June 22, 1948. R. T. WHITE 2,443,810

LAMP BULB PACKAGE

Filed Oct. 11, 1946 2 Sheets-Sheet 1

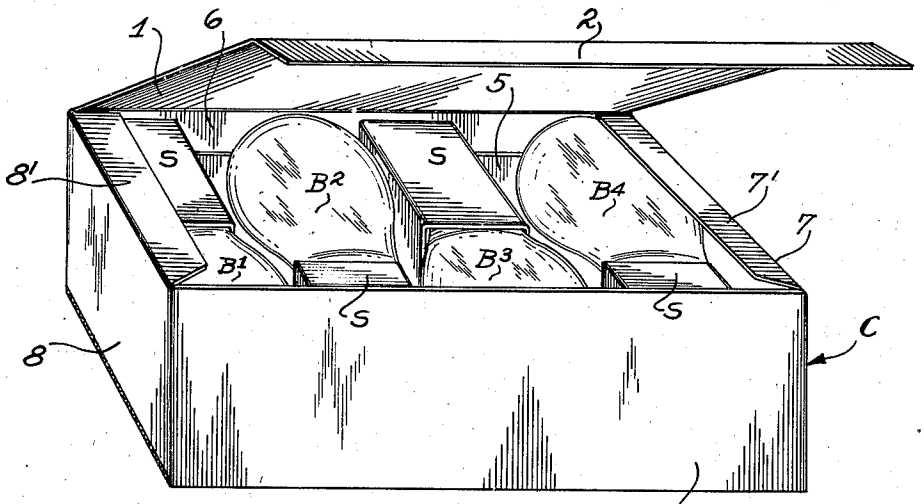


Fig. 1

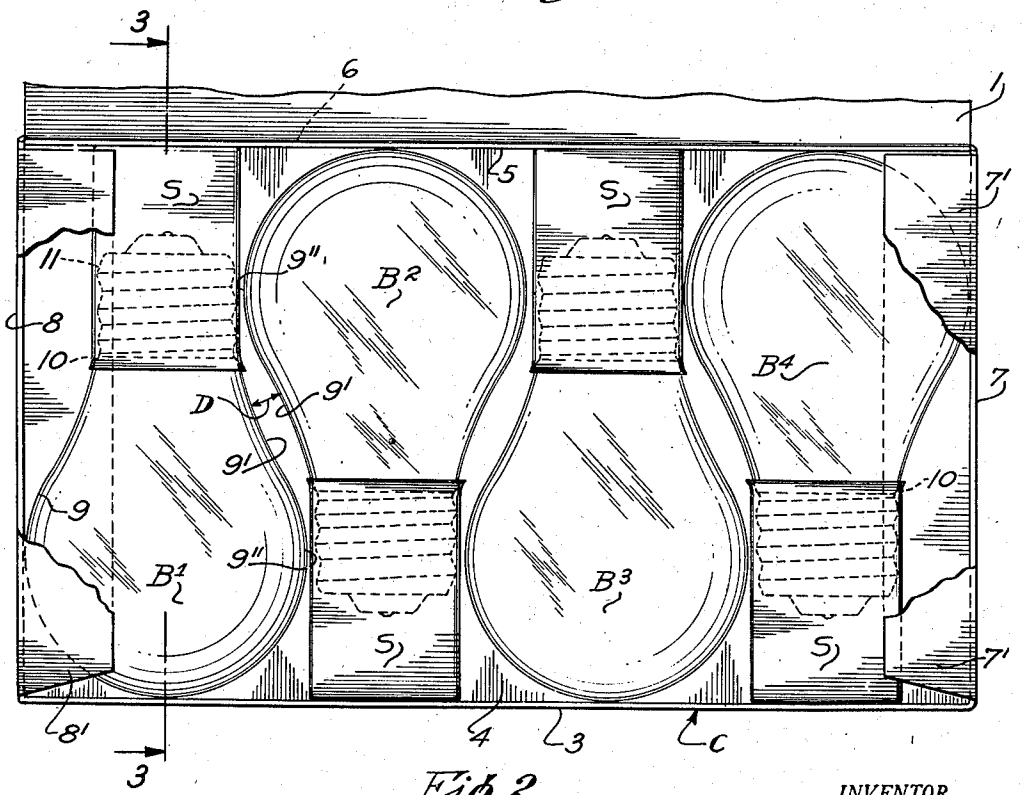


Fig. 2

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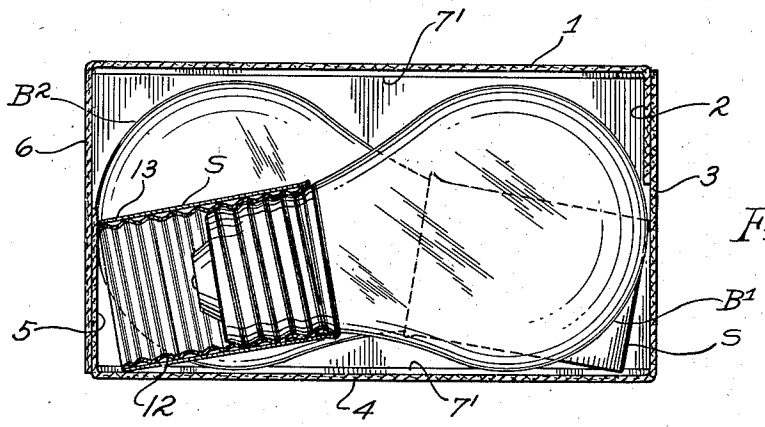


Fig. 3

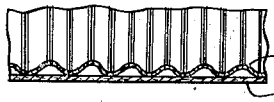


Fig. 5

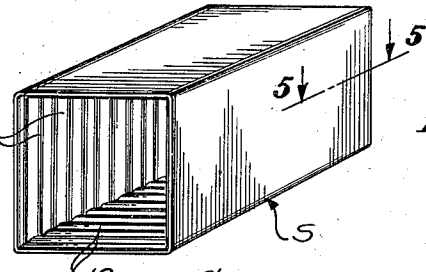


Fig. 4

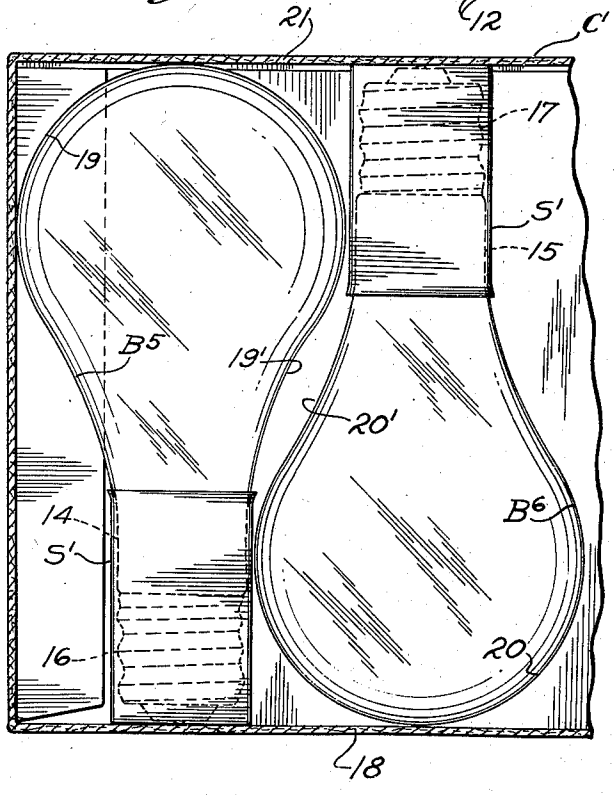


Fig. 6

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Patented June 22, 1948

2,443,810

UNITED STATES PATENT OFFICE

2,443,810

LAMP BULB PACKAGE

Ray T. White, Rocky River, Ohio, assignor to The Hawkins Container Company, Cleveland, Ohio, a corporation of Ohio

Application October 11, 1946, Serial No. 702,635

4 Claims. (Cl. 206—65)

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This invention relates to an improved protective package for fragile articles and more particularly to an improved carton or package for the usual type of incandescent electric lamp bulbs.

Various forms of containers have been proposed and used for packaging electric lamp bulbs in the usual household sizes and protecting them against breakage during transportation and storage. Some of these containers have been excessively bulky, others have been expensive to manufacture, some have not provided adequate protection for the bulbs and many of them have not been particularly attractive from a merchandising standpoint.

