Jan. 23, 1923. 1,443,043

W. H. ROSE.
PACKAGE CLOSURE.
ORIGINAL FILED FEB. 17, 1920. 2 SHEETS-SHEET 1

FIG. 1.

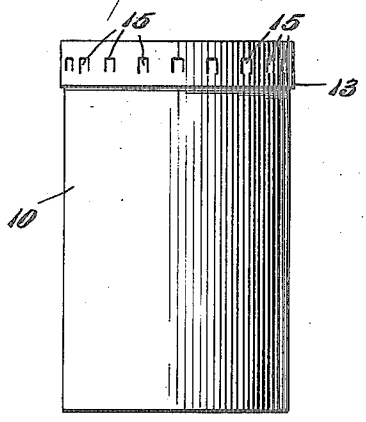
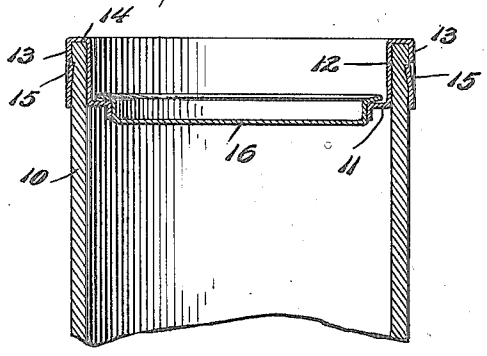


FIG. 2.



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FIG. 3.

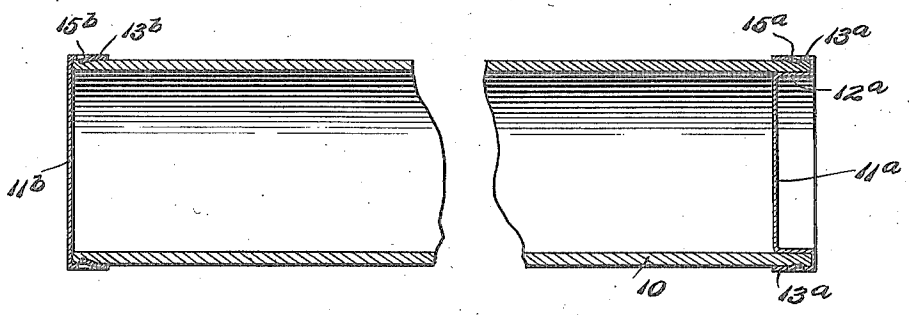
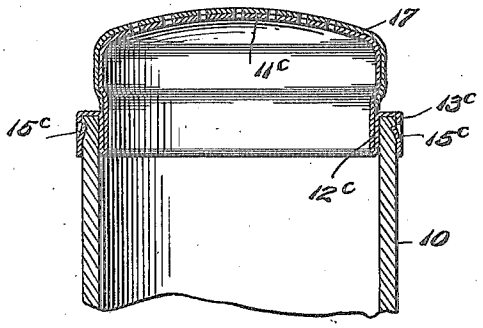


FIG. 4.



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Patented Jan. 23, 1923. 1,443,043

UNITED STATES PATENT OFFICE.

WILLIAM H. ROSE, OF JERSEY CITY, NEW JERSEY.

PACKAGE CLOSURE.

Original application filed February 17, 1920, Serial No. 354,890. Divided and this application filed November 5, 1920. Serial No. 421,933.

To all whom it may concern:

Be it known that I, WILLIAM H. ROSE, a citizen of the United States, and residing at Jersey City, Hudson County, State of New Jersey, have invented certain new and useful Improvements in Package Closures, of which the following is a specification.

This invention relates to closures for receptacles made of paper or other fibrous material.

It is the object of the invention to provide a metal closure which can be easily and quickly applied to a paper or other similar receptacle without the use of tools or machinery involving complicated mechanical operations and one which when in position will be firmly secured to the body of the receptacle and practically non-removable without destruction of the receptacle itself. The invention viewed in a more limited aspect further aims to provide a closure which is so shaped as to support the wall of the receptacle against inward pressure so that crushing or mutilation of the receptacle at the ends thereof is prevented. Other novel and valuable features of the invention will hereinafter appear.

The invention may be embodied in closures which differ in form and which are capable of use in different relations and for different purposes. In the drawings accompanying this specification and forming a part thereof I have, therefore, illustrated the invention applied to various forms of receptacles and closures. In the drawings:

Fig. 1 is a view in elevation showing the closure applied on one end of a paper bottle, carton or the like;

Fig. 2 is a vertical sectional view of the device of Figure 1 showing the construction of one form of my improved closure and its relation to the part of the receptacle to which it is applied;

Fig. 3 is a sectional view showing my improved closure applied to both ends of a tubular receptacle, such for example, as a mailing tube, this figure illustrating different forms of closure on the two ends of the receptacle;

Fig. 4 is a vertical sectional view of a portion of a container showing a further modified form of my improved closure.

