W. W. ANDERSON.

DETACHABLE CLOSURE.

APPLICATION FILED JAN. 27, 1909.

947,144. Patented Jan. 18, 1910.

FIG. 1.

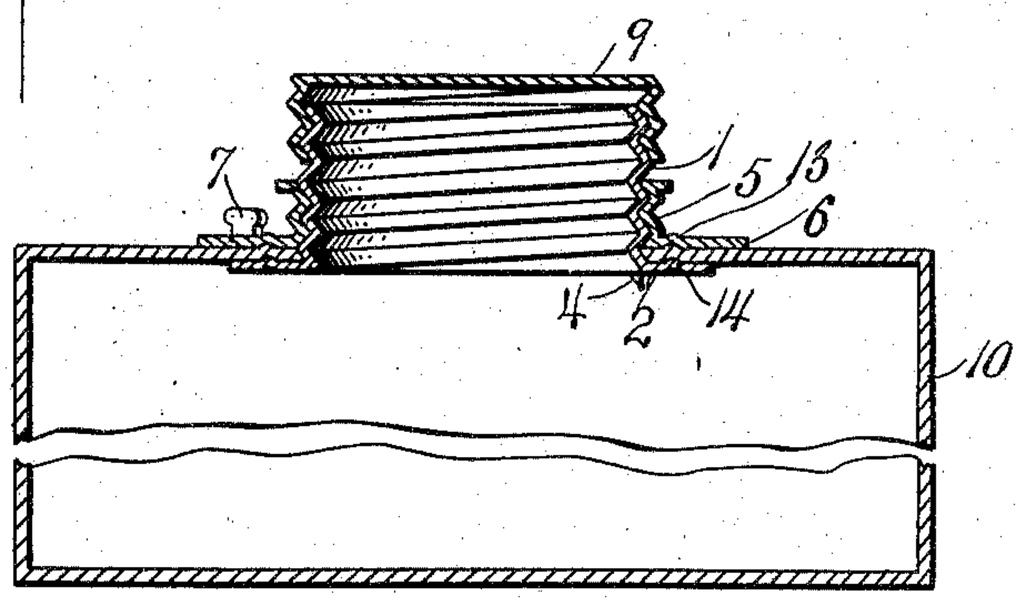


FIG. 2.

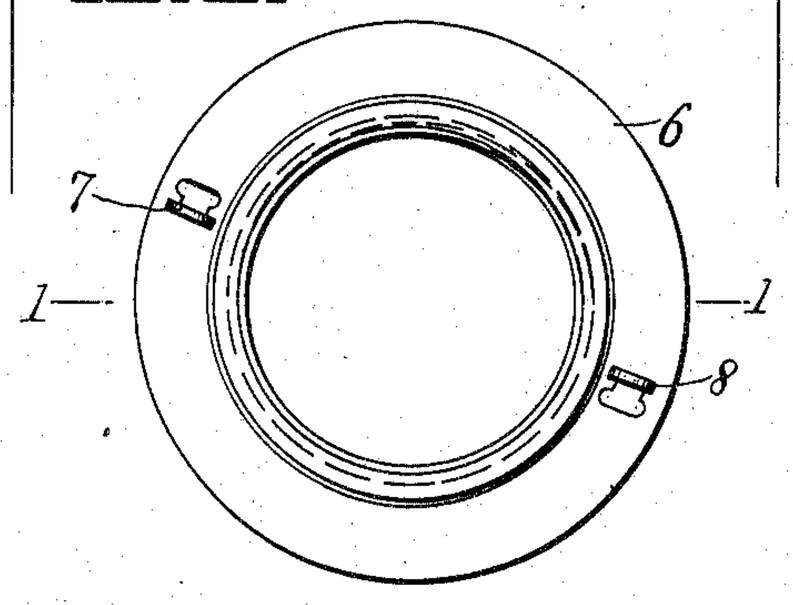


FIG. 3.

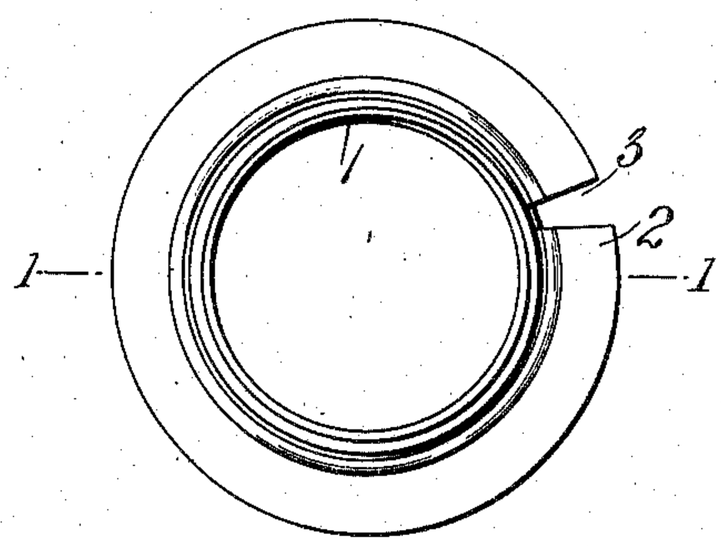


FIG. 4.

