Dec. 18, 1962 J. A. R. DUGRE 3,069,008

PACKING CONTAINER

Filed Feb. 8, 1961

FIG. 1.

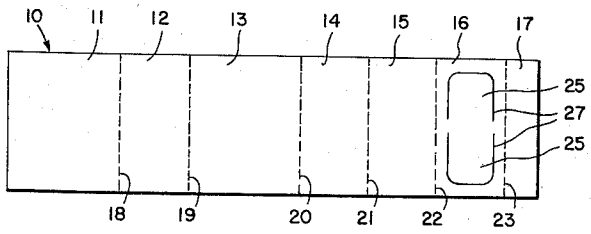


FIG. 2.

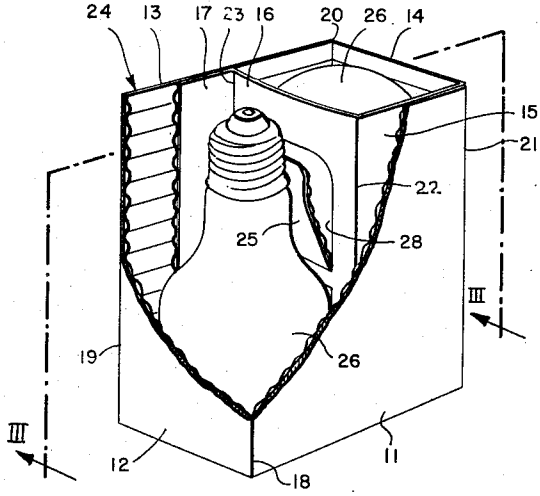
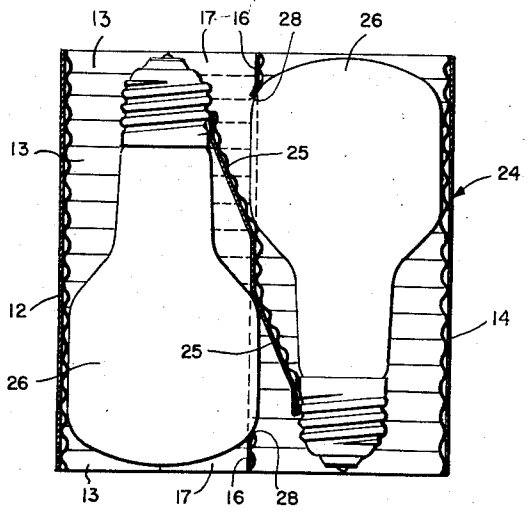


FIG. 3.



INVENTOR.
J. A. ROGER DUGRE.
BY D. S. Bulga
PATENT AGENT.

United States Patent Office 3,069,008 Patented Dec. 18, 1962

3,069,008
PACKING CONTAINER

Joseph A. Roger Dugre, Three Rivers, Quebec, Canada, assignor to Canadian Westinghouse Company Limited, Hamilton, Ontario, Canada, a company of Canada

Filed Feb. 8, 1961, Ser. No. 87,898
Claims priority, application Canada Sept. 14, 1960
7 Claims. (Cl. 206—65)

This invention relates to packing containers and, more particularly, to a container for a pair of fragile articles such as electric incandescent lamps having bulbous-envelopes.

When packing electric incandescent lamps it is common practice to provide a separate paper container or wrapper for each pair of lamps, the two lamps being arranged in side-by-side oppositely-disposed relation so that they occupy a minimum of space. A partition is provided between the two bulbs to separate them, since otherwise a light impact one against the other may be sufficient to shatter the relatively brittle bulbs.

It is found in commercial practice that the dimensions for such a container are surprisingly critical in that, if the container is too large, the bulbs will slip easily from the package, and if the container is too small, then when the lamps are inserted into the container they will cause it to bulge. Packages that bulge will not stack properly on the retailers' shelves thereby creating a vexing problem, particularly in supermarkets where a neat and attractive display is particularly advantageous from a sales standpoint.

The general object of the present invention is to provide an improved packing container for a pair of fragile bulbous articles which will obviate the foregoing and other deficiencies of the prior art containers.

Another and more specific object is to provide a packing container for a pair of electric lamp bulbs which can be easily loaded and will firmly grip and retain the bulbs without bulging outwardly.

A further object is to provide a duplex type packing container of the aforesaid character that can be fabricated from a single piece of packaging material by relatively simple folding, cutting and gluing operations.

