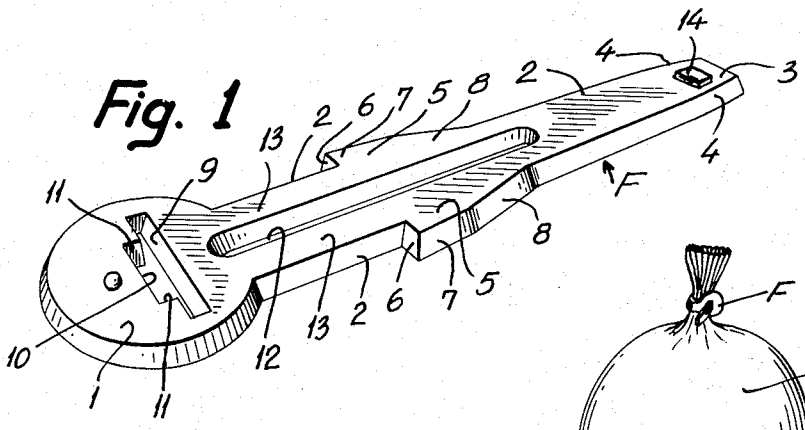
Dec. 17, 1963 J. R. BIGAOUETTE 3,114,184

CLOSURE FOR BAGS AND THE LIKE

Filed Feb. 23, 1962

Fig. 1



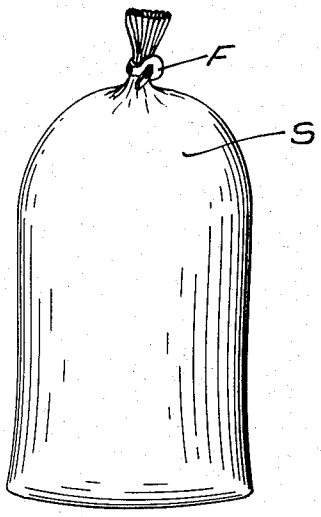
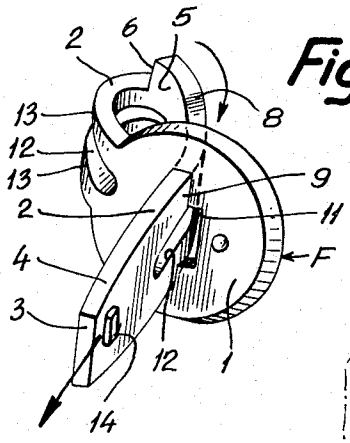




Fig. 2

Fig. 3



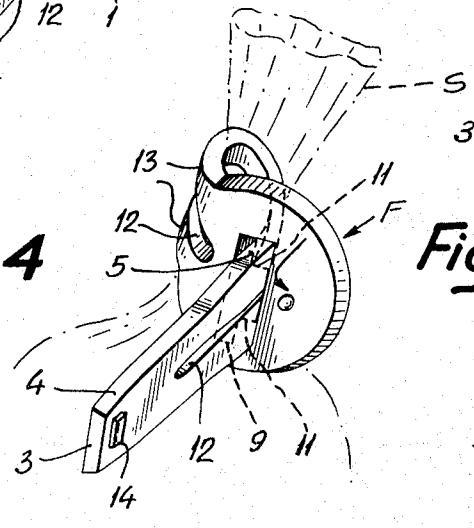




Fig. 4

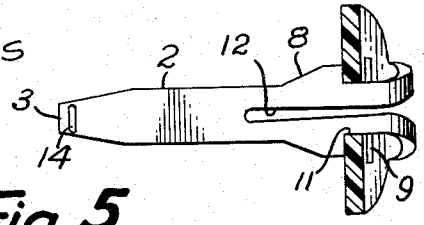



Fig. 5

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# CLOSURE FOR BAGS AND THE LIKE

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3 Claims. (Cl. 24—30.5)

The present invention relates to means for easily and quickly closing bags and the like which are made of flexible material, such as paper, cellophane, polyethylene, vinyl, and the like.

The general object of the present invention resides in the provision of a closure of the character described which can be easily attached and detached and which forms a very tight closure and cannot slip off relative to the walls of the bag even when these walls are made of a slippery material such as polyethylene.

Another important object of the present invention resides in the provision of a closure of the character described which can close bags of different sizes and the walls of which have different thicknesses.

Another important object of the present invention resides in the provision of a closure of the character described, more particularly adapted for closing bags of sugar, flour, and the like, and which can be thrown away after use, because it is of minimum cost.

The foregoing and other important objects of the present invention will become more apparent during the following disclosure and by referring to the drawings, in which:

FIGURE 1 is a perspective view of the closure in accordance with the invention on an enlarged scale;

FIGURE 2 is an elevation on a reduced scale of a bag closed by the closure of the present invention;

FIGURES 3 and 4 are perspective views of the closure showing how the latter is locked in closed position and FIGURE 5 is a cross-section showing the closure in a fully locked position.

Referring now more particularly to the drawings in which like reference characters indicate like elements throughout, the closure F in accordance with the invention generally consists of an elongated band made of molded plastic, or the like, and which is flexible and slightly resilient. Polyethylene is a preferred material for making the closure F. This band has at one end an enlarged generally circular portion 1 whereas the remaining part of the band has an elongated shape with substantially parallel longitudinal edges 2 which slightly converge toward each other at the other end 3 of the band, as shown at 4.

The band is moreover provided with two lateral teeth 5 formed at the edges 2 between end 3 and circular portion 1. Teeth 5 form transversely aligned shoulders 6 at right angles with respect to the edges 2 and facing circular portion 1. The outer edge of each tooth 5 is composed of a portion 7 which is generally parallel to edge 2 and an inclined portion 8 which merges with edge 2 in the direction of end 3 of the band.

