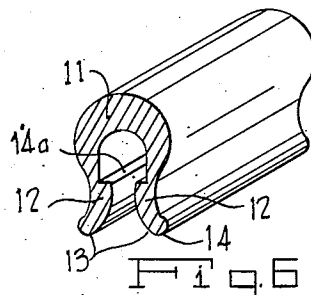
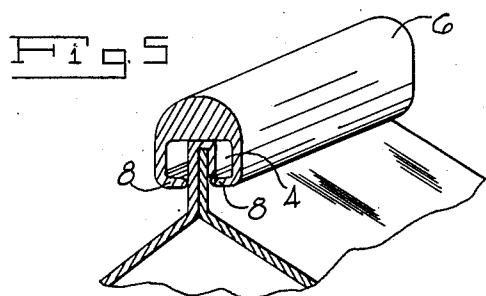
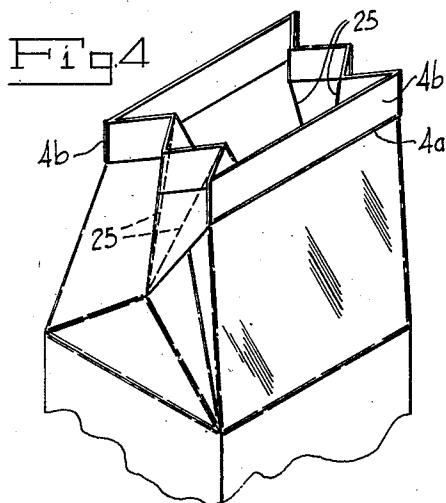
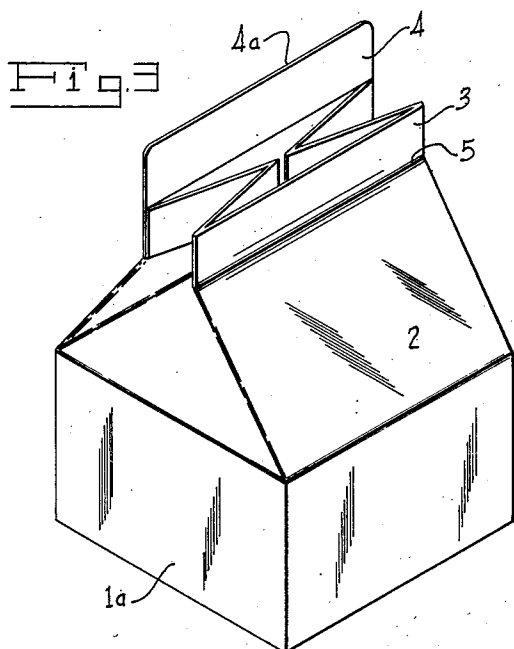
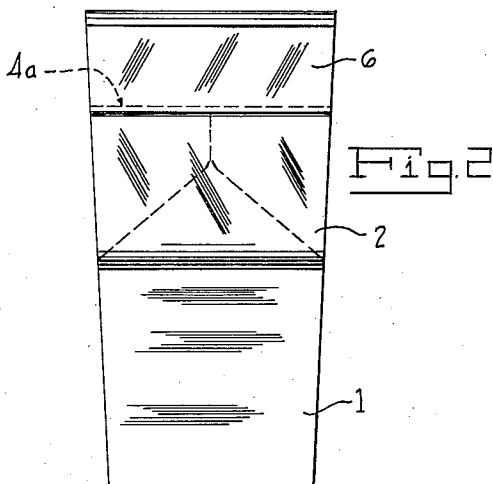
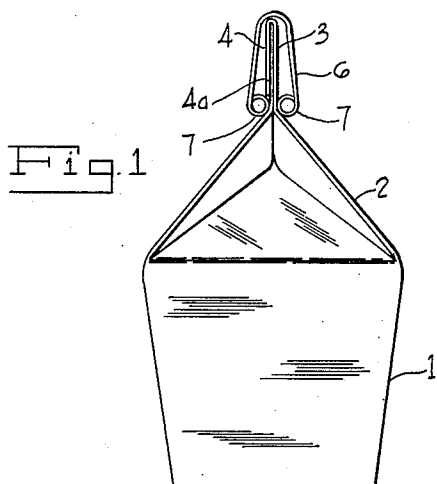