It is, therefore, among the objects of my invention to provide a package of electric light bulbs or the like which adequately protects the bulbs against breakage during storage and handling, which will permit one or more bulbs to be removed from the package and still protect the remaining bulbs against breakage, which enables a larger number of bulbs to be packed in the same space than packages commonly in use in this industry prior to my invention and which provides an extremely attractive display carton thus facilitating sales of the packaged products to the customers.

Other objects of my invention include: the provision of a protective package for electric lamp bulbs or the like which requires a minimum of material; the provision of a package of the type described which permits ready removal or replacement of lamp bulbs from or to the enclosing container; provision of an identifying means which may be left on a lamp bulb when removed from the enclosing carton; and the provision of an electric lamp bulb package which permits the user to determine at a glance how many bulbs remain in the package.

The above and other objects of my invention will appear from the following description of several embodiments thereof, reference being had to the accompanying drawings in which:

Figure 1 is a perspective view of an electric lamp bulb package incorporating the features of my present invention, the lid of the box or container being partially open.

Figure 2 is a plan view looking into the open top of the box of Figure 1 and illustrating a package designed for handling four lamp bulbs.

Figure 3 is a cross sectional view taken on line 3—3 of Figure 2 and illustrating the box or container with the cover closed.

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Figure 4 is a detached perspective view of my protective sleeve and spacer.

Figure 5 is a fragmentary cross sectional view taken on line 5—5 of Figure 4 illustrating the structure of the corrugated paper board from which the protective sleeves are made.

Figure 6 is a view generally similar to Figure 2 but illustrating a slightly larger size lamp bulb having somewhat different proportions from the bulbs of Figure 2.

The most widely employed incandescent electric lamp bulbs for household and other general illumination purposes range in size from about 25 to 150 watts. The complete range of wattage sizes, within these limits, is incorporated in only a few standard bulb sizes, each of which is used for several different wattage ratings. In the accompanying drawings I have illustrated my invention in Figures 1, 2, and 3 as adapted for packaging the smaller size bulbs, for example 25 and 50 watts, while in Figure 6 I have illustrated a package of larger bulbs, such as the 100 watt size.

My package consists essentially of a box or container C, preferably of rectangular form and made of corrugated paper board or other suitable shock absorbing material. The box C includes a top or cover 1 having a flap portion 2 adapted to fit within the front wall 3 when the box is closed (see Figure 3). The bottom 4 of the box is also provided with an upward extending flap portion 5 which fits against the rear wall 6. The end walls 7 and 8 have flaps 7′ and 8′ at their top and bottom edges which add to the rigidity of the box structure and provide a more complete and effective enclosure for the contents thereof.

The length of the box or container C between the end walls 7 and 8 depends upon the number of lamp bulbs to be housed in the package. In Figures 1 and 2 a box for four bulbs is illustrated but it will be understood that the length of the box could be made to accommodate 2, 3, 4, or more bulbs as desired. The individual bulbs in Figure 2 are generally indicated by reference characters B^1, B^2, B^3 and B^4. Each bulb comprises a globe portion 9 and a reduced neck or stem portion generally indicated at 10, this neck or stem portion 10 also including the usual threaded base 11.

Before placing the bulbs B^1, B^2, B^3, and B^4 in the container C protective spacer sleeves S are slipped over the necks 10 thereof until the ends of the sleeves come to a stop against the beginning of the outward bulging globe portions 9 of the

bulbs. As is best seen in Figure 4, the sleeves S are made of corrugated paper or paper board having a corrugated inner surface 12 and preferably having a smooth outer cover layer 13. These sleeves S are square in cross section, the length of the sides of the square being such that when a sleeve S is placed on the base 11 of a lamp bulb the corrugations 12, which extend peripherally of the sleeve, will slip or spring over the threads of the base 11 and will, due to their engagement with the threads, effectively hold the sleeve S in position on the base of the bulb as indicated in Figure 3. The sleeves S are preferably collapsible into flat form for storage and handling prior to placing on the lamp bulbs and may advantageously be made in accordance with the disclosure of Patent No. 2,084,922 which issued on June 22, 1937, to Melvin H. Sidebotham.