Circular portion 1 is provided with an elongated transverse slot 9 disposed at right angles with respect to the longitudinal axis of the band and of a length substantially equal to the distance between the exterior edges 7 of the lateral teeth 5. The edge of slot 9 opposed to end 3 has a recessed portion 10 which defines shoulders 11. The distance between shoulders 11 is slightly smaller than the width of the band between its longitudinal edges 2.

The band is furthermore provided with a longitudinal slot 12 which extends in substantially the middle thereof from the junction of the circular portion 1 with the band itself to a point beyond the inclined edges 8 of the teeth 5, but well short of the end 3 of the band. The width of slot 12 is approximately equal to the width of each of the



legs 13 which are defined by said slot 12 and the longitudinal edges 2.

The exterior face of the band is provided at its end 3 with a boss 14 of generally rectangular shape and transversely disposed with respect to the band.

The closure in accordance with the invention is used in the following manner: In order to close the mouth of a bag S, the wall portions of the bag at the mouth thereof are brought together and the resulting restricted mouth portion is surrounded with the closure F. The closure is bent into a loop and the end 3 is passed through slot 9. End 3 is pulled with the help of boss 14 while retaining circular portion 1. Teeth 5 easily slide through slot 9 even if not in exact lateral register with said slot because of their inclined edges 8 and because the length of slot 9 is at least equal to the distance between the exterior edges 7 of the opposed teeth 5 and also because the longitudinal slot 12 allows the legs 13 and consequently the teeth 5 to approach each other during pulling on end 3. Once the shoulders 6 of teeth 5 have reached a position beyond the exterior face of portion 1, end 3 is released. Upon release, the parts of the legs 13 between portion 1 and teeth 5 enter the recess 10 because the walls of the bag mouth exert a radially outward force on the looped closure. Due also to this force, the shoulders 6 are brought in contact with the exterior faces of the shoulders 11, whereby the closure is now in latched position.

In this latched position, legs 13 are maintained in a position closer together than in the rest position of the band due to the fact that the width of recess 10 is slightly smaller than the normal width of the band between its longitudinal edges 2 in the zone of the band adjacent shoulders 6. Because the material constituting the closure has a certain resilience and because the legs 13 are closer together than in their rest position, the portion of the edges 2 immediately adjacent shoulders 6 of teeth 5 are elastically pushed outward against the shoulders 11 of recess 10. Thus, the closure cannot become accidentially detached.

Moreover, the slot 12 causes a much better adhesion of the closure to the bag despite the fact that the bag may be made of a slippery material such as polyethylene, because the two legs 13 which encircle the bag along two spaced zones cause the bag wall to form a rib which protrudes within the slot 12, and said rib completely prevents the closure from slipping with respect to the bag; in other words, the bag walls are wedged within the slot 12.

In order to open the closure, it is only necessary to pull on the circular portion 1 and on the protruding end 3 of the band in opposite directions in order to push the legs 13 within the wider portion of slot 9 to release teeth 5 from engagement with shoulders 11. The teeth 5 can then easily pass through the slot 9. Detachment is facilitated by the presence of slot 12 becauset teeth 5 are caused to approach each other when pulling on the band. Thus, the teeth more easily pass through slot 9.

Slot 12 also saves material in the manufacture of the closure and thus makes said manufacture still more economical.

While only one pair of lateral teeth has been shown in the drawings, it is understood that several pairs of teeth 5 can be provided longitudinally spaced along the edges 2 of the band in order to adapt the closure to different sizes of bags or to bags the walls of which have different thicknesses.

While a preferred embodiment in accordance with the invention has been illustrated and described, it is understood that various modifications may be resorted to without departing from the spirit and scope of the appended claims.

What I claim is:

1. A closure for bags and the like, consisting of an

elongated, substantially flat, flexible band having an enlarged portion at one end provided with an elongated slot transversely disposed with respect to the longitudinal axis of said band, opposed teeth laterally protruding from the side edges of the band and disposed in a zone intermediate said enlarged portion and the other end of said band, the length of said slot being at least equal to the distance separating the outer edges of said opposed teeth whereby when said band is looped and said other end is passed through said transverse slot, said teeth will pass freely through said slot, said transverse slot being further provided along its edge opposed to said other end and to said teeth with a recess defining two spaced shoulders, the spacing between said shoulders being less than the distance between the ends of said transverse slot and less than the width of the portion of said band provided with said teeth, said band engageable with said recess and said teeth engageable with said shoulders to lock said closure in closed position under the radial outward pressure exerted by a portion of said bag tightly encircled by said looped band, said band further including a longitudinal slot having spaced longitudinal walls extending from said enlarged portion to a point beyond said opposed teeth and between the latter but short of said other end of said band, said longitudinal slot enabling a wall portion of said bag surrounded by said band to protrude therein to thereby prevent slipping of said closure with respect to the bag, and said longitudinal slot assuming a narrower condition when said teeth are engaged with said shoulders than in the free state of said band.



2. A closure as claimed in claim 1, wherein the part of said band provided with said opposed teeth has substantially parallel longitudinal edges and said teeth are defined by edges substantially at right angles to said longitudinal edges and facing said enlarged portion, the outer edges of said teeth comprising portions substantially parallel to said longitudinal edges of said band and inclined portions merging with said longitudinal edges towards said other end of said band.

3. A closure as claimed in claim 1, further including a boss protruding from a face of said band at said other end thereof.


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