

[54] BAG CLOSURE

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[51] Int. Cl. .... B65d 77/10, A44b 21/00

[58] Field of Search ..... 24/30.5 R, 259 HC, 248 HC, 24/259 A, 30.5; 132/46, 48; 229/65

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[57] ABSTRACT

A closure for sealing the mouth of a bag including a bowed strap and a clamping bar struck from the interior thereof and hinged at one end to the strap. Striking the clamping bar from the interior of the strap leaves an elongated slot in the strap defined by a plurality of contiguous edges. A hook is provided on the other end of the clamping bar which can be snapped over an edge of the slot in the strap with one hand to lock the strap and bar together. Prior to locking them together, the mouth of the bag to be sealed is inserted between the strap and clamping bar.

9 Claims, 5 Drawing Figures

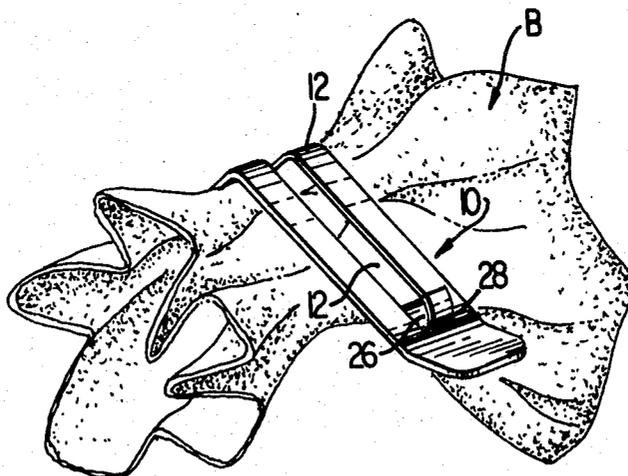


FIG. 1

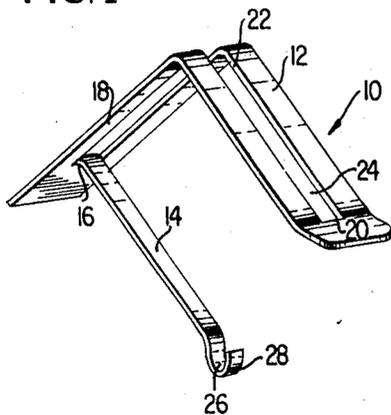


FIG. 2

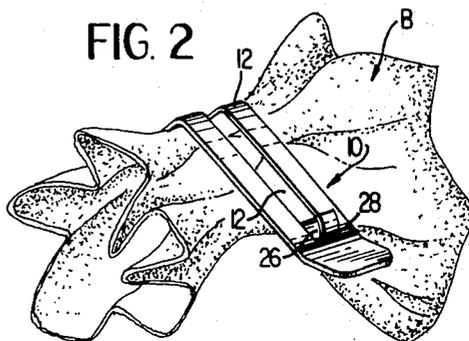


FIG. 3

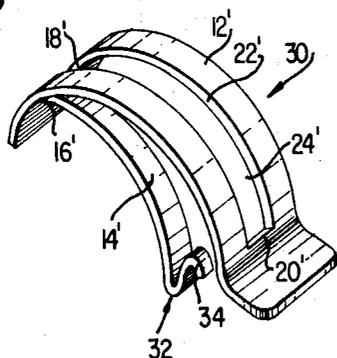


FIG. 4

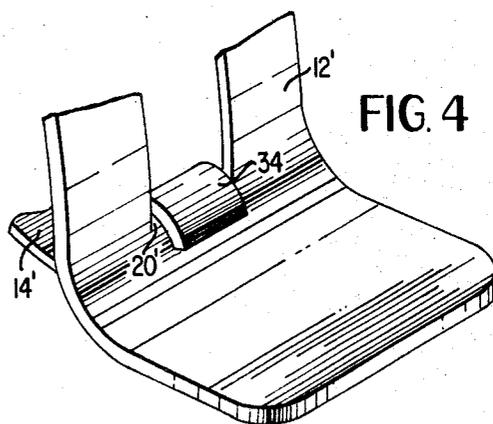
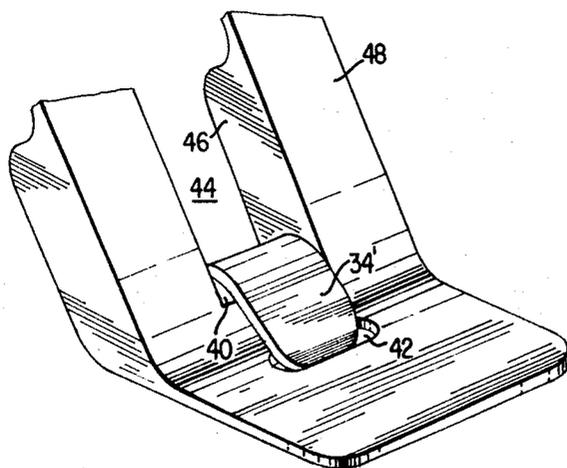


FIG. 5



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## BAG CLOSURE

## BACKGROUND OF THE INVENTION

## 1. Field of the Invention

This invention relates to a closure, and more particularly, a closure adapted to tightly seal the mouth of a bag or the like.