In the package of Figure 2 the four bulbs, each fitted with a sleeve S, are placed in the container C in nested, side by side, alternate end for end relation. It will be observed that with each of the bulbs of Figure 2, which are the relatively small size units, the sleeve S extends a substantial distance beyond the outer end of the base 11 when in position on the bulb. It will also be seen that the width of the box C between the front and rear walls 3 and 6 is substantially equal to the over-all length of the bulb plus sleeve units, the outer end of the globe 9 substantially contacting the one wall and the outer end of the rectangular sleeve S contacting the other wall (see Figure 3). Thus endwise movement of the bulb-sleeve units between the walls 3 and 6 of the container is prevented. Furthermore the globe portions 9 of adjacent bulbs, and particularly the surfaces indicated at 9' thereof, are prevented from impact or engagement with each other which might possibly cause breakage.

The portions 9'' of the globe portions 9 of each lamp bulb substantially contact the sleeves S on the adjacent bulbs and thus protective cushions of relatively resilient and shock absorbing material are interposed between the globe portion of each bulb and the neck or base portions of the adjacent bulbs. As is clearly illustrated in Figure 2, the length of the container C between the end walls 7 and 8 is such that the outer bulbs B^1 and B^4 just fit within the adjacent end walls when the intermediate globe portions 9 and sleeves S are substantially in engagement.

By making the width of the container C between the front and rear walls 3 and 6 equal to the over-all length of a lamp bulb plus its sleeve S, endwise movement of the units is impossible. Also, breakage causing contact between adjacent bulbs is prevented by making the sleeves S of proper length to give the bulb-sleeve units an over-all length sufficient to maintain a substantial space, as indicated at D in Figure 2, between globe portions 9 of adjacent bulbs. So likewise, by proportioning the length of the container C between end walls 7 and 8 to just fit the over-all length of the group of nested bulbs to be contained therein, lateral shifting of the bulbs is restrained and contact between adjacent bulbs is cushioned by the sleeves S. As the box or container C is also preferably made of corrugated paper board or the like a protective enclosure for the entire group of bulbs is provided.

The outer surfaces of the box C may, of course, be imprinted with suitable identifying and advertising matter and each of the individual sleeves S may also be so imprinted. When the lid or top 1 of the box is open, as shown in Figure 1, the bulbs within are attractively displayed, the sleeves S being arranged with their top and bottom surfaces horizontal and their side surfaces vertical, and the entire group of bulbs and sleeves being presented to view in a symmetrical and pleasing manner. When removing bulbs from the container C for use, the first one to be taken out should be one of the end bulbs of the group. The same procedure should be followed in removing additional bulbs, always taking an end bulb from the group so that the remaining bulbs will at all times be prevented from direct contact with each other and the protective features of the package will be preserved.

A popular and effective merchandising display for lamp bulbs has been found to result when a rather large number of bulbs, in "bulk" form, is displayed in a wire basket or the like. When the ordinary bulb is so displayed the identity of the manufacturer is not clearly evident to the observer of the display. However, when bulbs fitted with my protective sleeves are so displayed the manufacturer's name or trade-mark on the sleeve will readily identify the bulbs to the prospective purchaser. Due to the frictional, interlocking, engagement of the corrugated inner surfaces of the sleeves with the threads on the bases of the bulbs, the sleeves will be retained firmly in position although the sleeves may, of course, be readily slipped off when it is desired to use the bulb.

In Figure 6 I have illustrated a larger size bulb than that shown in Figure 2. Two bulbs B^5 and B^6 are illustrated in a box or container C', only a portion of which is illustrated. It will be observed that the larger bulbs illustrated in Figure 6 are provided with longer neck portions 14 and 15 than the bulbs of Figure 2. Thus the proportions of the bulbs B^5 and B^6 are such that, when the outer end of the threaded base portions 16 and 17 thereof abut the wall 18 of box C' and the outer end of the globe portions 19 and 20 engage the opposite wall 21, the portions 19' and 20' of the globes 19 and 20 are well spaced. Therefore it is unnecessary with a bulb of these proportions to extend the sleeves S' beyond the outer ends of the threaded bases of the bulbs, as was the case in Figures 2 and 3, and the ends of sleeves S' are substantially aligned with the outer ends of the base portions 16 and 17. In Figure 6 engagement between globe portions and neck portions of adjacent bulbs is cushioned by the sleeves S' in the manner previously described.