Referring to the drawings in detail the numeral 10 represents in each of the figures the body of the receptacle to which the closure is applied, such body being made of paper or other fibrous material and having a straight wall to receive the closure or closures applied thereto. The body of the receptacle, as shown in the various figures of the drawing, is made cylindrical although other shapes of body may be employed.

In the construction illustrated in Figures 1 and 2 the numeral 11 generally designates the main body or central portion of the closure which is formed with an opening in which a removable friction cover 16 is inserted. Around the central portion 11 in this form of my improved closure there is provided an inner wall 12 and an outer wall or flange 13, these walls being preferably of substantially the same length and extending some distance beyond the plane of the central portion 11 of the closure. The walls 12 and 13 are arranged substantially parallel and are spaced apart by the connecting portion 14 of the closure a distance substantially equal to or only slightly less than the thickness of the wall of the receptacle. The wall 13 of the closure is provided with a series of prongs or projections 15 preferably made by striking up or indenting the material of the wall, such prongs pointing toward the base of the flange 13 or toward the bottom of the pocket formed between the walls 12 and 13. The prongs are bent inwardly or toward the wall 12 to a slight extent so that they will be compelled to engage and embed themselves in the material comprising the wall of the receptacle when the closure is forced into position.

In Figure 3 of the drawing there is shown a receptacle having my improved closures applied to each end thereof, such arrangement being useful in mailing tubes or any other construction where it is desired to apply both a top and a bottom to a paper tube. Different forms of closure are shown at the two ends of this figure, it being evident of course, that any of the various forms of closures herein illustrated may be used on the ends of the tube shown in this figure. The closure shown at the right hand portion of Figure 3 is substantially the same as that illustrated in Figure 2, except that the central portion 11^a thereof is not provided with an opening. This closure is provided with an inner wall 12^a and an outer wall 13^a, the latter having on its inner surface prongs 15^a substantially the same as shown in Figure

2. The form of closure shown at the left hand portion of Figure 3 comprises a body or central portion 11^b which is provided with a wall or flange 13^b similar to the wall 13 shown in Figure 2, this wall 13^b being provided on its inner surface with projections 15^b substantially the same as those shown in the other form of the invention. In this form of closure I dispense with the inner flange or wall such as that shown at 12 in Figure 2.

In the form of device shown in Figure 4, the central portion 11^c of the closure extends outwardly to form a dome-shaped portion and this portion is provided with a movable cover 17, the parts 11^c and 17 being provided with a series of openings which may be caused to register by rotating the cover 17 upon the part 11^c. This construction provides a sifter top for the receptacle. In this form of device the closure is also provided with an inner wall 12^c and an outer wall 13^c between which there is formed a pocket for the reception of the end of the receptacle, the outer wall 13^c being provided with prongs 15^c which are adapted to embed themselves in the wall of the receptacle and prevent removal of the closure thereform.

It is apparent that my improved closure can be easily applied to a paper receptacle by merely forcing the closure on the receptacle. No tools or machinery are necessary for this operation, and it is further apparent that when employed in the form shown in Figures 2 and 4 and at the right hand portion of Figure 3, the wall of the receptacle will be braced against external pressure so that crushing or mutilation of the same will not take place.

Furthermore it will be understood that the various forms of my improved closure when applied to a receptacle will be firmly secured thereto, this result being accomplished in each case by the prongs on the outer wall or flange engaging and embedding themselves in the material forming the wall of the receptacle. A closure constructed in either of the ways above described will, therefore, be practically nonremovable when once applied to a receptacle since it becomes necessary to tear or mutilate the paper of the receptacle in order to detach the closure therefrom. On account of this secure fastening of the closure to the receptacle, my improved device is of value where a permanent closure is desired for a paper receptacle with or without an opening, and also where as shown in Figure 4, it is desired to provide a closure which will permit use of the contents of the receptacle and at the same time prevent refilling of the same.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

1. A construction of the kind described comprising a receptacle having a straight wall of paper or other fibrous material, a nonremovable metallic closure therefor having a body portion and a straight flange integral with the body portion, said flange being shaped to surround and closely fit said wall, said flange having a series of integral projections on the inner surface thereof extending toward the base of the flange for engaging in the material of the wall and permanently holding the closure in position when forced on the receptacle.

2. A receptacle having an opening surrounded by a straight wall composed of fibrous material, a metallic closure mounted in said opening, said closure having a central portion lying within the wall of the receptacle, a straight wall on said closure extending outwardly from the central portion thereof and contacting with the inner wall of the receptacle, an outer straight wall or flange on said closure spaced from the inner wall thereof and engaging the outer wall of the receptacle, whereby a pocket is formed between the walls of said closure in which the wall of the receptacle is inserted and held, one of the walls of said closure having a series of integral prongs extending toward the bottom of said pocket for engaging in the fibrous material forming the wall of the receptacle to prevent removal of the closure from the receptacle.

In testimony whereof I affix my signature.

WILLIAM H. ROSE.