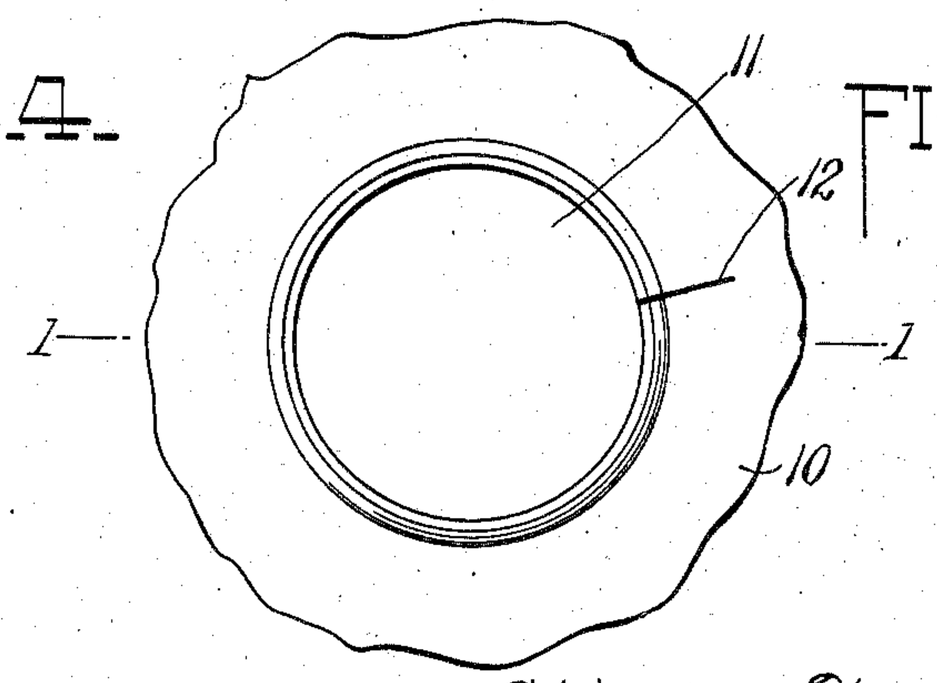
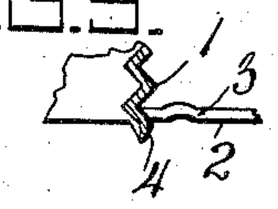


FIG. 5.



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UNITED STATES PATENT OFFICE.

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DETACHABLE CLOSURE.

947,144. Specification of Letters Patent. **Patented Jan. 18, 1910.**

Application filed January 27, 1909. Serial No. 474,604.

To all whom it may concern:

Be it known that I, WILLIAM W. ANDERSON, a citizen of the United States, residing at Ashland, in the county of Boyd and State of Kentucky, have invented certain new and useful Improvements in Detachable Closures, of which the following is a specification.

This invention relates to a closure for receptacles but particularly to one adapted to be utilized in connection with paper boxes and the like, as for example, the kind in which "breakfast foods" and similar material are packaged.

One object of the invention is to provide a closure which may be conveniently attached to a paper or board box by making a suitable opening in said box or the attachment being such that the closure may be conveniently removed for attachment to another box or receptacle.

Another object of the invention is to provide means whereby a cutting edge may form part of the closure to cut an opening of appropriate size so that the closure may be received.

It is also the purpose of this invention to provide means whereby that portion of the paper box surrounding the opening may be clamped between two members carried by the closure so that the liability of the closure becoming accidentally detached will be avoided.

In the drawings illustrating one embodiment of my invention, Figure 1 is a vertical longitudinal sectional view through the box or receptacle to which a closure constructed in accordance with my invention is applied. Fig. 2 is a plan view of a clamping ring. Fig. 3 is a similar view of the throat member. Fig. 4 is a fragmentary plan view of a portion of the receptacle to receive the closure and Fig. 5 is a fragmentary sectional view of the throat member illustrating the cutting edge.

