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W. H. ROSE

1,970,709

CONTAINER CLOSURE

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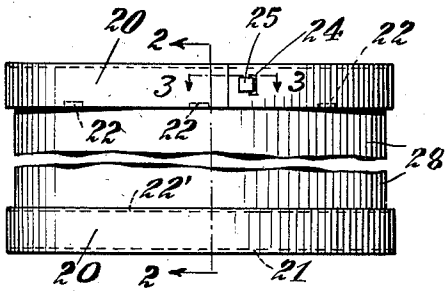


Fig. 1.

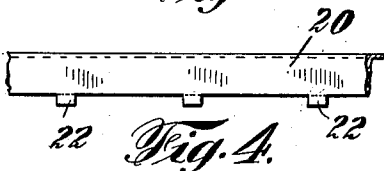


Fig. 4.

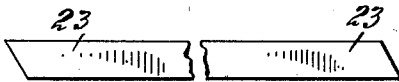


Fig. 5.

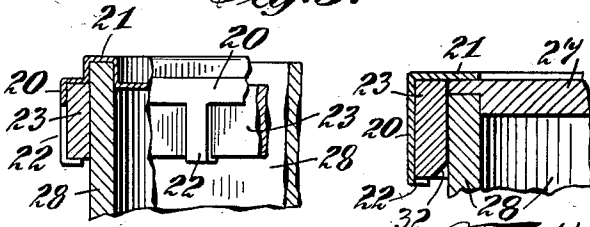


Fig. 6.

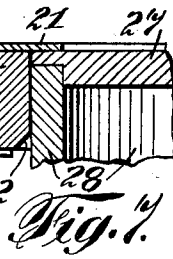


Fig. 7.

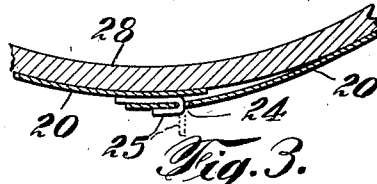


Fig. 3.

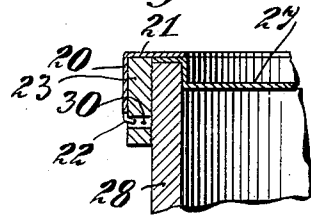


Fig. 8.



Fig. 9.

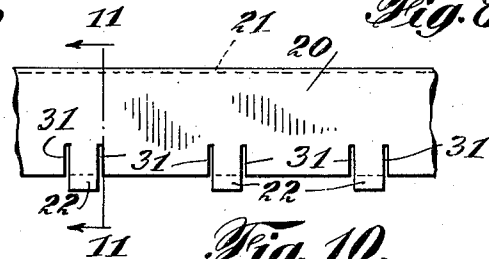


Fig. 10.

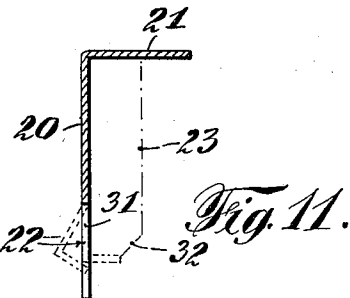


Fig. 11.

INVENTOR-
William H. Rose
BY
Nathan Freeman
Attorney-

UNITED STATES PATENT OFFICE

1,970,709

CONTAINER CLOSURE

William H. Rose, Jersey City, N. J.

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12 Claims. (Cl. 229—5.7)

My invention relates to container closures and refers particularly to container closures adapted for the economic and effective closure of containers coupled with ease of removal from the container without injuring the latter, or of hermetically sealing the container.

Among the properties which should be possessed by a successful closure for containers are low cost of production of the closure, possibility of shipment of the closures without shipment of the containers, replacement by a new closure when the used one has been removed, ease of application to the container, the production of a perfect and strong sealing of the container, ease of removal in order to obtain access to the contents of the container, non-destruction of the container during both attachment and removal of the closure, and the ability to readily re-seal the container after the closure has been removed.

A consideration of the closure of my invention illustrates that it possesses all of the above, and other, valuable attributes.

The greater number of practical closures includes means for puncturing the sides of the container in order to affix the closure thereto, a disadvantage not possessed by my closure which is attached to the outer face of the container with the necessity of puncturing devices.

Many closures consist of two or more, separate elements, a disadvantage which is overcome by my closure, which can be employed as a single unit.

Further, in the employment of many closures, the container is ruptured, or torn, during the removal of the closure, thus rendering it useless for further perfect sealing, a disadvantage not present in the use of my closure.

The removal of many closures requires the employment of special tools, the closure being rendered impossible of re-use after removal, while my closure can be readily removed by an ordinary tool and is capable of re-use by the simple replacement of a new, inexpensive packing, or attaching element.

The above are mentioned as only a few of the advantages possessed by my closure and which are not present in many of the closures now known.

In a broad way, my closure consists of an element extendible downwardly along the outer face of the upper portion of containers, and spaced therefrom, and an attaching element carried by the downwardly extended element within the space between it and the container and capable of being attached to the container, the upper portion of the downwardly extended element ex-

tending over the container cover, or being itself a cover for the container.