The aforesaid objects are achieved in accordance with this invention by providing a sleeve-like container dimensioned to accommodate a pair of lamp bulbs that are arranged in side-by-side oppositely-disposed relation and are separated by an interposed partition, which partition divides the container interior into two article-receiving compartments and has two dsplaceable panels or tongues. These tongues are so disposed that they are displaced from the plane of the partition by the bulbous parts of the respective lamps when the latter are inserted, thereby securely locking the lamps within the container and preventing the sides of the loaded container from bulging outwardly. The container is so constructed that it can be very conveniently and economically fabricated from a single piece or strip of material by high-speed machines.

If desired, intermediate portions of the partition may be cut out and removed to provide a pair of apertures in the partition instead of hinged tongues, which apertures will achieve the same advantageous and beneficial results above-described.

A better understanding of the invention will be obtained from the drawing, wherein:

FIGURE 1 is a plan view on a reduced scale of a paper blank from which the improved container is formed by folding and gluing;

FIGURE 2 is a perspective view of the loaded container, parts of the side walls being cut away to show the relationship of the partition and lamp bulbs; and

FIGURE 3 is a cross-sectional view through the loaded container along the line III—III of FIGURE 2, in the direction of the arrows.

The packing container is preferably formed from single face corrugated paper consisting of a strip of plain paper fastened by adhesive to a strip of corrugated paper of the same dimensions. It is arranged that when the container has been formed the smooth side of the paper faces outwardly and can therefore carry descriptive and advertising matter, while the corrugated side faces inwardly with the corrugations disposed transverse to the longitudinal axis of the container so as to engage and resiliently grip the packed articles.

Referring now to the drawing, in FIGURE 1 there is shown a blank **10** from which the improved container of the present invention is preferably formed. The blank is cut from a roll of single face corrugated paper by machine in the well known manner and, as shown, is divided into a plurality of panels **11** to **15**, a partition panel **16**, and a connecting flap **17** by a series of transverse score lines **18** to **23** which parallel one another and run perpendicular to the length of the blank. The blank **10** is assembled by folding it along the aforesaid score lines to form, as shown in FIGURES 2 and 3, an open-ended tubular container **24** of rectangular cross-section having a pair of relatively wide side walls **11** and **13** and a pair of narrow side walls **12** and **14** hingedly joined along score lines **18** to **21**. The lengths of the walls are made such that the tubular container **24** is of approximately the same length as the articles to be packed. In the case of lamp bulbs, the container is preferably slightly longer than the bulbs as here illustrated.

The panel **15** and connecting flap **17** are fastened respectively to the wide pair of side walls **11** and **13**, e.g. by gluing, so that the partition panel **16** is anchored along its entire length to the aforesaid side walls and extends longitudinally of the container thereby dividing it into two compartments of substantially the same cross section, each dimensioned to accommodate one of the packed articles, such as a lamp bulb **26** as here shown. The length of the two compartments is approximately equal to the length of the bulbs **26**, while their width parallel to the narrower walls **12** and **14** are such that the bulbs will contact the walls **11** and **13**, but will not cause the latter to bulge. The width of the two compartments parallel to the walls **11** and **13** is slightly less than the maximum outside diameter of the bulbs so that as the bulbs are inserted into the compartments the partition **16** and the walls **12** and **14** bulge slightly temporarily.

As will be noted in FIGURES 2 and 3, the partition **16** comprises a continuous member, that is, a single panel, that extends longitudinally of the tubular sleeve or container **24** formed by the walls **11**—**14**.

In accordance with this invention the partition **16** is provided with two hinged panels or tongues **25**, that are struck from the partition by means of two U-shaped cuts **27**. These cuts can be conveniently produced by a die cutting operation. The tongues **25** comprise intermediate portions of the partition **16** and are hinged to the central part thereof, as shown most particularly in FIGURES 1 and 3. The free ends of the tongues are accordingly disposed toward the open ends of the container. Thus, when a lamp **26** is inserted into one of the container compartments, the resultant pressuring of the partition and opposite side wall **12** or **14** by the bulbous portion of the lamp displaces that tongue **25** which is aligned with the bulbous portion outwardly from the partition. This forms an opening **28** in the partition **16** which accommodates the bulbous portion and thereby securely locks the lamp in its loaded position in the container. The tongue displaced by the said bulbus portion,

together with part of said bulbous portion, protrudes into the other article-receiving compartment, as shown most clearly in FIGURE 3. The protruding tongues are preferably long enough to seat against the basal end portion of the lamp inserted into the other compartment (see FIGS. 2 and 3) and thus serve as spacers that prevent the lamps from contacting one another at these points should the ends of the loaded container be crushed.

