April 20, 1926. 1,581,921

R. N. DOBLE

CONTAINER FOR ELECTRIC LAMPS

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Fig. 1

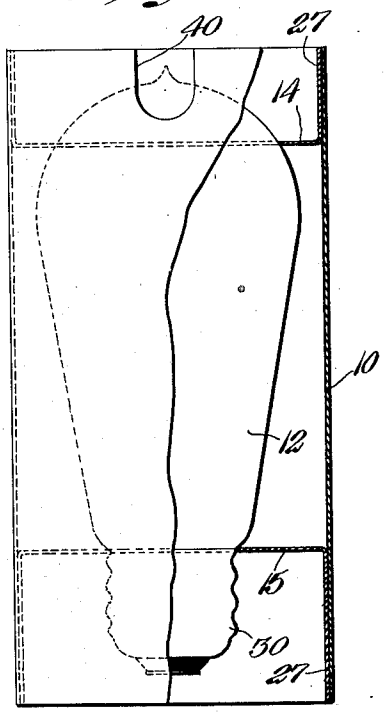


Fig. 3

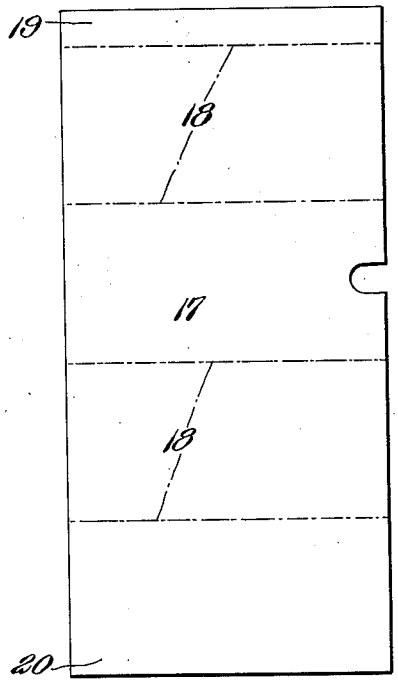


Fig. 2

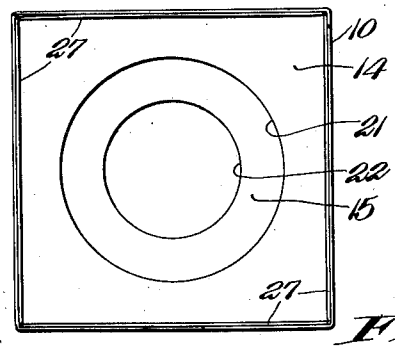


Fig. 4

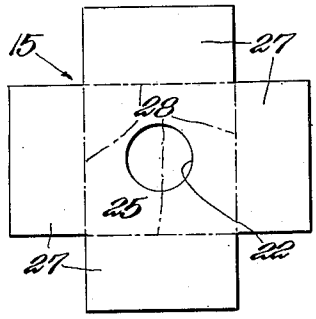
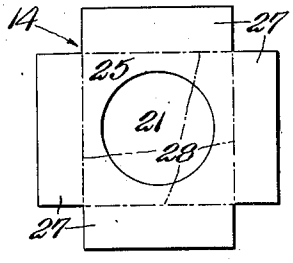


