May 12, 1959 P. A. TOENSMEIER 2,886,234

RECLOSABLE CARTONS

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FIG. 1

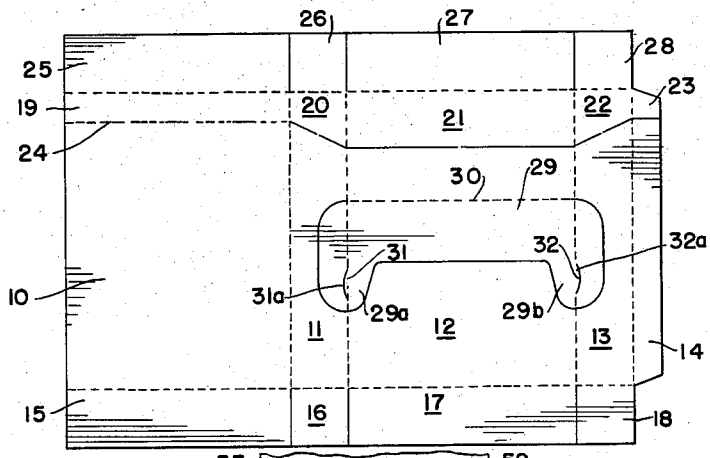


FIG. 2

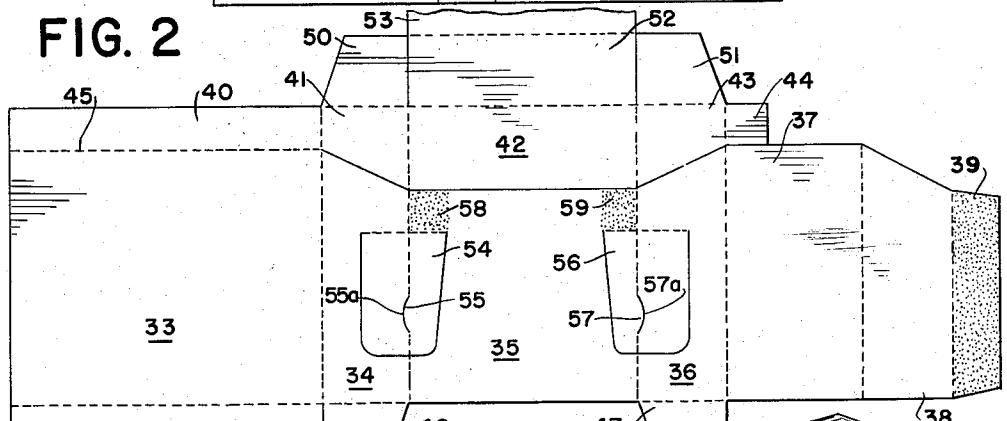
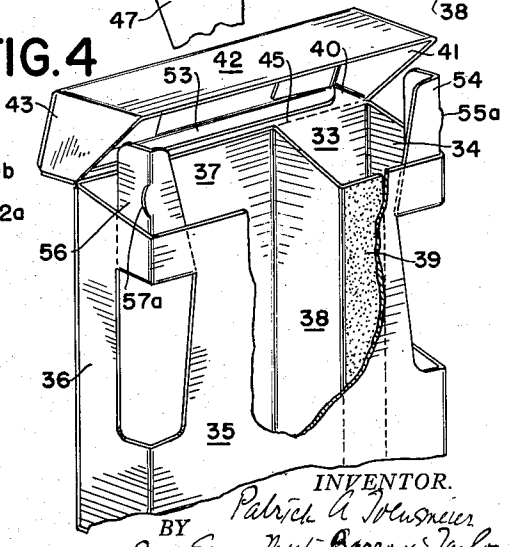


