March 27, 1928. 1,664,350

A. R. CAPPIELLO

NONREFILLABLE CARTON

Filed May 11, 1926

Fig. 1.

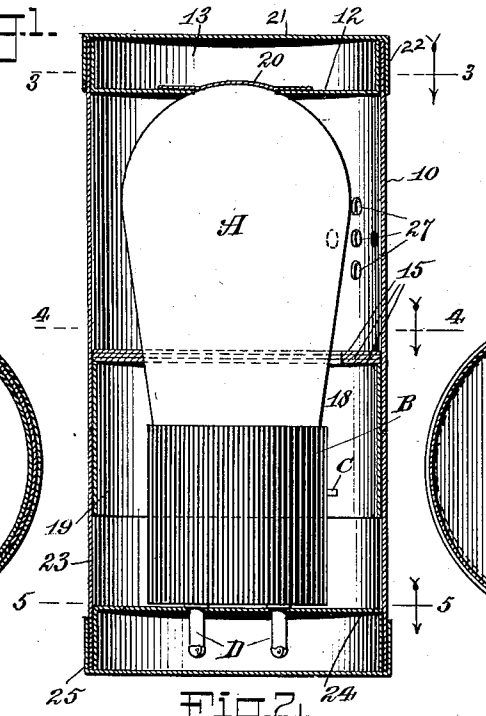


Fig. 3.

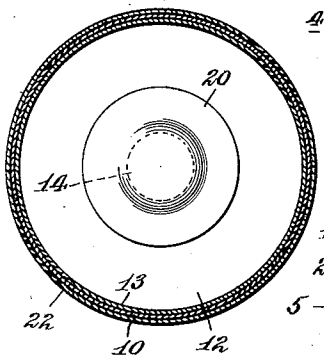


Fig. 5.

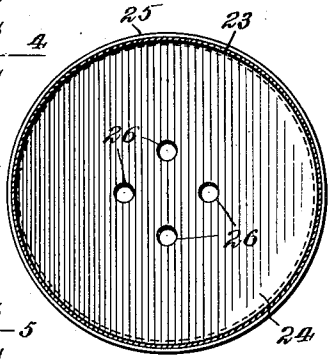


Fig. 2.

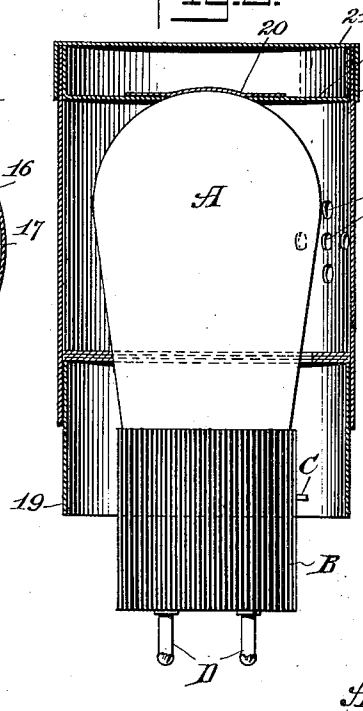


Fig. 4.

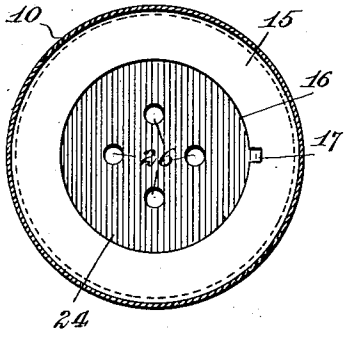


Fig. 6.

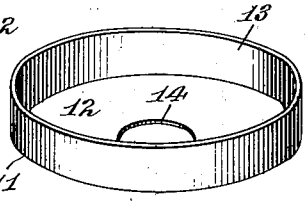
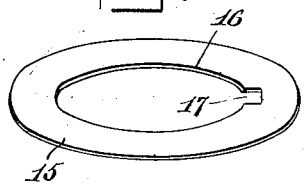


Fig. 7.



WITNESSES

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UNITED STATES PATENT OFFICE.

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NONREFILLABLE CARTON.

Application filed May 11, 1926. Serial No. 108,316.

This invention relates to containers for packaging articles of merchandise, and refers more particularly to a carton for containing radio tubes or analogous articles, the outstanding object being to provide a carton which prevents refilling without detection once the original content is removed.

The invention furthermore aims to provide a non-refillable carton for radio tubes or analogous articles which admits of and faciltates the testing of the content without removal thereof or breakage of the carton seal.

The invention aims as a still further object to provide a carton especially designed for radio tubes which protects the tube against accidental breakage by suspending and disposing the same within the carton at a point out of contact with the exterior walls.

The invention aims as a still further object to provide a container or carton of the character set forth which is comparatively simple in its construction and mode of use, which is economical to produce and which is highly efficient in its purpose.

With the above recited and other objects in view, reference is had to the following specification and accompanying drawings in which there is exhibited one example or embodiment of the invention which is in no way intended as a limitation upon the scope of the appended claims as it is to be clearly understood that variations and modifications which properly fall within the scope of said claims may be resorted to when found expedient.

