M. C. WHITAKER.

PROTECTIVE CONTAINER FOR MANTLES.

APPLICATION FILED DEC. 1, 1909.

1,030,954.

Patented July 2, 1912.

2 SHEETS—SHEET 1.

Fig. 1

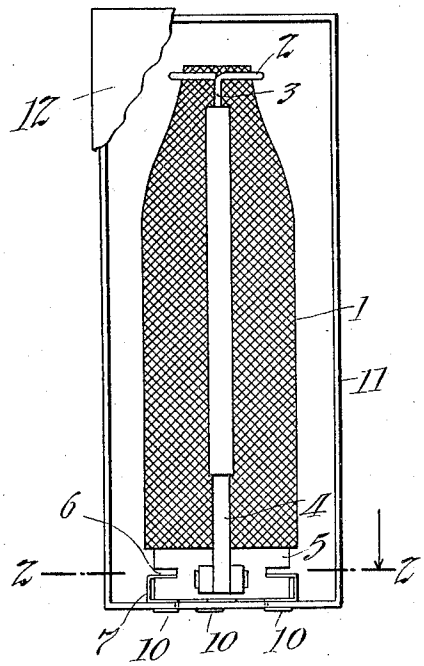


Fig. 4

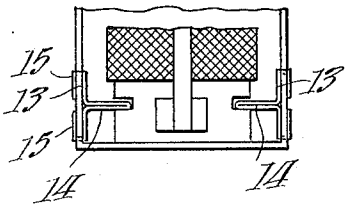


Fig. 3

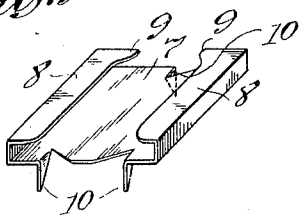


Fig. 5

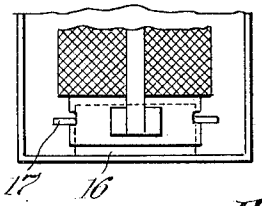


Fig. 2

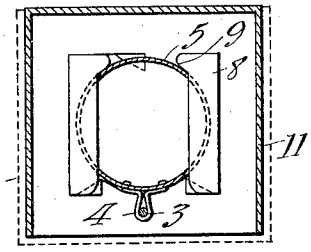


Fig. 6

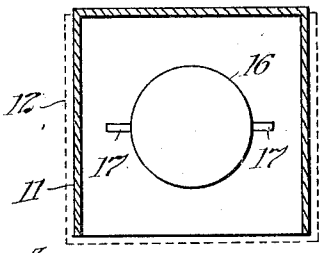
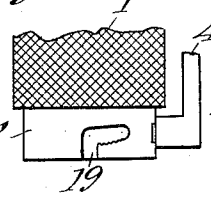


Fig. 7



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2 SHEETS—SHEET 2.

Fig. 12

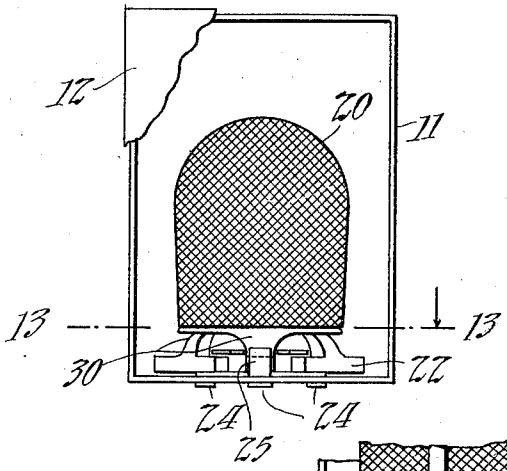
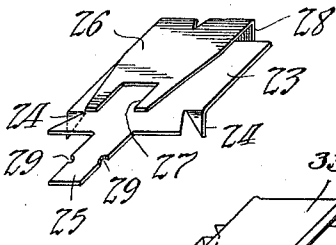


Fig. 14



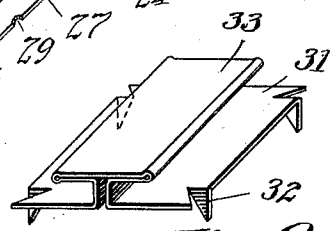


Fig. 9

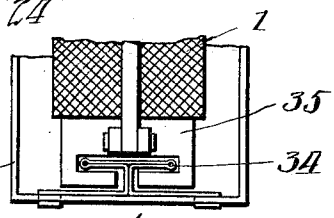


Fig. 13

Fig. 8

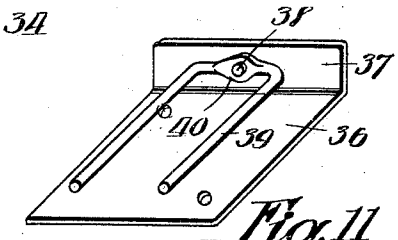
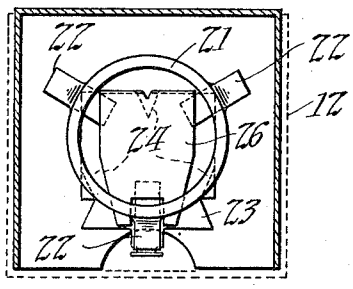


