United States Patent [19]

Gustafsson

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[54] **LIGHT BULB CONTAINER FOR ACCOMMODATING AT LEAST TWO LIGHT BULBS AND A BLANK FOR PRODUCING SUCH A CONTAINER**

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[52] **U.S. Cl.** ..... **229/39 B**, 206/65 R

[51] **Int. Cl.** **B65d 5/02**

[58] **Field of Search** ..... 229/39 B, 65 R

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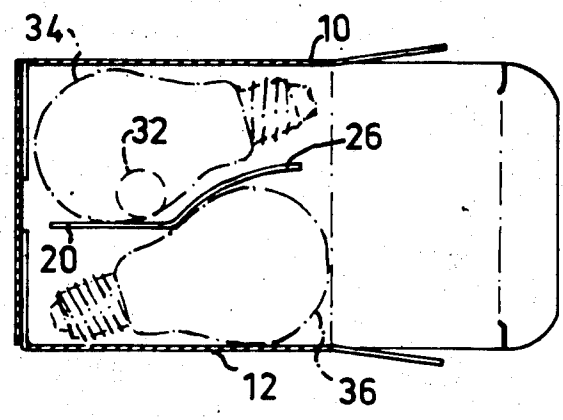
[57] **ABSTRACT**

A carton box for accomodating at least two light bulbs has two narrow and two broad side walls, of which walls one narrow side wall is extended with a glue or gum flap affixed to the inside of the adjacent broad side wall and end closure flaps. At least a portion of the glue flap is free from the broad side wall and is provided with a partition wall capable of being folded up from the broad side wall to divide the carton into at least two compartments. Arranged in the area of the broad side wall covered by the partition in its pre-raised or incumbent position is an opening through which pressure means can be inserted for raising the partition to a position in which it divides the carton into compartments.

