TTAB

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Applicant: Gebr. Hoffmann AG
Serial No.: 75/545,553
Filing Date: August 31, 1998
Mark: DESIGN ONLY

Published in the Official Gazette on April 23, 2002.

02 SEP -9 PM 1:44

08-23-2002
U.S. Patent & TMOfc/TM Mail Rcpt Dt. #61

J.L. Clark, Inc.,	)	
	)	
Opposer,	)	
	)	
v.	)	Opposition No.
	)	
Gebr. Hoffmann AG,	)	
	)	
Applicant.	)	

BOX TTAB FEE
Commissioner for Trademarks
2900 Crystal Drive
Arlington, Virginia 22202-3513

NOTICE OF OPPOSITION

Opposer, J. L. Clark, Inc. ("Opposer"), an Illinois corporation maintaining a principal place of business at 923 23rd Avenue, Rockford, Illinois 61104, states that it will be damaged by the registration of the mark shown in Serial No. 75/545,553, and hereby opposes registration of the same.

The grounds for opposition are as follows:

1. Opposer is a worldwide industry leader in manufacture and sale of metal packaging including metal tins, lids, and containers. Opposer has an interest in the possibility of manufacturing and/or selling lid products having the product design of the subject application.

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2. On information and belief, Applicant filed its application to register the product design for a metal lid on the Principal Register on August 31, 1998 for goods identified as "lids for cans" in international classes 20 and 6. Said application was given the Serial No. 75/545,553 and the product design was published for opposition in the Official Gazette of April 25, 2002.

3. After noticing publication of the subject Application, Opposer timely filed requests to extend the time to file a notice of opposition until August 21, 2002. As a result, the present opposition has been timely and properly filed by Opposer.

4. The product design of the subject application, as a whole, is functional in that it is essential to the use or purpose of the product or affects the cost or quality of the product.

5. A number of utility patents in the United States and Internationally establish the functionality and the utilitarian nature of the product design at issue, including U.S. Patent No. 1,505,265 to Hothersall attached as Exhibit 1, U.S. Patent No. 1,739,759 to Hothersall attached as Exhibit 2, UK Patent No. 201,899 to Spengler attached as Exhibit 3, UK Patent No. 325,811 to Davies attached as Exhibit 4, and Swiss Patent No. 132764 to Stadler, attached as Exhibit 5.

6. Applicant is not the only manufacturer or provider of the product design in the marketplace. A number of third parties manufacture or provide products using the product design of the subject application. The product design of the subject application is a common product design of others in the industry. Therefore the Applicant's product design does not function to identify Applicant's goods and distinguish them from goods offered by others.

7. Applicant's alleged product design has not become distinctive of the Applicant's goods in commerce and no customer recognition of said product design identifying only Applicant has been achieved.

8. Opposer believes that registration of the product design shown in the opposed application will result in damage to Opposer pursuant to the allegations above.

WHEREFORE, Opposer, J. L. Clark, Inc., prays that Serial No. 75/545,553 be rejected, that no registration be issued to Applicant, and that this opposition be sustained in favor of Opposer.

Opposer hereby appoints

James B. Muskal	Tamara A. Miller	Claudia M. Werner
Charles S. Oslakovic	Andrew J. Heinisch	Kevin L. Wingate
James D. Zalewa	Jeffery J. Makeever	Elizabeth C. Diskin
Mark J. Liss	Anne E. Naffziger	
Lynn A. Sullivan		

Attorneys at law of the firm of Leydig, Voit & Mayer, Ltd., Registry No. 501, whose Post Office address is Two Prudential Plaza, Suite 4900, Chicago, Illinois 60601-6780 [Telephone No. (312) 616-5600], all members of the bar of the State of Illinois, to act as attorneys for Opposer herein, with full power to prosecute said opposition, to transact all relevant business with the Patent and Trademark Office and in the United States Courts and to receive all official communications in connection with this opposition.

CORRESPONDENCE ADDRESS

Please address all communications to Opposer's attorneys as follows:

Leydig, Voit & Mayer, Ltd.
Attn: Andrew J. Heinisch
6815 Weaver Road, Suite 300
Rockford, Illinois 61114-8018

Opposer submits herewith its filing fee of $300.00 and the original and one copy of the Notice of Opposition.

Respectfully submitted,

J. L. CLARK, INC.

By its Attorneys,

By

Andrew J. Heinisch
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Attorneys for Opposer

Dated: August 20, 2002

Enclosures
Our Ref. No. 501885

CERTIFICATE OF MAILING

I hereby certify that this NOTICE OF OPPOSITION is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Trademarks, Box TTAB FEE, 2900 Crystal Drive, Arlington, Virginia 22202-3513:

8-20-02
Date

By: [signature]