A consideration of my specification and its accompanying drawing will indicate its construction and the valuable features incident to its employment.

In the accompanying drawing, illustrating modified forms of the device of my invention, similar parts are indicated by similar numerals.

Figure 1 is a side view of one form of the device of my invention.

Figure 2 is a broken section through the line 2—2 of Figure 1.

Figure 3 is a broken section through the line 3—3 of Figure 1.

Figure 4 is a broken development of the dependent element of Figure 1.

Figure 5 is a broken development of the attaching element of Figure 1.

Figure 6 is a broken vertical sectional view of a modified form of my device.

Figure 7 is a broken vertical sectional view of a modified form of my device.

Figure 8 is a broken vertical sectional view of a modified form of my device.

Figure 9 is a broken development of a modified form of my attaching element.

Figure 10 is a broken development of a modified form of my dependent element.

Figure 11 is a vertical section illustrating the means of employing the devices shown in Figures 9 and 10.

The device shown in Figures 1, 2, 3, 4 and 5, consists of an annular dependent member 20, the upper portion 21 of which is turned inwardly forming an annular flange. The lower portion of the member 20 carries a plurality of tongues 22, 22 which are bent inwardly. Within the device, and supported therein by the top element 21 and the tongues 22, 22 is an annular sheet of a paper, fibrous or other pliable material 23. The elements 20 and 21 may be a continuous ring, the ends of which are fixedly attached to each other as by welding or otherwise, or it may be a strip of material formed into an annular shape capable of disconnection. One method of thus forming a disconnectible member is shown in the drawing, in which one end portion of the material has an opening 24, through which the prong 25 of the other end portion may be inserted and bent to form a connection between the two end portions.

The attaching member 23 may be of one continuous annular piece, or it may be a non-con-

tinuous piece laid within, and maintained within the device.

The upper inner edge 26 of the attaching member 23 is beveled for purposes described later.

The method of application is as follows:—

The lid 27 of the container 28 is placed thereon. A coating of a cementitious material is placed upon the inner face of the attaching element 23, or upon the outer face of the upper portion of the container wall 28, or both, the container being preferably of compressed paper, cardboard, fiber or wood, and the closure forced downwardly, pressing the cover 27 firmly in sealing position and retained in that position until the attaching member 23 is fixedly attached to the side wall of the container 28. It is preferred, of course, that the inside diameter of the closure device be such as to cause the attaching element 23 to abut with some pressure upon the wall of the container, a condition easily accomplished by the compressibility of the attaching member.

In order to remove the closure, it is simply necessary to bend the tongues 22, 22 downwardly, as shown in dotted lines in Figure 2, and then remove the unattached element 20—21, which allows of the removal of the lid, or cover, 27.

It is evident that the element 20—21 can be reused for sealing purposes, by placing a new annular member 23 therein and bending up the tongues 22, 22.

It is also evident that the opened container can be again sealed by carefully removing the attached annular member 23 and employing my device.

In sealing the bottom of the container, a similar device can be employed, except that the beveled edge 26 of the attaching member 23 should be omitted, thus attaching the member 23 to both the container bottom 29 and the container wall 28, the member 22' being of band formation.

In the modification of my device shown in Figure 6, the dependent member 20 is narrower and the tongues 22, 22 are longer than these elements previously described, thus allowing of more ready bending of the tongues for purposes of removal, and the member 21 is itself a lid, or cover, for the container.

In the modification shown in Figure 7, the attaching member 23 is beveled at its lower inside edge 32, to allow of the more ready placement of the closure upon the container.

In the modification shown in Figures 8 and 9, the dependent element 20 has a plurality of openings 30, 30, into which the tongues 22, 22 may be inserted.

In the modifications shown in Figures 10 and 11, the dependent element has slits 31, 31 upon each side of each tongue 22, thus making the tongues longer without extending it further below the edge of the attaching member, and increasing the ease of removal of the closure.

While I have shown and described the device of my invention as applied to an annular container, it is evident that it is applicable to other shaped containers, as square or of other angular forms.

I have thus shown and described the device of my invention, from which its many advantageous attributes are evident.

I do not limit myself to the particular size, shape, number, arrangement or material of the elements of my device as shown and explained as these are given simply as a means for clearly describing my invention.

What I claim is:—

1. In a container closure, in combination, a dependent member, an inwardly extended flange carried by the upper portion of said dependent member, a plurality of tongues carried by said dependent member capable of being bent inwardly and outwardly, an annular attaching member which is uncompressed when the device is attached to a container carried by said device when said tongues are bent inwardly, the width of said attaching member being approximately the same as the width of its carrying member and a cementitious material adapted to cement said attaching member to the outer face of a container upon which it is positioned.

2. In a container closure, in combination, a dependent member, an inwardly extended flange carried by the upper portion of said dependent member, a plurality of tongues carried by said dependent member capable of being bent inwardly and outwardly, an annular attaching member which is uncompressed when the device is attached to a container carried by said device when said tongues are bent inwardly, and capable of being removed from the other elements of the closure when said tongues are removed from said inwardly bent position, the width of said attaching member being approximately the same as the width of its carrying member and a cementitious material adapted to cement said attaching member to the outer face of a container upon which it is positioned.