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RESEALABLE CARTON CLOSURE HAVING
METALLIC CLIP FASTENING MEANS
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RESEALABLE CARTON CLOSURE HAVING
METALLIC CLIP FASTENING MEANSGeorge Stewart Vivian, Surbiton, England, as-
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1 Claim. (Cl. 229—65)

1

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This invention relates to an improved method of and means for sealing and resealing cartons and like containers. The containers are of the type composed of stiff cheap sheet material such as cardboard or paper in which the mouth is closed by pressing opposed substantially parallel sides together at the top of the carton or the like, the remaining sides folding in sympathy with the said opposed pair of sides to produce a wedge-like top to the container, the customary practice being to pleat the container top between such opposed pair of sides so that the pleated parts fold inwardly.

With such containers it has been the practice to seal the mouth by applying a metal clip tightly over the ridge of the wedge-like top, the clip being a strip of metal of narrow U section with its limbs pinched flat by a mechanical device against the flattened peak or uppermost part of the wedge-like top, such limbs generally being indented or corrugated to bite into the material of the container. It has also been proposed heretofore to make one limb of such a U section metal clip slightly longer than the other and to bend in the longitudinal edge of such longer limb to form a longitudinal ledge which engages under and against the step formed by the free edge of a flap of the folded over and flattened carton top. While such devices effect an adequate seal the clips if properly affixed to the cartons require the use of considerable force to pull them off or the use of a blade to open them, and they are not easily replaced if it is desired to reseal the container. The object of this invention is to provide a method of and means for sealing the mouths of cartons which obviates these disadvantages.

According to this invention the improved method of sealing the cartons or like containers consists in forming an abutment along one side of the carton or like container top and applying over the peak of the carton or like container top a resilient U section clip or split tube a longitudinal edge of which if formed with or constitutes an abutment which is tripped over the before-said abutment along one side of the carton by reason of the resiliency of the clip to effect a snap locking and closure action which can be repeatedly effected with the same carton or container or clip.

The means for sealing a carton mouth according to the invention comprises a flap folded over one side of the carton top so as to have a free edge parallel with but spaced from one edge of the carton mouth, said free edge of the flap forming a shallow step-like abutment,

and a substantially U section or split tube resilient clip sprung over the closed mouth so as to pinch by the resiliency of the clip the opposite sides of the carton mouth together, and an abutment constituted by the longitudinal free edge of one limb of the clip or formed along the inner side of one limb of said clip overlapping and bearing against said shallow step-like abutment so as to obstruct upward pulling off of the clip when the clip is pushed fully on to the carton top, the arrangement being that the clip is readily removable by sliding the clip endwise parallel with the mouth of the carton, but can be replaced readily by the user of the carton in its original sealing position.

Provided the material of the clip is such as to afford sufficient yield or resiliency to obtain this snap action the clip can be made of any suitable stiff material, e. g. sheet metal bent to U or V section with inwardly curled longitudinal free edges, or as an alternative to metal a suitable hygienic substance being employed such as a thermoplastic material, thermosetting plastic material or casein extruded or molded to the desired channel section strip form with inwardly directed beads or ridges at the free edges of its side limbs.

The present invention is advantageously used with wax proofed cartons because the greasy surface of a wax proofed carton facilitates the endwise sliding off and the pressing on of the clips, and also obviates tearing or wear of the paper or cardboard by reason of the sliding action of the clip.

Various embodiments of the invention will now be described with reference to the accompanying drawings, in which,

Figure 1 is an end elevation and Figure 2 a side elevation of one form of carton when closed.

Figure 3 is a perspective view of the same carton with the clip removed the carton being shown slightly open.

Figure 4 is a perspective view of a modified form of carton adapted to afford two abutments to cooperate with both sides of the clip.

Figure 5 is a perspective view showing a molded or extruded form of clip applied to a carton, and

Figure 6 is a perspective view of a further configuration of clip.