FIG. 4



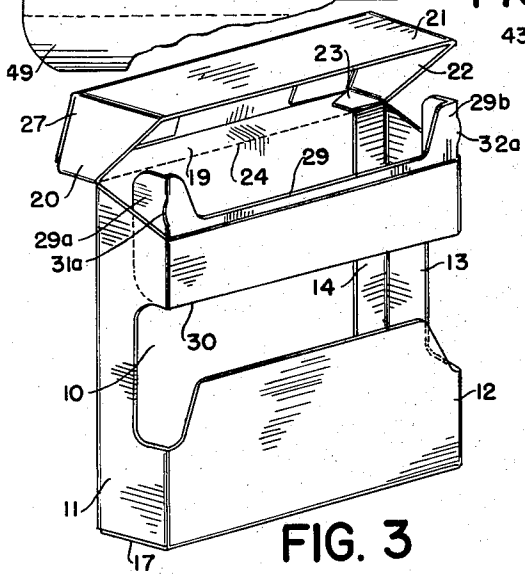


FIG. 3

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FIG. 5

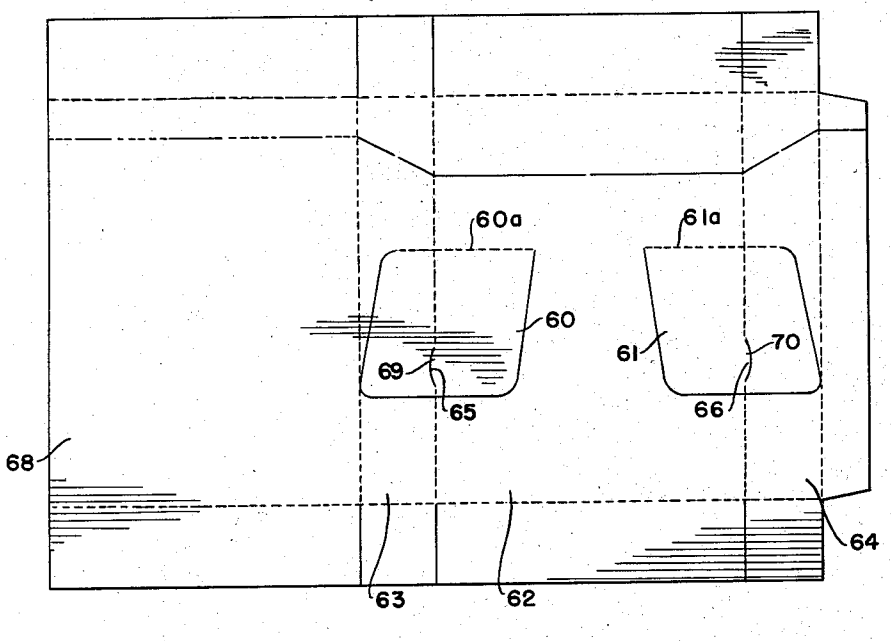
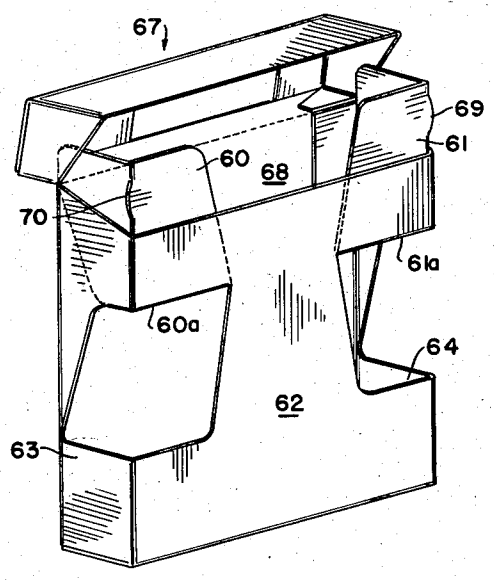


FIG. 6



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2,886,234

RECLOSABLE CARTONS

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Application September 30, 1957, Serial No. 686,987

6 Claims. (Cl. 229—44)

This invention relates to cartons having a removable and replaceable top and resides more particularly in a novel carton of the type described which requires less paperboard than prior similar cartons of the same capacity and is accordingly more economical to manufacture.

In one form of carton having a removable and replaceable top, the body of the carton is formed of connected front, rear, and end walls and the top includes a plurality of connected panels of such dimensions as to give it the cross-section of the carton body. The lower edge of the top is hinged to the upper edge of the rear wall of the body and the top can be swung on the hinge away from the upper end of the body to expose the contents of the carton and then swung back to close the body again. The carton is provided with guiding and retaining means projecting above the upper end of the body and, when the top is swung to closed position, it telescopes over such means and is engaged and held in place thereby. The guiding and retaining means usually take the form of one or more panels separated from the carton body and secured in place against the inside of the body. As the panels are not part of the body blank, they represent additional material and placing and securing them in place are extra manufacturing operations, so that the use of the panels adds to the cost of production.

The carton of the invention includes a top hinged to the upper edge of the rear wall of the body and means, which guide the top as it is moved toward closed position and then engage the top from within to retain it in that position. In the new carton, such guiding and retaining means are formed by one or more flaps partially severed from the portions of the blank forming the walls of the carton body, such flaps being secured to the remainder of the blank along transverse fold lines. In the production of the carton, the flaps are reversely folded so that they lie within the body, and they are secured to the inner surface thereof. In that position, the flaps project above the upper edge of the front wall of the body in position to guide and be received within the top as the latter is moved toward closed position. Since the flaps are sections from within the outline of the parts of the blank forming the carton body walls, their use does not require additional material, and they can be folded and secured in place in the usual operations, to which the blank is subjected to convert it into a carton.