## 2. Description of the Prior Art

This invention relates specifically to a reusable type of fastener which is adapted for closing and sealing the contents of a bag.

Many food items, such as bread for example, are sold in plastic bags, since the bag retains the freshness of the item for an extended period of time. Other items, such as trash, leaves or other debris are also contained within plastic bags for ready disposal.

Heretofore, it has been conventional to close and seal such bags with a wire tie wrapped around the mouth of the bag (the tie includes a piece of thin wire embodied in plastic or paper) or by means of a small plastic ring which is slipped over the mouth of the bag and the mouth is then twisted. Still other common fastening means include the usual string, rubber band, or tape wrapped around the mouth of the bag.

All of the aforementioned items are cumbersome to apply, and generally require the use of two hands to tighten around the bag mouth and while they may be subject to reuse, they have a rather limited life.

## SUMMARY OF THE INVENTION

This invention overcomes the aforementioned difficulties noted above in connection with prior art devices by providing a simple, integral bag closure which can be applied to the bag mouth grasped and held in one hand. The closure is inserted around the mouth of the bag with the other hand and snapped into clamping engagement to seal the mouth. The closure can be removed as simply.

The foregoing is accomplished by providing a bowed strap. Struck from the interior portion of the strap is a clamping bar hinged at one end to the strap. Striking the clamping bar from the strap leaves an elongated slot in the bowed strap defined by a plurality of contiguous edges. The term "striking" is merely illustrative and in actual fabrication it is contemplated that the strap and clamping bar would be molded as an integral unit. The term is used to merely indicate that an elongated slot is provided in a bowed strap whose length is approximate to that of the clamping bar hinged at one end to the strap.

The mouth of the bag is inserted between the bowed strap and clamping bar and means are provided on the end of clamping bar remote from its hinged connection to the strap to cooperate with one of the edges defining the slot in the strap to fasten the bar to the strap, whereby if the bag mouth is inserted between the clamping bar and strap, it can be firmly gripped and sealed. The disengagement of the clamping bar with the bowed strap of the closure can be effected by merely flexing the bar and strap relative to each other to disengage the fastening means on the end of the clamping bar from the edge of the slot in the strap.

Accordingly, it is an object of this invention to provide a bag closure which can be positively and easily secured about the mouth of a bag to provide a seal and preclude access to the interior thereof.

A further object of the invention is to provide a bag closure of the type described which is simple in design, lends itself to mass production, and is easy to operate so that it can be attached to and removed from the bag with one hand.

Further objects and advantages of the invention will be evident from the following specification and from the accompanying drawing wherein:

## BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of one form of bag closure constructed in accordance with the principles of the present invention;

FIG. 2 is a perspective view of the bag closure illustrated in FIG. 1 in closed position about the mouth of a bag;

FIG. 3 is a perspective view of a modified form of bag closure constructed in accordance with the principles of the present invention;

FIG. 4 is an enlarged fragmentary perspective view of the righthand portion of the bag closure illustrated in FIG. 3 when the closure is engaged in use about the mouth of the bag; and

FIG. 5 is a view similar to FIG. 4 but illustrates still another mode in which the closure of FIG. 3 can be locked in clamping engagement about the mouth of a bag.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawing in detail wherein like numerals indicate like elements throughout the several views, a bag closure constructed in accordance with the principles of the present invention is illustrated in FIGS. 1 and 2 by the numeral 10.

Closure 10 includes a bowed strap 12 consisting of a piece of plastic or other flexible and resilient material bent at approximately its center to form substantially a 90° angle. Prior to bending, an interior portion of bowed strap 12 is struck from the plane of the strap to form a clamping bar 14 which is hinged about one end 16 to bowed strap 12. Striking clamping bar 14 from the interior of bowed strap 12 leaves a slot having contiguous edges 18, 20 and 22 which in conjunction with end 16 of clamping bar 14 define a slot 24.

The end of clamping bar 14 is curled to form a hook 26 which opens toward strap 12. The length of clamping bar 14 from end 16 to the outer most portion 28 of hook 26 is slightly greater than the linear distance between end 16 of clamping bar 14 and edge 20 of slot 24.

