Oct. 7, 1941. W. L. RUTKOWSKI 2,257,919

CONTAINER

Filed Nov. 14, 1938

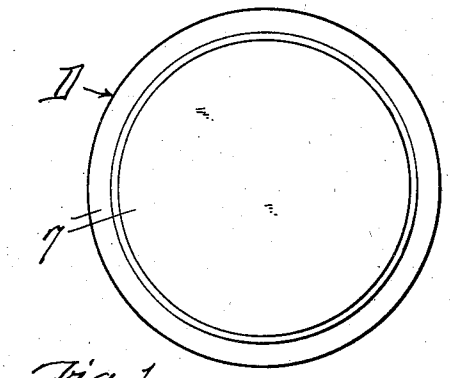


Fig. 1.

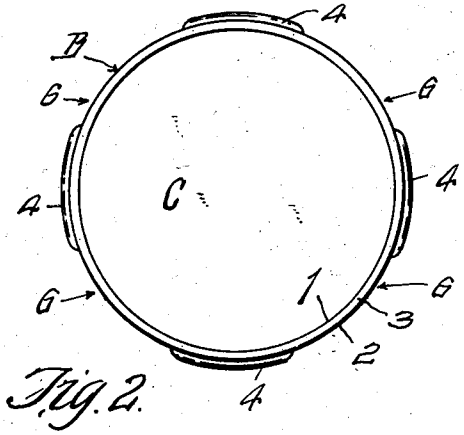


Fig. 2.

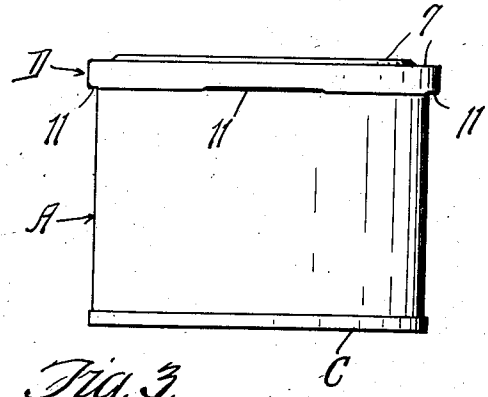


Fig. 3.

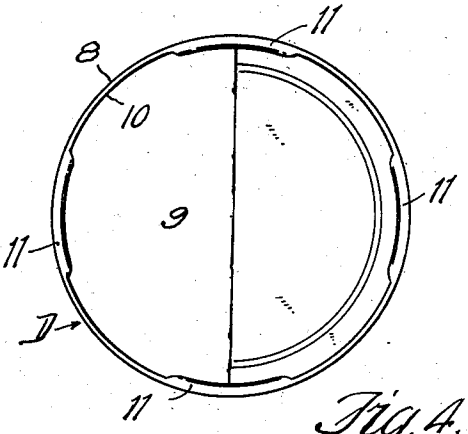


Fig. 4.

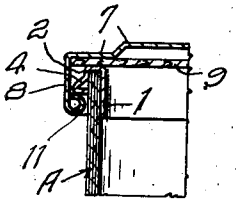


Fig. 5.

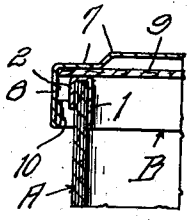


Fig. 6.



Fig. 7.

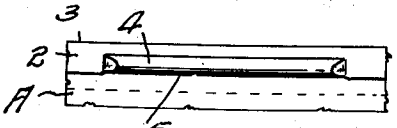


Fig. 8.

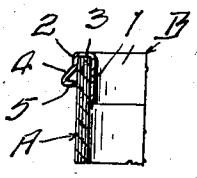


Fig. 9.

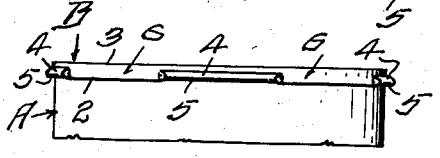


Fig. 10.

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2,257,919

CONTAINER

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Application November 14, 1938, Serial No. 240,334

2 Claims. (Cl. 229—5.7)

This invention relates, generally, to the container art, and more particularly to a top closure for combined metal and paper containers.

The object of the present invention is to provide a top closure for container bodies, which can be applied to, and removed from the open top end of the container body with extreme readiness.

A further object of the invention is to provide friction connecting means between a skirt on the top closure and a reinforcing ring secured to the open top edge portion of the container body to firmly hold the closure upon and to the reinforcing ring.

A still further object of the invention is a means of the character described, in which the removal of the closure from a container body will not serve to damage the friction connection means, or interfere with the replacement of the closure after removal from the container body.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be clearly apparent from the foregoing description of the preferred form of the invention, which is illustrated in the drawing accompanying and forming a part of this specification.

Referring to the drawing:

Fig. 1 is a top plan view of a container embodying the features of the invention.

Fig. 2 is a top plan view of the container body with the top closure therefor removed, clearly showing the shouldered reinforcing ring for the top edge of the container body.

Fig. 3 is a side elevation of the container showing the top closure in position.

Fig. 4 is a bottom plan view of the removable top closure, a paper packing disk therein being partly broken away.

Fig. 5 is an enlarged detail, in vertical sectional elevation, taken on a line through one of the shoulders on the friction ring and one of the curled lips on the top closure.

Fig. 6 is an enlarged detail, in vertical sectional elevation, taken on a line through the reinforcing ring and the skirt of the closure intermediate the shoulder on the reinforcing ring.

Fig. 7 is a detail, in inside elevation, of a section of the closure showing one of the curled friction lips.

Fig. 8 is an enlarged detail of a portion of the reinforcing ring showing one of the elongated shoulders in front elevation.

Fig. 9 is a detail, in vertical sectional elevation through one of the friction shoulders formed on the reinforcing ring.