Fig. 5



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Fig. 6

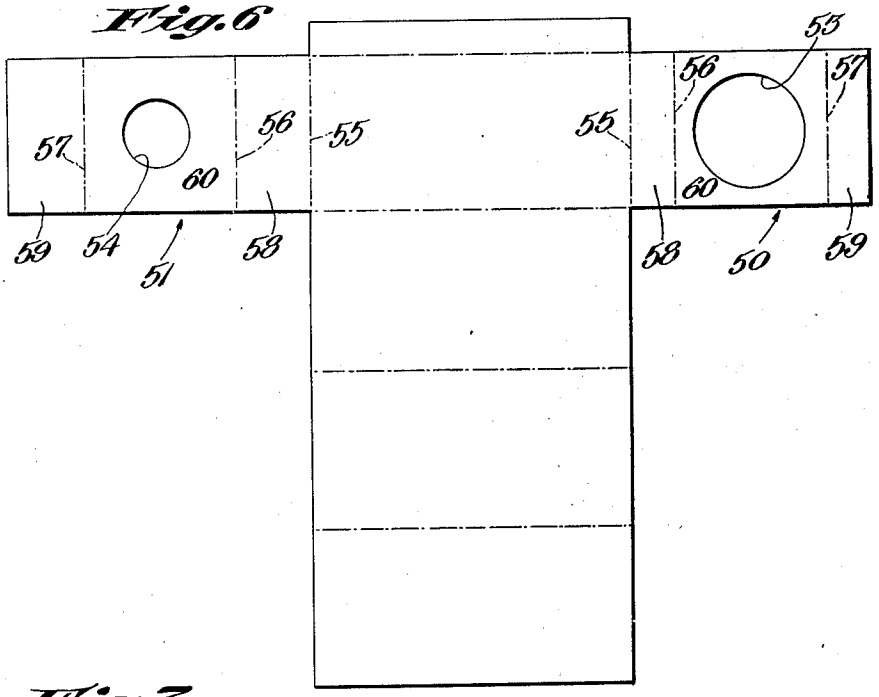
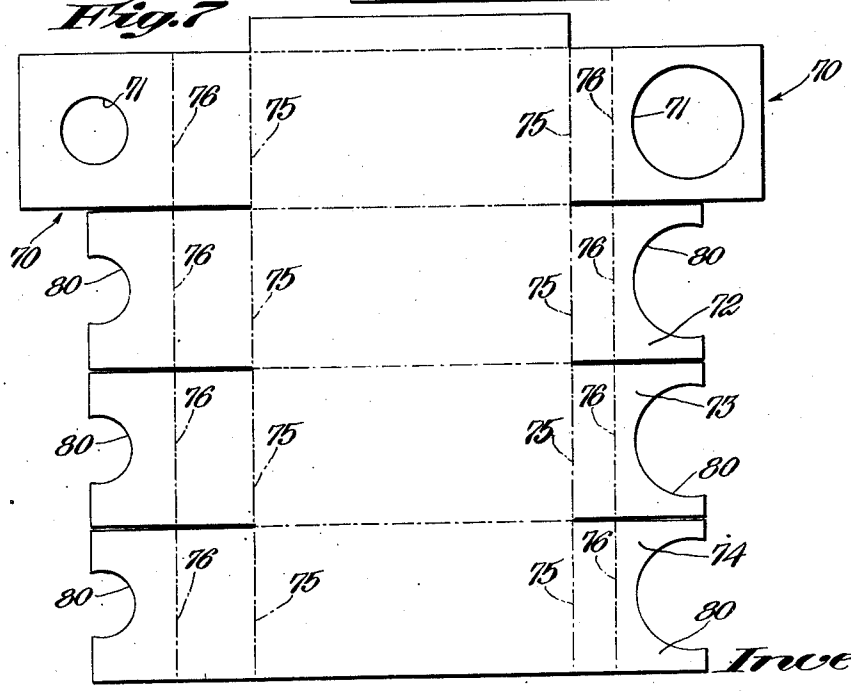


Fig. 7



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UNITED STATES PATENT OFFICE.

RALPH N. DOBLE, OF BAYSIDE, NEW YORK, ASSIGNOR TO PNEUMATIC SCALE CORPORATION, LIMITED, OF QUINCY, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

CONTAINER FOR ELECTRIC LAMPS.

Application filed April 11, 1924. Serial No. 705,759.

To all whom it may concern:

Be it known that I, RALPH N. DOBLE, a citizen of the United States, residing at Jackson Street, Bayside, Long Island, in the county of Queens and State of New York, have invented certain new and useful Improvements in Containers for Electric Lamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a protective container for electric lamps and the like.