Accordingly, as shown in FIG. 2, the mouth of a bag B can be disposed between bowed strap 12 and clamping bar 14 and clamping bar 14 moved about hinged end 16 towards bowed strap 12 with one hand. The outermost surface of hook 26 will initially strike edge 20 and clamping bar 14 being made of flexible material will bow until the outermost surface 28 of hook portion 26 snaps over edge 20 to lock and secure the clamping bar 14 to bowed strap 12. In order to remove closure 10, it is only necessary to assert downward pressure on the upper surface of hook 26 extending through slot 24, flexing the same relative to strap 12 until the hook 26 clears edge 20.

Referring specifically to FIGS. 3 and 4, a modified form of closure generally indicated by numeral 30 is disclosed. Closure 30 is similar in operation to closure 10 except that bowed strap portion 12' is curved or substantially arcuate throughout its length. Similar to closure 10, clamping bar 14' is struck from the interior of bowed strap 12' to provide a slot 22' defined by contiguous edges 16', 18', 20' and 22'. Edge 16' also serves as a hinge for clamping bar 14'.

The end of clamping bar 14' remote from edge 16' is provided with a hook generally indicated by the numeral 32. Hook 32 is substantially S-shaped in cross-section and includes an upper portion 34 which opens downwardly or away from bowed strap 12'.

The distance between edge 16' and the outermost surface of hook 32 is slightly larger than the distance between edge 16' and 20' of slot 24'. Accordingly, upon movement of clamping bar 14' towards bowed strap 12', the outermost surface of hook 32 is adapted to strike edge 20' of slot 24' and thereby be compressed inwardly. Continued movement of clamping bar 14' relative to strap 12' will cause portion 34 of hook 32 to snap over and into engagement with edge 20' of slot 24' as shown in FIG. 4 to effect securement of the clamping bar 14' to the strap 12' and consequent sealing of a bag mouth disposed between clamping bar 14' and bowed strap 12'. In order to open closure 30, hook portion 34 is compressed inwardly so that the outermost surface of the hook will clear edge 20' and the parts will then assume the relative position indicated in FIG. 3.

FIG. 5 illustrates a closure which is similar to that of FIGS. 3 and 4 except that more positive securement of hook portion 34' after snapping over edge 40 is provided. The end of hook portion 34' is adapted to enter a slot 42 whose elongated axis is transverse to that of main slot 44. In addition, the edges of slot 44 can be provided with depending guiding surfaces such as 46 which will aid in centering hook 34' relative to bowed strap 48 for facilitating snap engagement over edge 40 and entry into slot 42.

While a number of different shapes of both the bowed strap and clamping bar have readily been illustrated it will be apparent that other shapes would accommodate the mouth of the bag B and function in the identical manner. For example, the clamping bar need not be straight but may be either angular or curvilinear. Further, the shape of the snap hook may be varied as long as there is snug engagement of the clamping bar over the edge of the slot from which the bar is struck.

What is claimed is:

1. A one-piece bag closure comprising:  
 a bowed strap including slot defined by a plurality of edges,  
 a pivotable clamping bar having an inner end integrally connected to said strap at one end of said strap, the outer end of said bar being free,  
 said strap and said bar being apart except at the pivot joint, the distance between said strap and said bar sufficient to receive entry of a bag mouth,  
 said strap slot being of a width substantially equal to said bar width but wide enough to permit entry of said bar,  
 said bar free end having a rounded U-shaped portion for

releaseably engaging the terminal edge of said strap slot when said bar and strap are brought together, whereby a bag mouth inserted therebetween is tightly sealed.

2. A bag closure in accordance with claim 1 wherein said bowed strap is substantially arcuate throughout its length.

3. A bag closure in accordance with claim 1 wherein said bowed strap is bent at an angle intermediate its ends.

4. A bag closure in accordance with claim 1 wherein guide means for centering the movement of said clamping bar depend from opposite edges of said slot.

5. A bag closure in accordance with claim 1 wherein the length of said clamping bar measured from its pivotal connection to said bowed strap to the outer end of said hook is at least slightly greater than the planar linear distance of one end of said elongated slot to the other.

6. A bag closure in accordance with claim 1 wherein said bar free end includes a S-shaped hook, the outer portion of said hook being adapted to snap over and be releaseably retained by the terminal edge of said slot.

7. A bag closure in accordance with claim 6 wherein said hook opens towards said bowed strap.

8. A bag closure in accordance with claim 6 wherein said hook opens away from said bowed strap.

9. A bag closure in accordance with claim 8 wherein said bowed strap includes a second slot extending transversely to the direction of said first slot and said hook on the other end of said clamping bar being received through said first and second slots.

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