Fig. 11



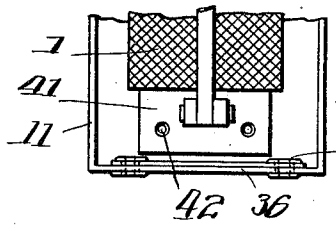


Fig. 10

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UNITED STATES PATENT OFFICE.

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PROTECTIVE CONTAINER FOR MANTLES.

1,030,954. Specification of Letters Patent. Patented July 2, 1912.

Application filed December 1, 1909. Serial No. 530,730.

To all whom it may concern:

Be it known that I, MILTON C. WHITAKER, a citizen of the United States, and a resident of Gloucester City, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Protective Containers for Mantles, of which the following is a description.

As is well known, Welsbach and other incandescent mantles as ordinarily manufactured are extremely fragile and must be very carefully protected against breakage during the handling which necessarily occurs from factory to consumer. Various containers for protecting these mantles have been devised from time to time, but many of them cannot be manufactured with sufficient cheapness to enable them to be used for ordinary purposes; others are open to the objection that the mantle is readily and therefore frequently injured while being removed therefrom, and others again require the use of both hands and considerable manipulation in order to free the mantle.

My invention has for its object the provision of an improved container free from the objections noted, which will be cheap to manufacture and simple and easy to use, which will facilitate the packing and handling of the mantles, and which will reduce breakage to a minimum.

Reference is hereby made to the accompanying drawing, in which—

Figure 1 is a front elevation of a mantle and container embodying my invention in its preferred form; Fig. 2 is a section on line 2—2 of Fig. 1; Fig. 3 is a detail perspective view of the holding means for the mantle carrier; Fig. 4 is a front elevation of a modification of my invention; Figs. 5 and 6 are front elevation and plan respectively of another modification; Fig. 7 is a side elevation of the mantle carrier adapted for use with the container of Figs. 5 and 6; Fig. 8 is a front elevation of another modification; Fig. 9 is a perspective view of the holding means of Fig. 8; Fig. 10 is a front elevation of another modification; Fig. 11 is a perspective view of the holding means of Fig. 10; Fig. 12 is a front elevation showing an adaptation of my invention to a mantle of the inverted type; Fig. 13 is a section on line 13—13 of Fig. 12; Fig. 14 is a detail perspective view of the mantle carrier holding means of Figs. 12 and 13.

Corresponding parts are designated by the same numerals of reference in the several views.

The mantle 1 is of a well known type and is suspended from the usual ring 2 formed on the upright 3 which is carried by a socket 4 rigid with the burner cap or mantle carrier 5. Said mantle carrier is formed with oppositely disposed slots 6 and may be stamped from sheet metal. Except for said slots it resembles the usual mantle carrier, and the mantle may be applied thereto in any desired manner, as for example in the manner shown, or by means of the well known double wire support or the well known center support.

The mantle carrier 5 is adapted to be removably engaged with a holder preferably in the form of a plate 7 of sheet metal having inwardly extending flanges 8 with shoulders 9. Teeth or tangs 10 are struck out from the body of the plate and are used for securing the same to the end of a pasteboard carton 11 which is open at one side as shown, said tangs passing through the same and being bent over as shown. These teeth may be dispensed with if desired and the plate secured to the carton by means of rivets or eyelets. The flanges 8 are so situated as to engage the slots 6 when the mantle and mantle carrier are introduced into the carton, the shoulders 9 acting as stops or abutments for the said mantle carrier. Instead of providing the flanges 8 with shoulders as shown, their edges may be straight and bent down at the rear corners thereby forming stops, or other means may be employed for limiting the movement of the carrier with respect to the holder. The mantle carrier 5 is resilient and is in frictional engagement with the holder 7 which may also be somewhat resilient. This result is obtained preferably by making the distance between the edges of the flanges 8 such as to cause them to bear against the ends of the slots 6, the

mantle carrier 5 assuming a slightly elliptical form and being under a slight stress within its elastic limit when in the holder and resuming its circular form as soon as it is removed therefrom. The carton 11 is preferably rectangular as shown, whereby it may be packed to great advantage. It is provided with a closely fitting rectangular cover 12 and holds the mantle securely in any position in which it may be placed.