The object of the invention is to provide a novel and improved protective container for individual electric lamps or a plurality of such lamps, which is adapted to efficiently protect the glass portions of the lamp or lamps from breakage during shipment and during the general handling to which which the lamps are subjected prior to their actual use.

A further object of the invention is to provide a novel container of the character specified in which the lamp is retained within the container in a position such as to expose the threaded plug of the lamp, to thereby enable the lamp to be screwed into a lamp socket for the purpose of testing the lamp without requiring the removal of the lamp from the container.

A still further object of the invention is to provide a novel container for the purpose specified of a construction particularly adapted to permit the lamp or lamps to be packed therein by automatic machinery.

These and other features of the invention will be hereinafter pointed out and particularly described in the claims at the end of this specification.

In the drawings, Fig. 1 is an elevation partly in section of the preferred form of container, showing the lamp therein;

Fig. 2 is a plan of the container illustrated in Fig. 1 with the lamp removed;

Fig. 3 is a plan of the blank used in forming the container shown in Fig. 1;

Figs. 4 and 5 are details in plan of the blank for forming the lamp engaging members preferably used in securing the lamp within the container; and

Figs. 6 and 7 are plans of blanks for forming alternate forms of containers embodying certain features of the present invention.

Referring to the drawings, for purposes of illustration the different features of the present invention are shown as embodied in a protective container for an individual electric lamp, but it is to be understood that they may if desired be embodied in protective containers for any number of electric lamps.

In the preferred form of the invention, as illustrated in Figs. 1 to 5, the protective container comprises a casing 10 having a sectional dimension greater than the greatest sectional dimension of the lamp 12 for which the container is designed, and provision is made for supporting the lamp 12 within the protective casing 10 and preferably in a manner such as to space the glass portions of the lamp from the internal walls of the casing to thereby prevent the direct transmission of shocks from the casing to the glass. For this purpose, the casing is provided with one or more and preferably two lamp engaging members 14, 15 arranged to cooperate with the lamp to retain the same in the desired position and to prevent displacement of the lamp from the casing. As illustrated in Figs. 1 to 5, the body portion of the casing 10 comprises a rectangular sleeve formed from a blank 17 of cardboard or other fibrous sheet, by folding the latter upon the dotted lines 18 illustrated in Fig. 3, and by gluing or otherwise securing the tab 19 upon one end of the blank to the portion 20 forming the adjacent side wall of the assembled casing.

The lamp engaging members 14, 15 comprise preferably separate members of cardboard or like material of rectangular shape and of a size capable of being inserted into and secured into the body portion of the casing 10 to removably retain therein a lamp positioned between them. The lamp engaging members 14, 15 may and preferably will be provided with holes or openings 21, 22 therein, both holes being of a size less than

the greatest sectional dimension of the lamp bulb but, on the other hand, of sufficient size to permit the opposite end portions of the lamp positioned between them, to project therethrough. Provision is also preferably made for securing the lamp engaging members 14, 15 to the casing 10, and for this purpose in the preferred form of container, each member 14, 15 may be formed of the general shape illustrated in Figs. 4 and 5 in which the body portions 25 of the blank are provided with one or more flaps 27 and preferably four such flaps, which are adapted to be folded upon the dotted lines 28 into a position at substantially right angles to the body portions 25. The flap engaging members 14, 15 thus formed may be inserted into the body portion of the casing 10 through one or both of the open ends thereof and into engagement with the lamp 12 therein and with the top of the lamp bulb and the threaded plug 30, projecting through the holes or openings 21, 22 respectively. The folded flap or flaps 27 may be glued or otherwise secured to the side walls of the casing to removably secure the lamp engaging members 14, 15 to the casing and to thereby retain the lamp in a predetermined position therein. The openings 21, 22 are preferably arranged to position the lamp centrally within the casing 10 and the latter of a size such as to provide a space around the lamp bulb and between it and the walls of the casing.