In the drawings—

Figure 1 is a vertical sectional view through a filled, closed and sealed carton constructed in accordance with the invention;

Fig. 2 is a similar view thereof with the removable cover displaced to facilitate the testing of the content;

Fig. 3 is a horizontal sectional view thereof approximately on the line indicated at 3—3 in Fig. 1;

Fig. 4 is a similar view with the content removed, taken approximately on the line 4—4 of Fig. 1;

Fig. 5 is a similar view taken approximately on the line 5—5 of Fig. 1;

Fig. 6 is a perspective view of the inner top sealing cap removed;

Fig. 7 is a perspective view of one of the sealing rings removed.

Referring to the drawings by characters of reference, the carton is composed of a cylindrical body 10 although it is to be understood that the same may be of any tubular formation used in its broadest sense to imply circular, square, or any other cross-sectional configuration which is practical for the purpose. The body 10 is closed at one end, which for convenience will be hereafter termed the upper end, by a cup-shaped cap 11, which includes a lower wall 12 and an annular rim or flange 13, adhesively or otherwise sealed, with the outer periphery of the flange or marginal wall 13 in contact with the inner periphery of the upper end of the body 10. The wall 12 of the cap 11 is provided with a central aperture 14.

The bulb A of the tube or other article to be contained, is inserted with its upper end slightly protruding through the aperture 14. One or more frangible rings 15, the central opening 16 of which is of a diameter to pass over the base B of the tube, are engaged over the bulb and inserted in the body 10, until the inner periphery of the ring snugly fits the periphery of the bulb A which is of gradually increasing diameters toward its upper end. The ring or rings 15 are formed with a notch 17 extending radially outward from the center opening to allow for their passage past the locking pin C of the tube base. A sealing collar 18 of a diameter and configuration to snugly fit within the lower end of the body is next inserted with its upper end underlying the ring or rings 15 and the portion of its periphery which is enclosed by the lower end of the body 10 is adhesively or otherwise sealed to the body with the remaining portion 19 projecting therefrom, to provide a reduced extremity for the reception of a removable bottom closure cap. The length of the projecting portion 19, however, is such that a considerable portion of the base B projects therebeyond so that the contacts of the base are freely exposed when the bottom cap is removed to permit of and facilitate the testing of the tube while sealed within the container body.

In order to prevent rotation of the tube, a sealing disk 20 is employed which is passed over the wall 12 and to the portion of the tube bulb A which is exposed through

the central opening 14 of the wall 12. As a further protection and seal, an inverted cup-shaped upper cap 21 is telescopically arranged over the upper end of the body 10 with its marginal or annular flange 22 adhesively or otherwise sealed in place. The bottom cover or cap consists of a tubular body portion 23 which is provided with an inner inverted cup-shaped end 24 and an outer cup-shaped end wall 25, the inner wall having apertures 26 for receiving and accommodating the contacts D of the tube. The diameter of the tubular body portion 23 of the lower removable cover or cap is such that it frictionally slips over the extending portion 19 of the collar 18. The body 10 is provided with a series of apertures 27 which permit of observation of the bulb when being tested.

In practice, the retailer may remove the removable cap and test the tube in the presence of the purchaser who may observe the reading of the testing instrument, and, at the same time, view through the openings 27 the lighted condition of the tube. The cap or cover may then be replaced and the carton dated with the understanding that the tube in no event may be returned by the purchaser after a given length of time, and, of course, it being understood that the same under no circumstance is permitted to be returned if removed from the carton body. It is obvious that in order to remove the tube, the upper sealed end or the frangible rings must be broken, and it is obvious that the same cannot be refilled without detection.

It will be noted that three rings 15 have been illustrated and this has been done for the reason that a single frangible ring is not sufficiently strong to support and suspend the tube in place; whereas a single ring of the desired thickness would not be sufficiently frangible to permit of the ready breaking of the seal at this point.

It will further be observed that the double top and bottom walls of the carton together with the rings 15 dispose the tube in a position where it will be out of contact with any of the exterior surfaces of the carton so that the possibility of accidental breakage is reduced to an absolute minimum.

From the foregoing it will thus be seen that a carton which is ideal as a container for radio tubes has been devised especially as a means for protecting the retailers against the promiscuous return of tubes which have been used. The carton also serves as a means for protecting the purchaser against the substitution of inferior tubes on the part of unscrupulous retailers, and in addition to this a simple and efficient package has been devised for containing radio tubes or other similar articles of merchandise.

What is claimed is:

1. In a container for radio tubes and the like, a body, frangible means for sealing and suspending the bulb portion of the tube within the body, said body having an open end from which the base portion and contacts of the tube project for permitting of and facilitating the testing of the tube, and an unsealed protective cover removably associated with the open end, said cover including outer and inner end walls, the latter spaced from the former a distance greater than the length of the contact and formed with apertures for receiving therethrough and spacing said contacts from the outer end wall thereof.

2. In a carton for radio tubes, a body defining a compartment for housing and protecting the bulb portion, frangible means for sealing and suspending said bulb portion out of contact with the outer walls of the body proper, said body having an open end from which the base portion and contacts of the tube are exposed whereby to permit of and facilitate testing of the tube without disturbing the sealed housed condition thereof, and a removable cover for the open end of the body including an outer wall and means within the cover for engaging and supporting the contact elements in suspended relation and out of contact with the outer wall of the cover.

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