It is very easy to introduce the mantle and mantle carrier into the carton or remove them therefrom, it being necessary only to seize the socket 4 and move the mantle carrier into or out of the carton in a direction transverse to the axis of the mantle.

It is not necessary to apply the holding means to the end wall of the carton 11 as said means may be applied to the side walls at a point or points near the end, as shown in Fig. 4, in which the holding means consist of oppositely disposed plates 13, bent to form ribs 14 for engaging the slots 6, and having tangs 15 passing through said walls and clamped down upon the same.

The container of Figs. 5 and 6 comprises the rectangular carton 11, and a holder secured to the end thereof and consisting of a cylindrical block 16 with laterally projecting pins 17. The mantle carrier 18 of Fig. 7 is formed with oppositely disposed L-shaped slots 19 adapted to receive the pins 17 and forming therewith a bayonet joint. The height of the carton is sufficient to permit the slight vertical movement required to disengage the slots 19 and pins 17, the mantle carrier and mantle being moved into or out of the carton in a direction transverse to the axis of the mantle.

In Figs. 8 and 9 I have illustrated another modification of my invention, in which the holder is in the form of a plate 31 having securing teeth 32 and bent to form a central track or guide 33 which is adapted to frictionally engage the edges of T-shaped openings 34 formed in the resilient mantle carrier 35.

In the device of Figs. 10 and 11, the holder is composed of a flat plate 36 secured to the carton by rivets 43 and having a vertical flange 37, to which is secured, by a rivet 38, a U-shaped wire somewhat resilient and having prongs 39 and central flattened portion 40. The mantle carrier 41 is provided with openings 42 to frictionally engage the said prongs as shown.

Referring to Figs. 12 to 14, the mantle 20 of the inverted type is carried by the usual ring mantle carrier 21 of clay or other suitable material and having the usual radial supporting lugs 22 carried by arms 30, all of well known or standard form. The container comprises the rectangular carton 11 of pasteboard, and a holder formed of a single piece of sheet metal bent to form a body 23 having securing teeth or tangs 24 and a finger 25, and an overhanging plate 26 having a recess 27, said plate being connected at its rear end with said body by a vertical web 28. Notches 29 are formed in the finger 25 to facilitate bending. The holder formed as shown in Fig. 14 is secured to the lower end of the carton 11 by the teeth 24 which are passed through the same and then bent down. The container is then ready to receive the mantle carrier 21. This member is grasped by one of the lugs 22 and moved into the carton in a direction transverse to the axis of the mantle in such a way as to cause the two forward lugs 22 to pass between the overhanging plate 26 and body 23 until their inner ends abut against the web 28 as shown in Fig. 9, the third lug 22 extending beneath the plate 26 with its supporting arm 30 within the notch 27, the other arms 30 being in close proximity to the lateral edges of the plate 26, whereby the base is held against lateral displacement. The end of finger 25 is then bent into a vertical position immediately adjacent the end of the lug 22 as shown, whereby the mantle carrier is locked into the holder. It may be readily withdrawn therefrom by bending the finger 25 into its original position.

Having now described my invention, what I claim is—

1. The combination of a carton open at one side, holding means secured thereto and comprising inwardly extending flanges, and a mantle carrier carrying a mantle, said mantle carrier having oppositely disposed slots so disposed as to receive said flanges.

2. The combination of a carton open at one side, holding means secured thereto and comprising inwardly extending flanges, and a mantle carrier carrying a mantle, said mantle carrier having oppositely disposed slots so disposed as to receive said flanges, the distance between said slots being normally somewhat in excess of the distance between the flanges.

3. The combination of a carton open at one side, a holder secured thereto and comprising inwardly extending flanges, and a mantle carrier carrying a mantle, said mantle carrier having oppositely disposed slots so disposed as to receive said flanges, and an abutment to limit the movement of said mantle carrier with respect to said holder.

4. A protective container for mantles consisting of a carton open at one side and holding means adjacent one end of said opening, said holding means having a projecting portion in combination with a cylindrical mantle carrier having an opening to receive said projecting portion, and movable into and out of said holding means in a direction transverse to the axis of the mantle.

5. A protective container for mantles consisting of a carton open at one side and holding means adjacent one end of said opening, in combination with a cylindrical mantle carrier, said holding means and mantle carrier being provided with one or more coacting projections and openings adapted to interlock by movement of the mantle carrier toward or into the holding means in a direction transverse to the axis of the mantle.

This specification signed and witnessed this 26th day of November 1909.

MILTON C. WHITAKER.

Witnesses:

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A. G. HENSEL, Jr.