

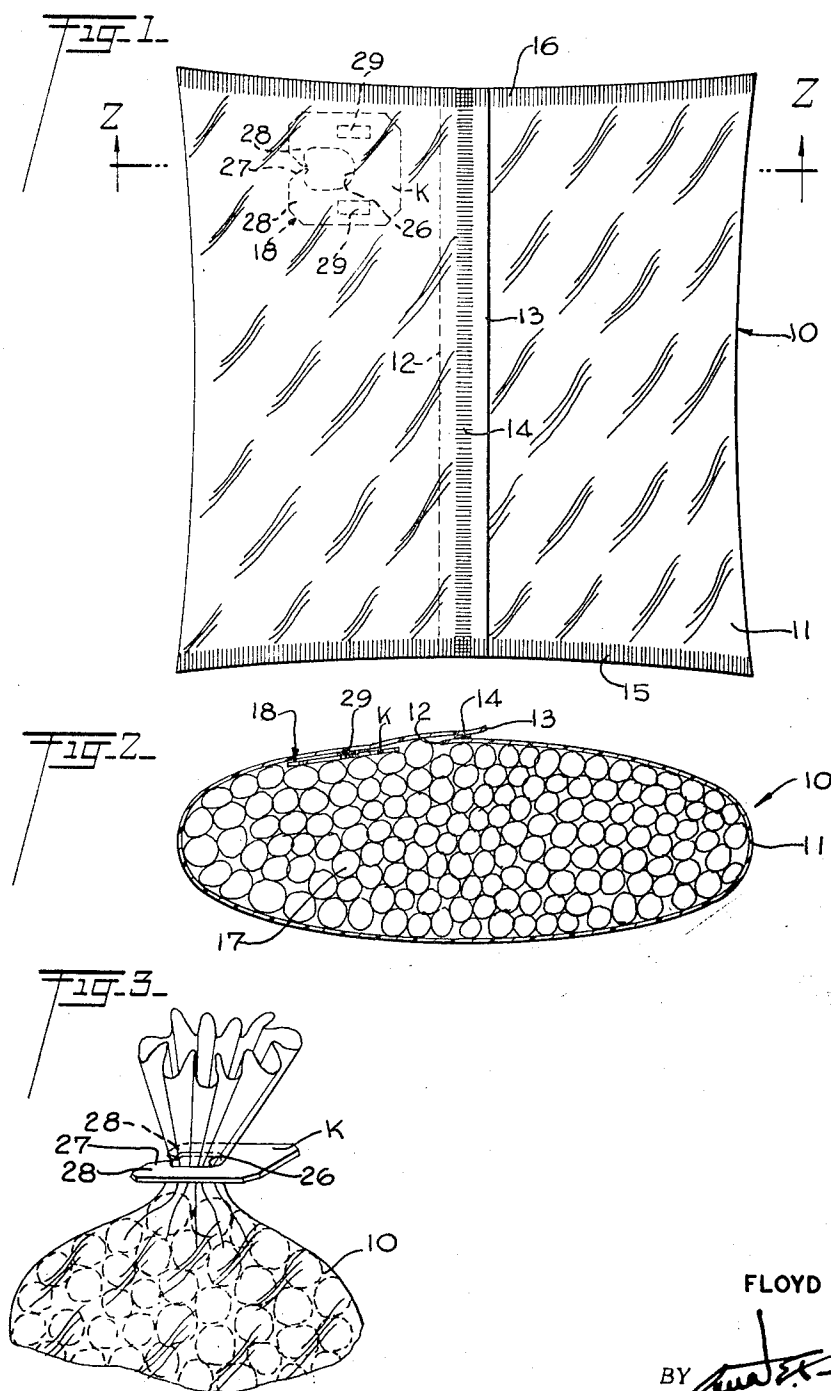
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BAG ENCLOSING RE-CLOSING FACILITY

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BAG ENCLOSING RE-CLOSING FACILITY

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Original application Aug. 6, 1965, Ser. No. 477,797, now
Patent No. 3,381,442, dated May 7, 1968. Divided and
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4 Claims

ABSTRACT OF THE DISCLOSURE

A pillow-type bag formed of thin sheet plastic material such as polyethylene having secured to the inner surface thereof close to an end of the bag assigned for opening the same, a "Kwik Lok" type reclosure facility which is located entirely inside said bag but is readily available, upon opening this end of the bag as by clipping the seal therefrom, for reclosing the bag after a portion only of the contents thereof have been removed so as to repack-
age the balance of the contents in the bag.