Referring to the drawings the carton is indicated by the reference numeral 1 and its comprises the known form which, when closed, has flat sides 1a and a wedge shaped top 2 with a laminated narrow flattened peak 3 which includes as one of its laminae a flap 4 integral with

one of the sides and folded over the flattened mouth flush against the other side whereby it not only helps to seal the carton but by means of its free edge affords a longitudinal step or ridge 4a parallel with and close to one of a pair of transverse folds 5 of the carton top forming the junctions of the inclined converging opposed sides and the flattened peak 3. This step or ridge 4a can thus form with the adjacent fold 5 a groove or recess extending along the top part of the carton, and in any event this step or ridge forms an abutment the presence of which is utilized in the present invention to retain in position a clip 6 which is pressed downwards over the carton top and snapped in position.

In the form shown in Figures 1, 2 and 3 this clip is a strip of resilient sheet metal bent to U section and with its longitudinal edges rolled to form a pair of beads 7 which are more narrowly spaced than the thickness of the laminated flattened peak 3 and its depth is such that when pushed fully downward over the flattened peak one of its rolls or beads 7 will just trip over the step or ridge 4a and will remain abutting against such step or ridge thereby becoming securely fastened against easy lifting off from the carton and assisting in securing the flap 4 in the sealed position. When it is required to remove the clip it is pushed off endwise, being guided by the step or ridge 4a or the depression or groove formed between such ridge and the fold 5. The limbs of the U section strip 6 are preferably splayed apart as shown to enable the strip to be narrow where it contacts the upper edge of the peak 3.

If desired both sides of the carton mouth can be provided with steps or ridges 4a as shown in Figure 4 by folding outwardly two flaps 4b from opposite parallel sides of the mouth, whereby both sides of the clip 6 snap over ridges. Also if extra thickness of material between the flaps is required the pleating at the top of the carton can be effected so as to produce two ridges 25 at each end.

Instead of manufacturing the clips 6 from sheet metal they may be composed of a plastic composition, the clips being extruded or molded to the desired cross-section, a convenient and attractive cross-section being the U section shown in Figure 5 in which the bend of the U is thickened to take the strain when the parallel side limbs are slightly sprung apart as the clip is pressed over the peak 3. The equivalent of the rolls or beads 7 is obtained by inwardly directed longitudinal ribs 8, which have smooth radiused free edges to bear against the carton.

As a still further modification of clip composed of extruded or molded plastic material the form shown in Fig. 6 can be adopted in which a substantially U section major or top portion 11 has inwardly directed jaws 12 which flare outwardly as at 13 to provide outwardly directed free edges 14 which afford easy pressing of the clip on to the carton top, the ledges 14a at the inner ends of the jaws tripping over and abutting against the step or ridge 4 of the carton.

It will be appreciated from the foregoing that the clip 6 retains the mouth of the carton closed and is itself firmly retained in position, the clip preferably being pressed into position in a direction parallel with the axis of the carton and it is of a sufficiently resilient nature to permit it to be sprung into position and to press the sides of the mouth of the carton firmly together. The clip may be withdrawn by sliding it longitudinally or in an endwise direction from the pressed together sides of the carton. When the clip is withdrawn, the sides of the carton may be separated so as to open the mouth of the carton to give access to the contents. The sides of the carton may again be brought together and the clip may be pressed in place to close and reseal the carton. The carton may thus be opened and closed and resealed as often as desired.

I claim:

- 20 Means for closing and sealing a carton, of the type in which the closure is formed by pressing together oppositely disposed parallel side walls of the carton adjacent the top to form an up-standing multi-layer flap and snapping over the flap a pressure closure, comprising a part of the up-standing flap folded over and downwardly upon itself to form a vertical doubled flap having a longitudinal free edge spaced from but parallel to the top of said flap, a substantially U-shaped resilient metal clip completely enclosing said vertical double flap, the width of the arms of said clip being greater than the width of the doubled flap, and said clip having its longitudinal edges rolled inwardly to form a pair of rounded beads parallel to the apex of said clip, the rounded lower surface of said beads enabling the clip to be sprung over and snapped on the doubled flap and enabling it to be pressed downwardly over said free edge of the flap, the rounded upper surface of one of said beads forming an abutment which engages the free edge of said flap to obstruct the upward pulling off of said clip.

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