When both lamps are inserted into the container, the protrusion of the lamps into the respective apertures **28** formed by the displacement of the tongues in opposite directions is sufficient to prevent bulging of the walls **12** and **14**. If the bulbous parts of the lamps are still greater in dimension than their compartments in a direction parallel to the walls **11** and **13**, then the partition **16** will bulge in preference to the walls **12** and **13**, since the partition is considerably less rigid than the walls **12** and **13** owing to the presence of the cuts **27**. The packages with the bulbs therein will have flat, i.e. unbulged, sides and can readily be stacked one upon the other.

Although in this embodiment U-shaped cuts and hinged tongues are employed to provide the intermediate openings **28** for the bulbous parts of the lamps, it will be apparent that in other embodiments cuts of various shapes may be employed so long as they provide openings or apertures sufficiently large to receive the bulbous parts of the packed articles and thereby retain the articles in their respective compartments without bulging the sides of the container. For example, the cut **27** can be of V-shape or of O-shape. In other embodiments the shape of the cut may be such that the struck-out portion **25** is completely separated from the remainder of the partition and is discarded, though it will usually be preferred to retain such portion to prevent clogging the cutting machine, and also for the cushioning it is able to provide between the two lamps. Materials other than the above-mentioned single face corrugated paper material can, of course, also be used.

It is preferable that the container be capable of folding flat, since it is usually necessary to ship them empty from the supplier to the user. As will be apparent, the container **24** of this invention meets this requirement since it can be folded flat to a minimum thickness without undesired creasing or buckling of any part of the container.

The embodiments described herein relates specifically to a container for packing electric incandescent lamps which have bulbous-shaped envelopes and elongated necks of appreciably smaller diameter, wherein said lamps are arranged in side-by-side and oppositely-disposed relation so that the bulb of one nests alongside the neck of the other, and vice versa, and said lamps are thus packed in a smaller space than if they were disposed side-by-side pointing in the same direction. The term bulbous-shaped articles as used in the specification is intended to refer to articles which are generally of similar shape to such lamps and with which a commercially worthwhile saving in packing space can be achieved by packing them side-by-side and pointing in opposite directions. It will, of course, be obvious that the same advantageous interlocking and non-bulge features will be obtained if lamps of pear-shaped configuration, that is, those having generally spherical bulbous portions, are substituted for the lamps **26** herein shown having generally cylindrical bulbous portions.

It will be understood that the invention has been disclosed with reference to specific embodiments thereof, and accordingly various modifications and changes may be made to the embodiments described within the scope of the invention as set out in the appended claims.

I claim:

1. A container for packing a pair of bulbous-shaped articles arranged in side-by-side substantially oppositely-disposed relation, comprising; a four-sided open-ended tube, a continuous partition extending longitudinally of said tube dividing it into two article-receiving compartments, said tube being of approximately the same length as the length of each of the articles to be packed, and said partition being attached along its entire length to oppositely disposed walls of said tube and having intermediate portions that are displaceable from the plane of said partition and are adapted, when so displaced, to provide openings dimensioned to receive part of the bulbous portions of the articles and maintain the separation of the articles..

2. A duplex type container as set forth in claim 1 wherein, said tube is of generally rectangular cross-section, and said partition is attached to the wider pair of oppositely disposed walls.

3. A duplex type container as set forth in claim 1 wherein said tube and partition constitute parts of an integral cut and scored blank.

4. A duplex type container as set forth in claim 1 wherein the walls of said tube and said partition are hingedly connected and dimensioned to fold flat.

5. A duplex type container as set forth in claim 1 wherein said tube and partition are fabricated from a single piece of single face corrugated paper the corrugated side whereof comprises the inner surface of said tube.

6. A package comprising: a pair of bulbous-shaped fragile articles arranged in side-by-side substantially oppositely-disposed relation; and a tubular open-ended container of rectangular cross-section snugly enclosing said articles; a continuous partition in said container fastened along its entire length to the wider pair of oppositely disposed walls of said container and longitudinally dividing said container into two article-receiving compartments, each of which contains one of said articles; intermediate precut portions of said partition being displaced outwardly in opposite directions from the plane of said partition by the bulbous portions of said articles and constituting hinged tongues interposed between the adjacent portions of said articles, whereby said tongues and the engaging part of the bulbous portion of said articles protrude into the compartment containing the other o said articles and said articles are thereby securely locked in loaded position within said container wtihout bulging the sides thereof.

7. A duplex type package as set forth in claim 6 wherein said pair of articles comprise electric lamp bulbs.

References Cited in the file of this patent

UNITED STATES PATENTS

2,611,531	Conkle	Sept. 23, 1952
2,654,472	White	Oct. 6, 1953
2,825,496	Meissler	Mar. 4, 1958
2,892,581	Amatel	June 30, 1959
2,940,653	Meissler	June 14, 1960