Referring now to the drawings by numerals of reference 1 designates a throat member provided with spiral corrugations or threads on the exterior thereof. At the base of the throat member 1 is a circumferential flange 2 having a notch or slit 3 therein which may be formed by cutting out a portion of the metal along the edges of the slit and then bending it down in a form of a tine or projection 4 having a cutting edge, the purpose of which will be specifically described hereinafter.

5 designates a clamping ring or collar having corrugations corresponding to those on throat 1 and adapted to engage the threads thereof whereby said ring may be screwed on to said throat 1. The ring 5 is provided with a circumferential flange 6 which when in its clamped position will be approximately parallel with the flange 2 on the throat 1. For convenience in screwing the ring 5 onto and unscrewing it from the throat 1, I may provide projections 7 and 8 in the flange 6. These projections may be struck up from the flange 6, as shown in Fig. 2.

9 is a cap or cover adapted to be screwed onto the throat 1 to exclude air and moisture from the receptacle.

The receptacle 10 is shown in Fig. 4 as being provided with an annular opening 11, the edge surrounding the opening 11 being inserted by the transverse slit 12. The diameter of the flange 6 is such that it will overlap the notch 12 in the receptacle 10, as will be clear by reference to Figs. 1 and 2.

As heretofore stated, the paper box or receptacle will ordinarily be sealed and instead of breaking the seal in the usual manner, the operator may press the tine 4 through the wall of package at any convenient place and by rotating the throat a circle may be scribed upon the package or a disk entirely cut therefrom of a size approximately the size of the throat but the diameter of which will be less than the diameter of the flange 2. A slit of appropriate length as shown at 12, may then be cut in the wall of the receptacle and one of the edges of the notch 3 may then be inserted through the slit 12 so that by turning the throat member the entire flange 2 may pass through said slit 12 and lie against the inner side of the wall of the receptacle 10. The clamping ring may then be screwed upon the throat so that the wall of the receptacle will be securely clamped between the flange 2 of the throat 1 and the flange 6 of the ring 5 in which position the closure will be securely held until it is necessary or desirable to remove it.

The cap 9 may be applied and removed without in any way affecting the attachment of the closure to the receptacle. If it is found desirable, grooves or recesses 13 and

14 may be formed in the flanges 6 and 2 respectively so as to crimp the wall of the receptacle when the two flanges are in clamping position and so as to prevent slipping of the flanges on the receptacle wall when the ring 5 is screwed into position. Ordinarily, however, these grooves or recesses may be dispensed with.

It is obvious that the closure may be readily attached to and detached from the box and that it may be repeatedly used without affecting its efficiency.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent is:—

1. The combination with a receptacle, of a detachable closure therefor, comprising a throat, means carried by the throat for perforating and effecting its application to the receptacle, and means for clamping the throat to said receptacle.

2. The combination with a receptacle, of a detachable closure therefor, comprising a throat having a lateral flange, means carried by the throat for perforating and effecting the application of the flange within the receptacle, means for clamping the throat in applied position, and a cap to fit on said throat.

3. The combination with a receptacle, of a detachable closure therefor, comprising a throat, a lateral flange carried by the throat and having means for perforating the receptacle whereby to attach the closure thereto said flange being of greater diameter than the perforation, and means for clamping the flange to the receptacle.

4. A detachable closure for receptacles comprising a throat provided with a flange having a slit adapted to permit the insertion of the flange within a receptacle, and means to secure the closure to the receptacle.

5. In a detachable closure for receptacles, a throat member having a flange, means carried by the closure proper for perforating a receptacle and inserting the flange therein, and a collar movable over the throat and adapted to clamp said closure to the receptacle.

6. In a detachable closure for receptacles, a throat member having screw threads, a notched flange on said throat adapted to permit the application of the closure to a receptacle, and a clamping collar threaded on said throat and adapted to secure the closure in position.

7. A detachable closure for receptacles comprising a throat having a lateral flange with a cutting edge struck therefrom, and adapted to cut in a receptacle an opening of less diameter than the flange, said flange adapted to be inserted in said opening, and means for securing the closure in applied position.

8. A detachable closure for receptacles comprising a throat, a flange on the throat having means whereby said flange may be inserted within an opening in a receptacle of less diameter than said flange, and a clamping member to fit over the throat and provided with a flange to overlap the flange to be inserted.

The foregoing specification signed at Ashland, Ky., this fifteenth day of December, 1908.

WILLIAM W. ANDERSON.

In presence of—
T. RUSSELL MOATS,
JAS. G. SEREY.