opposite edges of the panels 11 and 12. In addition, an intermediate line of heat sealing 15 extends down from the top edges of the panels 11 and 12 to a point spaced above the bottom of the pouch 10 to define a relatively wide main compartment 16 and a much narrower dispensing compartment 17, the compartment 17 being disposed adjacent the heat sealing line 13.

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After the pouch 10 has been filled to the desired level with the desired liquid and a straw 18 has been placed within the dispensing compartment 17, the top of the pouch 10 is sealed by a line of heat sealing 19. It is to be noted that the line of heat sealing 15 extends into the line of heat sealing 19 so that the compartments 16 and 17 are communicated only at the bottoms thereof.

In order to facilitate the opening of the pouch 10, the line of heat sealing 13 has a notch 20 formed therein. When it is desired to dispense the contents of the pouch 10, the upper corner of the portion of the pouch 10 defining the dispensing compartment 17 is grasped and is torn upwardly starting along the notch 20 so that the upper corner of the dispensing compartment 17 is removed, as is shown in FIGURE 4. The straw 18 is then projected upwardly out of the pouch 10 to a position where it may be used for the purpose of dispensing the contents of the pouch 10.

At this time, it is pointed out that the straw 18, if desired, may be formed of a suitable material so as to have flotation properties and whereby when the pouch 10 is opened, the straw 18 will automatically float up out through the open upper end of the dispensing compartment 17. On the other hand, when a normal straw, such as a plastic straw, is provided, the straw 18 may be forced out of the open upper end of the dispensing compartment 17 by pressing upwardly on the lower part of the pouch 10 in alignment with the dispensing compartment 17. The pouch 10 can be flexed sufficiently to force the straw 18 up out through the open end of the dispensing compartment 17 without spilling the contents of the pouch 10.

Reference is now made to FIGURE 5, wherein the pouch 10 is provided with a slight addition. When the upper corner of the dispensing compartment 17 is removed by tearing, starting with the notch 20, there is the possibility that in lieu of the corner being torn off of the pouch 10, the panels 11 and 12 will tear into the line of heat sealing 15 and through the line of heat sealing 15 into the main compartment 16, with the result that there is a good possibility of spillage of the contents of the container. In order to avoid any possibility of this, as is shown in FIGURE 5, the pouch 10 may be provided with a weakening line 21 in the upper part thereof along the line of heat sealing 15. The weakening line 21 is illustrated as being formed by a plurality of perforations, but if desired, may be in the form of other types of weakening lines. Thus, when the upper corner is to be torn off the pouch 10 by starting with the notch 20, in the event the tear does not extend diagonally, as is shown in FIGURE 4, the tear will extend into the weakening line 21 and up the weakening line 21 to tear out a generally rectangular upper portion of the pouch 10.

Reference is now made to FIGURE 6 wherein a slightly modified form of pouch 10 is provided. The pouch of FIGURE 6 is formed identical with the pouch shown in FIGURE 3, with the addition of a line of heat sealing 22 across the bottom of the pouch. Although the pouch illustrated in FIGURE 6 may be formed of two panels folded from a single sheet, in some instances, it is desired to provide the lower line of heat sealing 22 inasmuch as this provides for a much stronger pouch.

Reference is now made to FIGURE 7 in particular, wherein there is illustrated a modified form of pouch, generally referred to by the numeral 23. The pouch 23 is formed of two separate sheets 24, 25, which form panels that function similarly to but are utilized in lieu of the two panels 11 and 12 which are formed from a single

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sheet. The sheets 24 and 25 are heat sealed together about their entire periphery in the finished pouch by heat sealing 26. The pouch 23 will include the line of heat sealing 15 and the straw 18. Further description of the pouch 23 is believed to be unnecessary.

The pouch 10 is primarily intended for the dispensing of beverages which will primarily be consumed by small children. However, it is to be understood that the pouch may contain any liquid and, for example, it could contain a liquid type medicine. On the other hand, the liquid contained within the pouch may be plain water with the pouch being intended for survival purposes. It is to be understood that the contents of the pouch in no way controls the construction thereof, with the exception that the contents is a liquid to be dispensed through the straw 18.

From the foregoing, it will be seen that there has been devised a novel pouch assembly for solving the problem of dispensing liquid in an economical manner. While several forms of the invention have been specifically illustrated and described, it is to be understood that other variations may be made in the examples disclosed herein without departing from the spirit and scope of the invention, as defined in the appended claim.

I claim:

A liquid filled pouch assembly comprising a sealed pouch formed of a heat sealable flexible sheet material, said pouch having two panels joined along the edges thereof and said pouch including a top, a bottom and side edges, a line of heat sealing extending between said panels downwardly from said top and more closely adjacent to one of said side edges than to the other so as to separate said pouch into a large main compartment and a smaller dispensing compartment disposed proximal to said one side edge, a straw loosely received in said dispensing compartment, said line of heat sealing terminating short of said bottom whereby liquid may flow from the bottom of the main compartment into the bottom of said dispensing compartment, at least said one side edge being defined by a wide line of heat sealing, said wide line of heat sealing including first weakening means facilitating the tearing off of an upper portion of said pouch to open the upper end of said dispensing compartment whereby said straw may be projected above the top of said pouch, second weakening means extending along an upper central part of said first mentioned line of heat sealing to limit the tearing of said pouch to said dispensing compartment, said first weakening means comprising a notch in said one side edge, said second weakening means being a weakening line in the line of heat sealing separating the dispensing and main compartments of said pouch, and said weakening line being formed by a plurality of perforations extending from the top edge of said top to a point substantially directly opposite the notch for facilitating the tearing off of an upper rectangular corner portion of said dispensing compartment to effect the projection of said straw above the top of said pouch without otherwise effecting the top of said main compartment.

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