9 Claims, 5 Drawing Figures



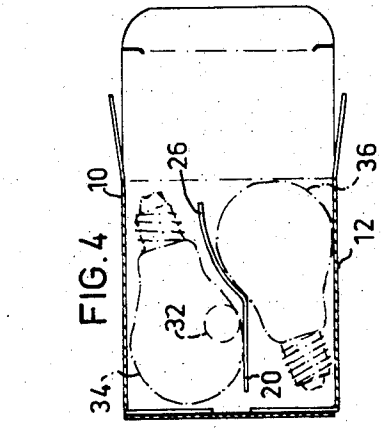


FIG. 4

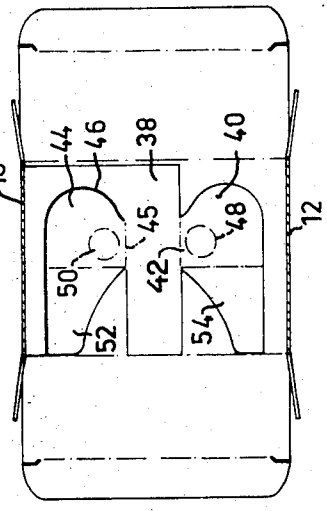


FIG. 5

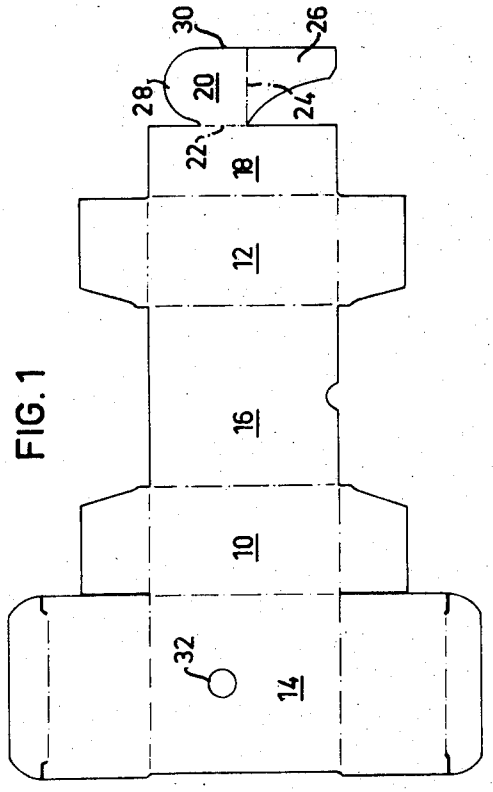


FIG. 1

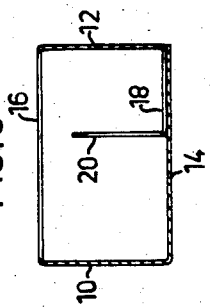


FIG. 3

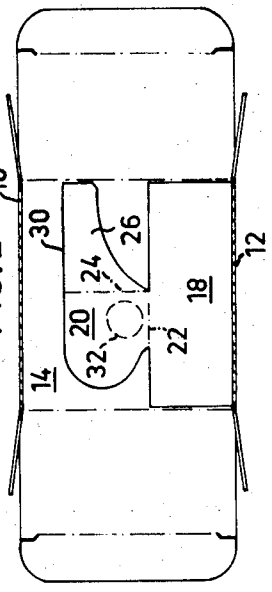


FIG. 2

LIGHT BULB CONTAINER FOR ACCOMMODATING AT LEAST TWO LIGHT BULBS AND A BLANK FOR PRODUCING SUCH A CONTAINER

BRIEF DESCRIPTION OF THE INVENTION

The present invention relates to a light bulb container for accomodating at least two light bulbs, comprising two broad side walls and two narrow side walls, of which walls one narrow side wall is extended with a gum flap attached to the inside of the adjacent broad side wall, the carton further comprising end closure flaps for securing the ends of the carton. The carton of the present invention is primarily intended for pear-shaped light bulbs of standard size, having a diameter of 6 cm and a length of 10.5 cm.

A carton constructed in accordance with the invention is mainly characterized in that at least a portion of the gum flap is free from the broad side wall and is provided with a partition wall capable of being folded up from the broad side wall to divide the carton into at least two compartments, and that arranged in the area of the broad side wall covered by the partition in its pre-raised or incumbent position is an opening through which pressure means can be inserted for raising the partition to a position in which it divides the carton into compartments.

The carton can be formed integrally from a single piece of material and has at least one partition member which can be readily raised into position when erecting the carton. This considerably simplifies the manufacture of such cartons and their preparation for use. Further, the carton of the present invention obviates the arrangement of separate bulb shielding means, since the partition member alone serves to prevent physical contact between the bulbs packed in the carton.

The invention will now be described in more detail with reference to two embodiments thereof illustrated in the accompanying drawing, further features of the invention being made apparent in connection therewith.

BRIEF DESCRIPTION OF THE FIGURES

In the drawing, FIG. **1** illustrates a blank for producing a carton intended for two light bulbs, FIG. **2** is a sectional view of a carton formed from the blank illustrated in FIG. **1**, the section being taken in the immediate vicinity of one broad wall of the carton to show the position of the partition before it is raised to divide the carton into separate compartments, FIG. **3** is an end view of the carton illustrated in FIG. **2** with the partition raised, FIG. **4** shows the same view as FIG. **2** but with two pear-shaped light bulbs inserted in the carton with the base portions of the bulbs facing in opposite directions and one end of the carton secured by the end closure flaps, and FIG. **5** illustrates a similar sectional view to FIG. **2** through a carton constructed in accordance with the invention to receive three light bulbs and having two partition members.

DETAILED DESCRIPTION OF THE FIGURES

As will be seen from FIG. **1**, the carton blank consists of a number of panels forming two narrow side walls **10,12** and two broad side walls **14,16.** The two narrow side walls **10,12** and one broad side wall **14** are provided with end flaps. The narrow side wall **12** is extended with a rectangular gum flap **18.** Hitherto the carton conforms with a conventional carton.

In accordance with the invention, the gum flap **18** is provided with a flap **20** which forms the mentioned partition member and which can be raised along a fold or score line **22** extending along a portion of the length of the gum flap.

A transversely extending fold or score line **24** is arranged approximately in the center of the partition **20.** With the illustrated embodiment, the portion of the flap **20** located beneath the fold line **24,** as seen in the drawing, has the form of a flexible tongue **26,** while the portion of the flap located on the opposite side of the fold line is provided with a lug **28.**

The height of the partition **20** from the fold line **22** to the outer edge **30** of the partition is slightly less than the width of the narrow side walls **10,12** so that when erecting the carton, the flap can be raised to a position perpendicular to the side wall **14,** as shown in FIG. **3.**

When erecting the carton, the partition **20** remains in abutment with the side wall **14,** as shown in FIG. **2.** To facilitate the raising of partition **20,** the broad side wall **14** is provided with an opening **32** through which pressure means can be caused to activate the partition to its operative carton dividing position, as shown in FIG. **3.** According to one aspect of the invention, the opening can be so positioned that subsequent to erecting the carton and prior to raising the partition, the opening lies beneath the partition.