3. In a container closure, in combination, a dependent member, an inwardly extended flange carried by the upper portion of said dependent member, a plurality of tongues carried by the lower portion of said dependent member capable of being bent inwardly and outwardly, an annular attaching member which is uncompressed when the device is attached to a container carried by said device when said tongues are bent inwardly, the width of said attaching member being approximately the same as the width of its carrying member, and a cementitious material adapted to cement said attaching member to the outer face of a container upon which it is positioned.

4. In a container closure, in combination, a dependent member, an inwardly extended flange carried by the upper portion of said dependent member, a plurality of tongues carried by the lower portion of said dependent member capable of being bent inwardly and outwardly, an annular attaching member which is uncompressed when the device is attached to a container carried by said device when said tongues are bent inwardly and capable of being removed from the other elements of the closure when said tongues are removed from said inwardly bent position, the width of said attaching member being approximately the same as the width of its carrying member, and a cementitious material adapted to cement said attaching member to the outer face of a container upon which it is positioned.

5. In a container closure, in combination, a dependent member, an inwardly extended flange carried by the upper portion of said dependent member, a plurality of tongues carried by said dependent member capable of being bent inwardly and outwardly, a fibrous annular attaching member which is uncompressed when the device is attached to a container carried by said device when said tongues are bent inwardly, the width of said attaching member being approxi-

mately the same as the width of its carrying member, and a cementitious material adapted to cement said attaching member to the outer face of a container upon which it is positioned.

5 6. In a container closure, in combination, a
dependent member, an inwardly extended flange
carried by the upper portion of said dependent
member, a plurality of tongues carried by said
dependent member capable of being bent inward-
10 ly and outwardly, a fibrous annular attaching
member which is uncompressed when the device
is attached to a container carried by said device
when said tongues are bent inwardly and capable
of being removed from the other elements of the
15 closure when said tongues are removed from said
inwardly bent position, the width of said attach-
ing member being approximately the same as the
width of its carrying member and a cementitious
material adapted to cement said attaching mem-
20 ber to the outer face of a container upon which
it is positioned.

7. In a container closure, in combination, a dependent member, an inwardly extended flange carried by the upper portion of said dependent member, a plurality of tongues carried by the lower portion of said dependent member capable of being bent inwardly and outwardly, a fibrous annular attaching member which is uncompressed when the device is attached to a container carried by said device when said tongues are bent inwardly, the width of said attaching member being approximately the same as the width of its carrying member and a cementitious material adapted to cement said attaching member to the outer face of a container upon which it is positioned.

8. In a container closure, in combination, a dependent member, an inwardly extended flange carried by the upper portion of said dependent member, a plurality of tongues carried by the lower portion of said dependent member capable of being bent inwardly and outwardly, a fibrous annular attaching member which is uncompressed when the device is attached to a container carried by said device when said tongues are bent inwardly and capable of being removed from the other elements of the closure when said tongues are removed from said inwardly bent position, the width of said attaching member being approximately the same as the width of its carrying member and a cementitious material adapted to cement said attaching member to the outer face of a container upon which it is positioned.

9. In a container closure, in combination, a dependent member, an inwardly extended container cover carried by the upper portion of said dependent member, a plurality of tongues carried by said dependent member capable of being bent inwardly and outwardly, an annular attaching

member which is uncompressed when the device is attached to a container, carried by said device when said tongues are bent inwardly, the width of said attaching member being approximately the same as the width of its carrying member and a cementitious material adapted to cement said attaching member to the outer face of a container upon which it is positioned.

10. In a container closure, in combination, a dependent member, an inwardly extended container cover carried by the upper portion of said dependent member, a plurality of tongues carried by said dependent member capable of being bent inwardly and outwardly, an annular attaching member which is uncompressed when the device is attached to a container carried by said device when said tongues are bent inwardly, and capable of being removed from the other elements of the closure when said tongues are removed from said inwardly bent position, the width of said attaching member being approximately the same as the width of its carrying member and a cementitious material adapted to cement said attaching member to the outer face of a container upon which it is positioned.

11. In a container closure, in combination, a dependent member, an inwardly extended container cover carried by the upper portion of said dependent member, a plurality of tongues carried by the lower portion of said dependent member capable of being bent inwardly and outwardly, an annular attaching member which is uncompressed when the device is attached to a container carried by said device when said tongues are bent inwardly, the width of said attaching member being approximately the same as the width of its carrying member and a cementitious material adapted to cement said attaching member to the outer face of a container upon which it is positioned.

12. In a container closure, in combination, a dependent member, an inwardly extended container cover carried by the upper portion of said dependent member, a plurality of tongues carried by the lower portion of said dependent member capable of being bent inwardly and outwardly, an annular attaching member which is uncompressed when the device is attached to a container carried by said device when said tongues are bent inwardly and capable of being removed from the other elements of the closure when said tongues are removed from said inwardly bent position, the width of said attaching member being approximately the same as the width of its carrying member and a cementitious material adapted to cement said attaching member to the outer face of a container upon which it is positioned.

WILLIAM H. ROSE.