In practice the openings 21, 22 in the lamp engaging members 14, 15 will be made of sufficient size to permit a substantial portion of the upper end of the lamp bulb to project through the opening 21 in the lamp engaging member 14, and the opening 22 in the lamp engaging member 15 will be made of a size slightly greater than the threaded plug upon the lamp so as to permit the threaded plug to extend therethrough and to be firmly engaged thereby. The length of the body portion of the casing 10 is preferably slightly greater than the length of the lamp for which it is designed, for the purpose of affording protection for both ends of the lamp. The lamp engaging members 14, 15 are preferably inserted into the ends of the sleeve 10 with the flaps extended toward the ends of the sleeve and in order to facilitate removal of one of the lamp engaging members to permit the lamp to be conveniently removed, one end of the casing is preferably provided with a U-shaped opening or recess 40 arranged to expose the portion of the flap 27 immediately beneath the opening 40 for the purpose of enabling one to grasp the flap 27 of the lamp engaging member and to readily detach the same from the sleeve and thus remove the lamp from the casing.

For some purposes it may be desirable to form the flap engaging members 14, 15 integrally with the body portion of the casing 10, and in Figs. 6 and 7, I have illustrated blanks of fibrous material such as cardboard, from which such alternate forms of containers may be formed. Referring to Fig. 6, the blank illustrated therein, is provided with two flaps 50, 51, having holes or openings 53, 54, therein, corresponding in size and purpose to the holes or openings 21, 22 in the flap engaging members 14, 15 of the container shown in Fig. 1. In assembling the container from the blank shown in Fig. 6, the body portion of the blank is folded into the form of a rectangular sleeve, and the flaps 50, 51 are folded upon the dotted lines 55, 56, 57 to cause the portions 58, 59 at each end of the flaps 50, 51, to lie against the walls of the container at each end thereof and to cause the intermediate portion 60 of the flap to be positioned transversely of the interior of the container. The flaps 50, 51 and the portions 58, 59 thereof are preferably designed of such length as to position the intermediate portion 60 of the flap (which corresponds to the flap engaging members 14, 15 of the carton shown in Fig. 1), at a sufficient distance from the ends of the container to afford protection for the projecting portions of the lamp bulb and for the threaded plug. The folded portions 58, 59 of the flaps 50, 51 may be secured to the walls of the container by glue or otherwise.

In the alternate form of blank shown in Fig. 7, the body portion of the blank is provided with flaps 70 corresponding to the flaps 50, 51 of the blank shown in Fig. 6, and having holes 71 therein corresponding to the holes 21, 22 in the members 14, 15 of the container shown in Fig. 1, and in addition, with two sets of flaps 72, 73, 74 upon opposite sides of the blank. In assembling the carton from this blank, the body portion of the blank is folded into the form of a rectangular sleeve and the flaps 70, and 72, 73, 74 are all folded on the dotted lines 75, 76 to position the body portions of the flaps transversely of the sleeve and to space them from the ends of the container. Each set of the flaps 72, 73, 74 is preferably provided with semi-circular openings 80 therein, arranged to align with the holes 71 in the flaps 70 when the carton is assembled and when the flaps 72, 73, 74 are superposed on the flaps 70. If found necessary, the flaps may be glued or otherwise secured together.

From the description thus far, it will be observed that containers embodying the different features of the present invention may be constructed to form in effect a collapsible carton of the general type employed at present in packing bulk goods by automatic packaging machinery. In the preferred