For a better understanding of the invention, reference may be made to the accompanying drawings, in which

Fig. 1 is a plan view of a blank for one form of the new carton;

Fig. 2 is a plan view, with parts broken away, of a blank for a modified form of the new carton;

Fig. 3 is a view in perspective of a carton made from the blank of Fig. 1;

Fig. 4 is a view in perspective, with parts broken away, of a carton made from the blank of Fig. 2;

Fig. 5 is a plan view of a blank for another modified form of the new carton; and,

Fig. 6 is a view in perspective of a carton made from the blank of Fig. 5.

The blank shown in Fig. 1 is for a carton oblong in cross-section and it includes a rear wall **10**, an end wall **11**, a front wall **12**, a second end wall **13**, and a glue flap **14** connected along fold lines in the order stated. Bottom closing flaps **15**, **16**, **17**, and **18** are secured along fold lines to the lower edges of walls **10**, **11**, **12** and **13**, respectively, and these flaps can be turned in upon one another and secured together to form the bottom closure of the carton.

At its upper end, the blank is formed with parts making up a removable and replaceable top and these parts include a rear panel **19**, an end panel **20**, a front panel **21**, another end panel **22**, and a glue flap **23** connected along fold lines in the order named. The rear panel **19** is connected along its lower edge of the upper edge of the rear wall **10** along a fold line **24**, so that the panel and wall are hinged together, while the remaining panels **20**, **21**, and **22**, and the glue flap **23** are separated by a continuous cut from walls **11**, **12**, and **13** and the glue flap **14**, respectively, of the body. Closing flaps **25**, **26**, **27**, and **28** are connected along fold lines to the upper edges of panels **19**, **20**, **21**, and **22** and, when the blank is converted into a carton, the closing flaps are folded to lie upon one another and are secured together.

A flap **29** is partially severed from the front wall **12** and the end walls **11** and **13** of the carton body and the flap extends entirely across the front wall and is hinged thereto along a transverse fold line **30**. The end sections **29***a*, **29***b* of the flap are wider than the central portion and are traversed by the fold lines between the end walls **11**, **13** and the front wall **12** of the body. Preferably, the end sections have curved cuts **31**, **32**, the ends of which lie in the fold lines across the sections and, when the sections are bent on the fold lines, the cuts define the ends of small tongues **31***a*, **32***a* projecting outwardly.

In converting the blank of Fig. 1 to carton form, the flap **29** is reversely folded upon fold line **30** to cause it to lie against the inner surface of the blank and it is secured in that position. When the flap is thus folded, the entire flap projects upwardly beyond the cut separating panels **20**, **21**, **22** from the corresponding walls **11**, **12**, **13**. The blank is next folded on the fold lines separating adjacent walls and adjacent panels and the folding is continued until the glue flap **14** overlies the rear wall **10** and the glue flap **23** overlies the rear panel **19**. The flaps are then secured in position by gluing and the bottom of the body is closed by turning in flaps **15**, **16**, **17**, **18** and securing them together in overlapping relation. The top closing flaps **25**, **26**, **27**, and **28** are similarly folded inward and secured upon one another to close the upper end of the top. In folding the blank as described, the end sections **29***a*, **29***b* of flap **29** are bent along the fold lines traversing them, so that the tongues **31***a*, **32***a* project outwardly in the plane of one part of each end section and across the edge of the other.

In the completed carton, the lower edges of panels **20**, **21**, and **22** of the top overlie the upper edge of flap **29**, since the central section of the flap projects upwardly above the upward edge of front wall **12**, and the end sections **29***a*, **29***b* of the flap project upwardly above the upper edges of walls **11**, **12**, and **13** at the corners between the front and end walls. When the carton is to be opened, the top is swung on the hinge connection **24** so that it moves away from the body of the carton and exposes the contents. When the carton is to be reclosed, the top is swung back and, in such movement, the top telescopes over the exposed portions of flap **29**. These portions of the flap guide the top to closed position and the tongues **31***a*, **32***a* engage the end panels of the top from within to retain the top in place.

The blank shown in Fig. 2 is generally similar to that of Fig. 1 and includes a rear wall **33**, an end wall **34**, a front wall **35**, and an end wall **36** secured together along fold lines in the order named. A glue flap **37** is secured to the outer edge of end wall **36** along a fold line and a partition flap **38** is similarly secured to the outer edge of flap **37**. A glue flap **39** is secured along a fold line to the outer edge of partition **38**.