Cross reference to related application

This application is a division carved out of my co-
pending application Ser. No. 477,797 filed Aug. 6, 1965,
now Patent Number 3,381,442, on Method of and Appa-
ratus for Making a Bag Enclosing a Reclosing Facility.

Background of the invention

A vast amount of dry fluent products are packaged
commercially in pillow-type flexible plastic bags which
are formed, filled and sealed on a conventional bag pack-
aging machine. This machine draws a continuous web of
plastic material from a roll thereof and progressively
forms this into a tube, seals one end of this tube, delivers
a predetermined quantity of the product through said
tube into the sealed end portion thereof, and then seals
the tube transversely just above said product and cuts
the transverse area just sealed to divide it into lower and
upper seals and thus separate the bag just formed from
said tube. The first of these seals closes the upper end of
the bag just severed from the tube. The second seal closes
the lower end of the remainder of the tube in readiness
to start another cycle in the bag forming, filling and seal-
ing operations automatically performed repeatedly by
said machine.

Summary of the invention

When one end of such a bag is snipped off to open the
same and start using the contents thereof, there is often
a need for reclosing the bag to prevent the drying out or
spoilage of a portion of the product left in the bag.

It is an object of the present invention to provide such
a pillow-type plastic bag which will have embodied there-
with, and entirely enclosed therewithin, a "Kwik Lok"
type reclosure facility which will be retained near the
bag end assigned for opening, and will be readily detach-
able from the bag, from the inside, after the latter has
been opened, for use in reclosing said bag.

Another object of the invention is to provide such a
bag wherein the closure facility will not interfere with
the formation of or impair in any way the lengthwise
and transverse seals employed in the manufacture of
the bag.

Brief description of the drawing

FIGURE 1 is a front elevational view of a preferred
embodiment of the "pillow"-type bag of the invention.

FIGURE 2 is a diagrammatic cross-sectional view
taken on the line 2—2 of FIGURE 1 and illustrates the
manner in which a longitudinal welded seam is formed

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in said bag and the manner in which a reclosure facility
is secured to the inner surface of the bag with said facility
completely enclosed by the latter.

FIGURE 3 is a fragmentary perspective view of the
upper end of the aforesaid bag after the upper transverse
welded seam thereof has been clipped off to open said
bag and a portion of the contents removed and the re-
closure facility aforesaid has also been removed from the
bag and applied to the loose neck portion of the bag to
close this and thus preserve the balance of the contents
of the bag from exposure.

Description of the preferred embodiment

Referring specifically to the drawing and particularly
to FIGURES 1 and 2, a pillow-type bag 10 is here shown
which comprises a preferred embodiment of the bag of
the present invention. This bag has a tubular body 11
which is formed from a longitudinal web of flexible plastic
material with its side edges wrapped around the longitudi-
nal axis of the bag so as to provide overlapping marginal
areas 12 and 13, the first of which is superimposed above
the second and the two then united by a heat weld 14
which seals said areas together and converts the aforesaid
longitudinal web into said tubular body 11. As with all
conventional "pillow"-type bags, bag 10 has its lower
end closed by a heat weld 15 which welds back and front
portions of the tubular body 11 together. In a similar
manner the upper end of bag 10 is closed by heat weld 16
after a predetermined amount of loose product 17 has
been deposited in said bag so that the weld 16 confines
said product.

The manner in which bag 10 departs significantly from
the conventional, is in its having affixed to the inner sur-
face of the tubular body 11 just inside of the upper end
of the bag closed by weld 16, and spaced inwardly from
the area of said weld, a reclosing facility 18.

In the broader aspect of the present invention, this
facility may comprise any of the well known bag closures
which embrace, among others, a closure operating by
means of a pressure adhesive and a closure comprising
a plastic coated wire filament which is twisted about the
neck of the bag to close the same, or it may and pref-
erably does comprise a closure of the type known com-
mercially as a "Kwik Lok" closure which is made of a
small, approximately rectangular sheet of flat polystyrene
which is stiff but springy and has an internal bag closing
aperture therein which is connected with one edge of
the closure by a narrow entrance opening. The application
of the "Kwik Lok" closure to a bag is effected in any of
several ways, but when it is done manually, the bag neck
is generally bunched together as by twisting, and the two
jaws on the opposite sides of the entrance opening of the
closure are sprung apart to admit the bag neck between
these and into said aperture after which the pressure on
the closure is removed so that these jaws spring together
and trap the bag neck in said aperture.