form of container illustrated in Figs. 1 to 5, the body portion of the container may be preformed from the blank, and in such form may be stored in a collapsed or flattened condition occupying relatively little space. The collapsed containers may be readily handled by automatic machinery of the general type and design used at present in handling collapsible cartons, and automatically opened to form the rectangular sleeve. The lamp engaging members illustrated in Figs. 1 to 5 and which are preferably employed, are of such construction as to enable them to be readily inserted into the open ended sleeve by machinery, and in practice one of the lamp engaging members may be first inserted into one end of the sleeve and secured thereto by gluing or otherwise. The lamp or lamps may then be introduced through the remaining open end of the sleeve after which the second lamp engaging member may be inserted. The openings in the lamp engaging members through which the top of the lamp bulb and the threaded plug preferably project, assist in centering the lamp in the container to facilitate the insertion of the remaining lamp engaging member after the lamp has been inserted into the container. In the alternate forms of containers illustrated in Figs. 6 and 7, the container may be assembled from a collapsed condition and the lamp engaging members inserted in a manner analogous to the manner in which the flaps of the ordinary carton are closed. In all of the illustrated forms of containers, the rectangular form of the carton and the definite lines of fold of the same, assist materially in facilitating the packing of the lamp or lamps therein by machinery in which the operating mechanism must of necessity have very definite paths of movement.

The lamp engaging members, comprising preferably cardboard of material stiffness, serve as re-enforcing members to prevent the collapse of the container, and operate to impart sufficient stiffness to the container to permit relatively rough handling during shipment without danger of breakage of the lamp or lamps packed therein.

Electric lamp containers embodying the features of the present invention enable the lamp or lamps to be packed economically by machinery where heretofore they have been packed by hand, and furthermore, afford materially greater protection to the lamp bulb itself than the corrugated sleeves heretofore employed. The exposure of the threaded plug serves to enable the lamp to be tested by screwing the plug into a lamp socket without requiring the removal of the lamp from the container. In this respect, the present container is particularly convenient, a feature which of itself reduces to some extent the liability of breakage of the lamp. Another advantage of the present form of container over the well-known corrugated sleeves heretofore employed for packing the individual lamps, is from the point of view of advertising. The smooth lateral surfaces of the present container are particularly adapted for advantageous display of printed matter, either in the form of a label affixed upon the container or matter directly printed thereon.

While the preferred forms of container embodying the features of the present invention have been illustrated and described, it is to be understood that the invention may be embodied in other forms within the scope of the following claims.

Having thus described the invention, what is claimed is:

1. The combination with an electric lamp, of an individual shipping carton therefor of cardboard or like fibrous material having a body portion comprising a rectangular hollow sleeve, lamp engaging means secured to the sleeve adapted to engage portions of the lamp near the opposite ends thereof at points within the sleeve and spaced from each end thereof, the lamp engaging member for engaging the plug end of the lamp comprising a flap secured to each wall of the sleeve and folded inwardly toward the interior of the sleeve to form portions extending substantially parallel with the respective side walls of the sleeve and other portions extending transversely across the sleeve and superposed one upon the other, which are provided with openings adapted to register and through which the plug end of the lamp extends to be exposed, and lamp engaging means for the bulb comprising a flap integral with each side of the wall and folded first to a position parallel with the sides of the wall and thence transversely and provided with openings for receiving the bulb at a substantial distance from the end thereof, whereby the filament is exposed to view from the end thereof, when the plug is attached to the testing mechanism, substantially as described.

2. The combination with an electric lamp, of an individual shipping carton therefor of cardboard or like fibrous material, having a body portion comprising a rectangular hollow sleeve, lamp engaging means secured to the sleeve comprising two sets of flaps formed as extensions of each end of the body portion, each set being folded inwardly to engage portions of the lamp near the opposite ends thereof at points within the sleeve and spaced from each end thereof, the lamp engaging means for the plug end of the lamp comprising a flap secured to each wall of the sleeve folded inwardly toward the interior of the sleeve to form portions extending substantially parallel with the respective side walls of the sleeve, and other por-

tions extending transversely across the sleeve and superposed upon one another, which are provided with openings adapted to register and through which openings the plug end of the lamp extends to be exposed, and the lamp engaging means for the bulb comprising a set of flaps formed as extensions of the walls of the body portion and folded inwardly into the interior of the carton and engaging the bulb at a substantial distance from the end thereof whereby the filament is exposed to view from the end thereof when the plug is attached to testing mechanism, substantially as described.

RALPH N. DOBLE.