The blank of Fig. 2 is provided with parts forming a removable and replaceable top and such parts include a rear panel **40**, an end panel **41**, a front panel **42**, an end panel **43**, and a glue flap **44** connected along fold lines in the order stated. The lower edge of the rear panel **40** is connected along a fold line **45** forming a hinge connection to the upper edge of rear wall **43**, while the panels **41**, **42**, **43** are separated by a cut from end walls **34**, **35**, **36**, respectively, and the glue flap **44** is similarly separated from the glue flap **37**. At its lower end, the blank has flaps **46** and **47** connected along fold lines to the lower edges of walls **34**, **36** and a flap **48** with a tuck flap **49** is similarly connected to a lower edge of rear wall **33**. Flaps **46–49**, incl., form parts of a bottom closure and the top is provided with a similar closure made up of flaps **50**, **51** secured to the upper edges of end panels **41**, **43**, respectively, and a flap **52** having a tuck flap **53** and secured to the upper edge of the front panel **42**.

A flap **54** is partially severed from the end wall **34** and the front wall **35** of the blank and is hinged along its top to the two walls. The flap is traversed by the fold line, which separates the two walls, and is formed with a curved cut **55** with its ends in the fold line. A flap **56** similar in all respects to flap **54** is partially severed from the front wall **35** and the end wall **36** and flap **56** has a curved cut **57** with its ends in the fold line, which traverses it. The cuts **55**, **57** define retaining tongues **55*a***, **57*a*** similar in purpose and function to the tongues **31*a***, **32*a***.

In the conversion of the blank of Fig. 2 to a carton, the flaps **54**, **56** are reversely folded and secured in position to the inner surface of the blank by glue areas **58**, **59**, respectively. Glue is applied to appropriate areas on the blank and the blank is then folded to cause the glue flap **37** to lie against and be secured to the inner surface of the rear wall **33**. Similarly, the glue flap **37** is caused to be secured to the inner surface of the front wall **35** and glue flap **44** to be secured to the rear panel **40**. After the body of the carton is squared, flaps **46**, **47** at the bottom of the blank are turned in, the flap **48** is folded to overlie them, and the tuck flap **49** is inserted in place. The top is similarly closed by the inward folding of flaps **50**, **51** and **52** and the insertion of the tuck flap **53**.

In the completed carton, the upper ends of the reversely folded flaps **54**, **56** project upwardly above the upper edges of the front and end walls to serve as guiding and retaining means for the top and, since the flaps are formed of material within the outline of the parts of the blank forming the carton body walls, their use does not require additional material. The partition **38** subdivides the interior of the carton into two compartments and, in the carton disclosed, the compartments are of unequal size, but, by proper proportioning of the glue flap **37**, the compartments may be of any relative size desired.

The blank shown in Fig. 5 is similar in all respects to

the blank of Fig. 1 except that it includes a pair of flaps **60**, **61**, each partially severed from the front wall **62** and from one of the end walls **63**, **64**. The flaps are connected to the walls, from which they are cut, along respective fold lines **60*a***, **61*a*** and, in the completed carton, the flaps are reversely folded upon lines **60*a***, **61*a***, so that they project upwardly above the top edges of the front and end walls. Each flap is traversed by a fold line between the front wall and one of the end walls and flap **60** is provided with a curved cut **65** having its ends in the fold line, while flap **61** has a similar cut **66**. In the completed carton, the portions of the flaps projecting above the upper edges of the front and end walls serve as guiding means for the top **67** hinged to the upper edge of the rear wall **68**. The curved cuts **65**, **66** define small tongues **69**, **70** which project outwardly in position to engage the inner surface of the top as it is swung to closed position and retain the top in that position.

I claim:

1. A carton, which comprises a body formed of front, rear, and end walls connected together, a closure for the bottom of the body secured to the lower ends of the walls, a removable and replaceable top for the body made up of front, rear, and end panels secured together and a closure for the upper end of the top secured to the upper ends of the panels, the lower edge of the rear panel being attached to the upper edge of the rear wall by a hinge connection, and at least one flap formed of parts of the walls within the outline thereof by partial severance therefrom, the flap being secured to the body along a transverse fold line, the flap being reversely folded to lie within the body and project above the upper edge of the front wall in position to be received within the top, when the latter is moved from open to closed position.

2. The carton of claim 1, in which the flap extends across the front wall of the body and the ends of the flap are sections severed from the end walls of the body.

3. The carton of claim 1, which has a pair of flaps cut partly from the front wall and partly from respective end walls, the flaps being hinged to the front and respective end walls and reversely folded to lie within the body and project above the upper edges of the front and respective end walls.

4. The carton of claim 1, in which the interior of the body is subdivided into two compartments by a vertical partition extending between and having its ends connected to the front and rear walls.

5. The carton of claim 4, in which a glue flap having one lateral edge secured to the vertical edge of one of the end walls is attached to the inner surface of an adjacent wall and the partition is an extension from the outer lateral edge of the glue flap.

6. The carton of claim 1, in which the flap projects above the upper edges of both the front wall and at least one end wall.

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