Thus, in packaging any size or type of lamp bulb or other article of generally similar shape such as a bottle, by making the length of the sleeves S such that when the sleeves are installed on the bulbs the globe portions of adjacent bulbs will be positively held in spaced relation in the box or container, glass to glass contact is prevented. It will be observed from the above description that my improved package of electric light bulbs is extremely simple. Aside from the material used in the box or container C, which is a minimum for the number of bulbs to be packaged due to the nested relation of the bulbs, only the corrugated board for the small protective sleeves S is required. Both the boxes and the sleeves may be economically manufactured and loading of the bulbs into the packages is extremely easy due to the simplicity of the elements thereof.

Another important advantage of my invention arises from the fact that one size of outer box or container C may be used to package several sizes of bulbs by employing sleeves S of different lengths. Thus in the box illustrated in Figure 2

bulbs of a greater over-all length could be packaged by using sleeves somewhat shorter than those illustrated but which, when installed on the bulbs, would make the over-all length of the bulbs and sleeves equal to the distance between the front wall 3 and rear wall 6 of the box. Substantial savings in the manufacture of the boxes C can thus be effected by reducing the number of different sizes of boxes which are required to package an entire line of bulb sizes.

Although I have described the illustrated forms of my invention in considerable detail it will be understood that variations and modifications may be made in the proportions and arrangement of the elements of my package without departing from the spirit of my invention. For example, a two layer package may be made by providing a box or container which is substantially twice as deep as that shown, placing a layer of bulbs on the bottom of the box in the manner illustrated herein, placing a sheet of corrugated paper or the like on top of the lower layer of bulbs, and then placing a top layer of bulbs on the spacer sheet. I do not, therefore, wish to be limited to the particular form and arrangement of parts herein shown and described but claim as my invention all embodiments thereof coming within the scope of the appended claims.

I claim:

1. A package of electric light bulbs or the like comprising a generally rectangular corrugated paper board box having a cover adapted to be opened and closed, and a plurality of electric lamp bulbs disposed in said box in side by side alternate end for end nested relation, each of said bulbs having a corrugated paper sleeve disposed around the neck thereof, said sleeves being substantially square in cross section and snugly fitting the sleeve portions of said bulbs and abutting the globe portions thereof.

2. A package including a box of corrugated paper board or the like, a plurality of electric light bulbs disposed in side by side alternate end for end relation in said box, said bulbs having globe portions and reduced neck portions, and corrugated paper protective sleeves of generally rectangular cross-section positioned on the necks of each of said bulbs, the globe portion of each

bulb substantially contacting the sleeves on its adjacent bulbs, each bulb being held against substantial endwise movement by engagement of the globe with one side of the box and the sleeve with the opposite side of the box, said engagement with opposite sides of the box also maintaining the globe portions of adjacent bulbs out of contact.

3. A package of electric light bulbs or the like comprising two or more bulbs disposed in nested relation on the bottom of a box, each bulb having a corrugated paper sleeve of generally square cross-section fitting snugly around its neck portion and abutting its globe portion, each bulb with its sleeve having an overall length substantially equal to the width of said box whereby endwise movement of the bulbs and contact between the globe portions of adjacent bulbs is prevented, said sleeves preventing direct contact and providing cushions between the globe portions and neck portions of adjacent bulbs.

4. A package of the type described including a generally rectangular box having a cover portion forming the top of the box when closed, a plurality of electric light bulbs disposed therein, each of said bulbs having a globe portion and a neck portion, said bulbs being nested side by side in said box with adjacent bulbs reversed end for end, and means for restricting movement of said bulbs in said box and maintaining them out of breakage causing contact with each other comprising sleeves of rectangular cross-section frictionally retained on said neck portions of said bulbs, the length of said sleeves being correlated to the width of said box to maintain the globe portions of any two adjacent bulbs out of engagement with each other when said globe portions of said two adjacent bulbs are in contact with the sleeves on the necks of said two adjacent bulbs.

RAY T. WHITE.

REFERENCES CITED

The following references are of record in the file of this patent:

FOREIGN PATENTS

Number	Country	Date
691,746	France	July 21, 1930

Certificate of Correction

Patent No. 2,443,810 June 22, 1948

RAY T. WHITE

It is hereby certified that the name of the assignee in the above numbered patent was erroneously described and specified as "The Hawkins Container Company" whereas said name should have been described and specified as *The Hankins Container Company*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 21st day of February, A. D. 1950.

[SEAL]

THOMAS F. MURPHY,
Assistant Commissioner of Patents.