"Kwik Lok" closures are available commercially
packed in columns of individual closures or they may be
had coiled in multi-closure strip form which is known as
"Striplok."

Reference is made to the aforementioned copending
application for full disclosure of a preferred method and
apparatus for the manufacture of the bag 10. As pointed
out therein, each of the closures K has an internal bag
neck confining aperture 26 which is connected to one
edge of the closure by a narrow opening 27 through which
the bag neck is admitted to said aperture, this opening
providing a pair of opposed jaws 28 on opposite sides
thereof which spring together after the bag neck has
been inserted into the aperture 26 so as to retain said
neck in said aperture.

Each closure K is also provided with one or more spots 29 of adhesive which are susceptible to the application of pressure thereagainst with or without heat to make a tight bond with the element applying such pressure and which in the present invention is preferably the sheet of plastic material being employed in the formation of a plastic bag 10.

In the formation of the bag 10, a closure K is inserted into the tubular body 11 before this tube has been converted into a bag 10 and pressure is applied through a wall of said tube against said closure particularly in the areas of the glue spots 29 so that said bag wall is pressed against said glue spots causing a substantial degree of adhesion between said spots and the inner surface of the wall of said tube. The closure K is thus applied to the inner surface of a tube 11 in such a location therein that when said tube is converted into the bag 10 by sealing transversely the lower edge of said bag, filling said bag with a fluent product 17 then forming a seal 16 at the upper end of said bag, said closure K will be located entirely within said bag, just beneath seal 16, and spaced inwardly from the area of said seal.

When the time comes to open the bag 10, this is preferably done by application thereto of a pair of scissors in snipping the seal 16 from the upper end of the bag so as to completely open the bag at this end. This is made possible by closure K being spaced inwardly from said seal. This permits removal of a substantial portion of the contents of the bag thereby producing an unoccupied portion of the bag and making the closure K accessible so that it may be readily pulled free of the adhesion produced between the spots 29 and the inner surface of the bag. The closure K is thus available for use in reclosing the upper neck portion of bag 10 as shown in FIGURE 3. This is done by manually bunching together the neck portion of the bag and possibly twisting the same after which the closure K is applied to the twisted neck of the bag in such a manner as to spring apart the jaws 28 of the closure causing these to pass around the bag neck and snap together with the latter trapped in aperture 26 as shown in FIGURE 3.

I claim:

1. A pillow type bag comprising
 - a tube of flexible thin sheet plastic material such as polyethylene or the like, said tube being sealed closed at one end; and
 - a reclosure device located entirely inside said bag and adhesively fastened to the inner surface of said bag material near the other end of said bag, but spaced inwardly therefrom, whereby,
 after a loose product has been delivered into said bag, said other end of said bag extends endwise beyond said closure permitting it to be closed by heat sealing

and then subsequently opened for removing a portion of said product, said reclosure device thus being rendered available for separation from said bag for use in reclosing the bag to keep fresh the balance of said product in said bag.

2. A bag as recited in claim 1 wherein said reclosure device comprises a stiff but flexible thin sheet bag closure of polystyrene or the like having a bag closing aperture formed therein inwardly from an edge of said closure, access to which aperture is had through a narrow slit in said edge, whereby the neck of said bag may be introduced through said slit into said aperture and trapped in the latter to close the neck of said bag.
3. A packaging facility for a quantity of dry fluent product, said facility comprising
 - a tube of flexible thin sheet plastic material such as polyethylene or the like, a transverse seal closing the lower end of said tube so as to support said quantity of product delivered into said tube,
 - a reclosure device located entirely inside said bag and adhesively fastened to the inner surface of said bag material near but spaced inwardly from the other end of said bag, and
 - a seal closing said other end of said bag whereby said closure is trapped within said bag and retained therein in a position close to the latter end of said bag so that when said latter end of said bag is eventually opened to secure access to said product, access is also had to said closure whereby the latter may be removed from its attachment to the inner surface of said bag material and employed to reclose said bag after a portion of said product has been removed therefrom.
4. A bag as recited in claim 3 wherein said reclosure device comprises a stiff but flexible thin sheet bag closure of polystyrene or the like having a bag closing aperture formed therein inwardly from an edge of said closure, access to which aperture is had through a narrow slit in said edge, whereby the neck of said bag may be introduced through said slit into said aperture and trapped in the latter to close the neck of said bag.

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229—66; 206—56