Fig. 10 is a side elevation of the shouldered reinforcing ring on the upper end of a paper container body.

Referring to the drawing, the reference character A designates a suitable container body, preferably cylindrical in form, and made from suitable paper material, as is well known in the art of paper can manufacture.

The reference character B designates, generally, a reinforcing ring formed of thin sheet metal which is secured to the open top end of a container body. The lower end of the body A is closed by means of a sheet metal closure C suitably and permanently secured to the body A.

The reference character D designates, generally, a sheet metal closure for the ring reinforced open top edge portion of the container body A.

The reinforcing ring B is channeled, or substantially U-shaped, in cross-section, and is secured to the upper end portion of the container body A by crimping the same thereto. The channeled ring B provides an inner wall portion 1 which engages the inner surface of the container body A, and an outer wall portion 2, which engages the outer wall surface of the container body A. The channel between the inner wall portion 1 and outer wall portion 2 provides a pocket to receive the upper end portion of the container body A. The upper portion of the ring, which unites the two wall portions 1 and 2, serves to provide a metal seat 3 for the removable closure D for the upper open end of the container body A.

A plurality of spaced elongated protuberances forming shoulders 4 and having lower horizontal friction surfaces 5 project outwardly from the surface of the outer wall portion 2 of the reinforcing ring B, thereby leaving a gap or space 6 between the ends of each shoulder 4.

The closure member D for the open top end of the container body A, comprises a thin sheet metal body, or top portion 7 and a skirt portion 8. A central part of the top or body portion 7 of the closure D is shown as depressed upwardly to form a dome shaped closure, although not necessarily so. A suitable packing disk 9 is disposed within the closure member D, although the packing member 9 can be eliminated, if desired. The lower edge portion of the skirt is folded inwardly and upwardly to lie against the inner face of the skirt portion 8, at spaced intervals, as at 10. The remaining spaced portions of the skirt fold

are curled inwardly to form a plurality of tubular lips 11 having suitably shaped upper friction surfaces 12 and with the ends of the upper surfaces 12 suitably inclined, as at 13, to facilitate the application of the closure member D to the reinforcing ring B for closing the open upper end of the container body A.

In applying the closure member D to the reinforcing ring B, the closure is so initially positioned thereon as to cause the curled lips 11 to register with the gaps, or spaces 6 between the ends of each pair of ring shoulders 4. When the closure member D has been thus positioned to rest upon the ring seat 3, the operator turns the closure member D by hand, in either direction, causing the skirt lips 11 to climb the lower friction surfaces 5 of the ring shoulders 4, thereby drawing or pulling the disk packing 9 mounted within the closure member tightly into intimate contact with the seating surface 3 of the reinforcing ring B and holding the closure member D securely in position on the seating ring to close the open top of the container body A.

The ring shoulders 4 and the closure skirt lips 11 tend to hold the closure member against accidental rotary displacement upon the reinforcing or seating ring B, due to frictional contact of the upper friction surfaces 12 of the elongated closure skirt lips 11 with the lower friction surfaces of the elongated circumferentially aligned ring shoulders 4. To remove the closure member from the container body A, one merely turns the closure member in either direction to bring the skirt lips 11 in register with the gaps or spaces 6 between the ends of the ring shoulders 4, and then lifts the closure member D upwardly from seating position on the reinforcing and seating ring B.

It is to be understood that the upper and lower surfaces of the rolled skirt lips 11 may be parallel with each other, if so desired, instead of the upper surface 12 being slightly inclined from one end to the other, as shown in Fig. 7, or, is desired, when the upper and lower surfaces of the rolled skirt lip 11 are parallel with each other the lower surface of the ring protuberances 4 can be slightly inclined. However, in either instance, the closure is held firmly in position and against accidental rotary displacement thereon by frictional contact of the upper surface 12 of the skirt lip 11 with lower surface 5 of the ring protuberance 4, and the closure can be quickly and easily applied to and removed from the reinforcing ring by hand.

The many advantages of the herein described invention will readily suggest themselves to those skilled in the art to which the invention appertains.

From the foregoing description, it is evident that a simple device for this purpose has been disclosed, but it is to be understood that I do not desire to restrict, or limit myself to the very details of the construction shown and described, which is merely illustrative, it being obvious that changes, not involving the exercise of invention, may be made without conflicting or departing from the spirit of the invention within the scope of the appended claims.

What I claim is:

1. A container having, in combination, a tubular paper body, a sheet metal closure secured to the lower end of the body for closing the same, a channeled sheet metal ring secured to the upper edge of the body, elongated protuberances struck outwardly from the outer wall of the channeled ring and spaced from each other, a removable sheet metal top closure, said closure having a skirt flange, said flange having an inwardly rolled lower edge, and said rolled edge being flattened out at spaced intervals corresponding to the elongated protuberances and of a length at least equal to the length of the corresponding protuberances to facilitate seating of the top closure upon the sheet metal ring and removal therefrom, and to allow the closure to be turned in either direction to frictionally lock the curled edge portions of the skirt to the elongated protuberances on the channeled ring.

2. A container having, in combination, a tubular body of paper material, a sheet metal reinforcing ring having inner and outer walls engaging the upper end of the body, a plurality of spaced elongated protuberances struck outwardly from the outer wall of the ring and forming spaces between the ends of the protuberances, a removable top closure for said container adapted to seat upon said ring, the top closure having a skirt provided with an inwardly rolled lower edge with portions of the rolled edge flattened out at spaced intervals against the skirt to provide a double walled skirt at such intervals, said flattened out portions corresponding to the elongated protuberances and of a length at least equal to the length of the corresponding protuberances for locking the top closure to the ring upon partial rotation of the top closure.

WALTER L. RUTKOWSKI.