Subsequent to erecting the carton and moving the partition into position, the carton is ready to receive two pear-shaped light bulbs **34,36** which can be inserted into the carton simultaneously from one end thereof with their respective base portions facing each other, as shown in FIG. **4.**

The carton is so dimensioned that the distance between the partition **20** and one narrow side wall **10** is equal to the height of the narrow side walls and roughly equal to the diameter of the light bulbs. One light bulb, **34,** will therefore lie firmly held between the partition **20** and one narrow side wall, **10.** As will be seen from FIG. **4,** the distance between the partition **20** and the other narrow side wall **12** is much shorter than the distance between the partition and the narrow side wall **10** this distance being so small as to deny room for the main body of the bulb but sufficient to accomodate the base portion of the other light bulb **36.**

As will be seen from FIG. **4,** the arrangement is such that the two light bulbs lie obliquely in the carton, thereby utilizing the space available in the best possible manner.

Insertion of the second light bulb into the carton is facilitated by the flexible tongue **26,** which is moved to one side by the bulb upon its insertion into the carton and takes the position illustrated in FIG. **4.** In this way the bulb is firmly supported by the flexible tongue, movement of which is facilitated by the fold or score line **24.** The tongue also forms an effective shield between the two light bulbs **34,36.**

The carton is closed in a known manner by means of the end closure flaps.

FIG. **5** illustrates an embodiment of the carton according to the invention constructed to accomodate three light bulbs (not shown). Similarly to the embodiment illustrated in FIG. **1,** the gum flap **38** of the carton is formed with a partition, **40,** which can be lifted about

a fold or score line **42.** In addition there is formed in a similar manner a further partition **44** which is freely insertable through a slit **46** disposed in the gum flap and which is not affixed to the underlying broad side wall. The partition **46** can be lifted about a fold or score line **45.**

The two partitions **40,44** can be raised by pressure means acting through two openings **48,50** disposed in the side of the carton, whereafter two light bulbs can be inserted into the carton with their respective base portions extending into the carton in the compartments located between the flexible tongues **52,54** of the partitions and adjacent narrow side walls. The third light bulb is inserted from the other end of the carton with its base portion located between the two partitions **40,44.** The tongues are bent in towards each other to provide room for the light bulbs, in the same manner as that illustrated in FIG. **4,** and form a shield between the bulbs to prevent mutual contact therebetween.

What is claimed is:

1. A light bulb carton for accomodating at least two light bulbs, comprising two narrow and two broad side walls, of which walls one narrow side wall is extended with a gum flap affixed to the inside of the adjacent broad side wall, and end closure flaps, characterized in that at least a portion of the gum flap is free from the broad side wall and forms a partition wall capable of being folded up from the broad side wall to divide the carton into at least two compartments, and that arranged in the area of the broad side wall covered by the partition in its pre-raised or incumbent position is an opening through which pressure means can be inserted for raising the partition to a position in which it divides the carton into compartments.

2. A carton according to claim **1,** characterized in that the compartments are of different width, the width of the wider compartment being approximately equal to the height of the narrow side walls.

3. A carton according to claim **1,** characterized in that at least one end of the partition is provided with a freely projecting, laterally bendable tongue.

4. A carton according to claim **3,** characterized in that the length of the tongue is at least a third of the total length of the partition, which is greater than half the distance between the ends of the carton.

5. A carton according to claim **4,** characterized in that the free long edge of the gum flap is provided with a raisable partition, that a further partition of the same design as the aforementioned is formed at a distance in on the gum flap, and that the distance between the pivot connection points of the two raisable partitions with the gum flap to adjacent narrow side walls is approximately equal to the height of the side wall, while the distance between the pivot connection points is considerably shorter than said height.

6. A carton according to claim **1,** containing at least two pear-shaped light bulbs and with which the distance between the broad side walls of the carton is approximately equal to the largest diameter of the light bulbs, characterized in that the base portions of the two juxtaposed bulbs face in opposite directions and that the flexible tongue of the partition is bent in by the body of the bulb, whose base portion lies nearest the pivot connection of the partition with the gum flap, so that the tongue forms an obliquely extending, resilient partition between the two main body portions of the bulbs.

7. A carton blank for producing a carton capable of accomodating at least two pear-shaped light bulbs, comprising panels which can be folded together to form two narrow and two broad side walls in the erected condition of the carton, of which walls one narrow side wall forms one end portion of the blank and is extended with a gum flap, and further comprising end closure flaps, characterized in that the gum flap is pivotally connected along a portion of its length with a partition forming flap intended to be raised when the carton is erected, to divide the carton into a number of compartments.

8. A blank according to claim **7,** characterized in that the other end of the blank is formed by one of the broad side walls, and that arranged in said one side wall is an opening so positioned that subsequent to erecting the carton and prior to raising the partition said opening lies beneath the partition.

9. A blank according to claim **7,** characterized in that the width of the gum flap at its pivot connection point with the partition is such that the width of the broad side walls minus the width of the gum flap is approximately equal to the width of the narrow side walls.

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