Aug. 19, 1924. 1,505,265

J. M. HOTHERSALL

CLOSURE

Filed June 5, 1922

Fig-1

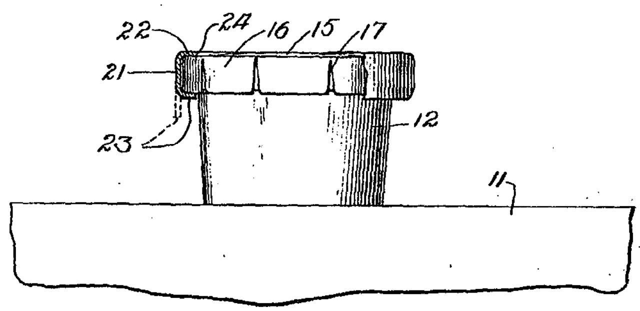


Fig-2

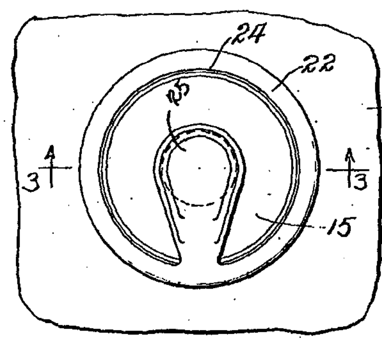
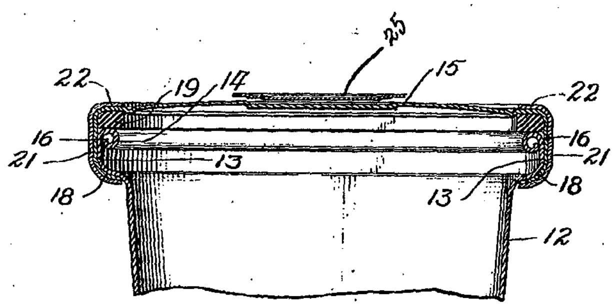


Fig-3



Inventor:
John M. Hothersall
By: Munday, Clarke & Carpenter,
Atty's.

Patented Aug. 19, 1924. **1,505,265**

UNITED STATES PATENT OFFICE.

JOHN M. HOTHERSALL, OF BROOKLYN, NEW YORK, ASSIGNOR TO AMERICAN CAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

CLOSURE.

Application filed June 5, 1922. Serial No. 565,986.

To all whom it may concern:

Be it known that I, JOHN M. HOTHERSALL, a citizen of the United States, residing in Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Closures, of which the following is a specification.

This invention relates in general to bottle and nozzle caps and closures and has more particular reference to closures of this sort adapted to be removed and replaced by flexing of the closure itself. Such flexing is accomplished by pressing upon the top of the closure causing it to snap off the bottle or container or at least to snap into a shape that permits its being pulled off.

Manifestly such containers provided with such closures must be carefully handled in shipment and in storage to prevent accidental flexing and releasing pressure being applied to the closure. My invention has for a principal object the provision of means which can be readily removed or torn away for holding the cap or container to its locking shape or against flexing, wherefore the necessity for careful handling and careful arrangement in storage is eliminated.

The invention has for a further object the provision of a structure accomplishing the above result which will not add materially to the cost of the package nor prevent the closure being relocked in place where such relocking is contemplated or desired.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawing,

Figure 1 is a partial side elevation of a container provided with a closure in which my invention is embodied, parts being shown in section;

Fig. 2 is a top plan view thereof; and

Fig. 3 is a section taken vertically through said closure.

For the purpose of illustrating my invention I have shown on the drawing a container 11 of any usual or preferred construction and provided with a pouring nozzle 12. This nozzle at its top is provided with an outstanding shoulder 13 beneath a bead 14. The flexing closure in the present instance comprises a cap having a domed flexible center 15 and a flange 16 slit at intervals at 17 and turned in beneath the shoulder 13 at 18. A gasket 19 of rubber or other suitable material is included in the cap and is adapted to engage the bead 14. The cap thus described is so proportioned and of such material that when the domed flexible center 15 is pressed inwardly from the position shown in Fig. 2 the flange 16 expands and the cap may be removed. This cap may be locked again in position by pressing upon its sides to throw the flexible body of the cap up past its central plane and back into the position shown in Fig. 1 relocking the cap in tight engagement with the nozzle. The body or domed part 15 is thus movable to a releasing position below its central, intermediate or neutral plane, or from the latter position to one above said plane, the last being its normal locking position. This neutral plane lies substantially and usually in the top marginal part of the cap.

Manifestly a cap thus constructed pressed upon in transit or in storage (and very little pressure is needed) will spring open and permit leakage of the contents of the container. To prevent this I provide means for preventing, for such time as may be desired, the expansion of the flange 16 and also in the present instance to prevent the flexing from the position shown in Fig. 1. This means comprises a soft metal ring or annulus 21, which embraces the flange 16 about the periphery of the cap. It has a part 22 overlying the top of the cap and a part 23 rolled in under the inwardly extending part 18 of the flange and in under the shoulder 13. This band or ring is constructed with the part 22 turned in and the part 23 is extending downward. In this form it is placed over the cap and the part 23 moved from the position shown in dotted lines in Fig. 1 to that shown in full lines.

The doming 15 of the cap is or may be very slight and in any event the edge 24 extends up and protects this dome against movement under the flexing pressure to and past its central plane, this in addition to the confinement of the flange 16 against expansion. It will be manifest, however, that either by confinement or by preventing flexure the cap is protected in shipment and the possibility of leakage is eliminated. The ring may be readily torn away to permit flexing of the cap to open the container, a hand-hold portion 25, overlying the cap and adapted to be pulled to tear across the ring, being provided for this purpose.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A closure for nozzles, bottles and the like, comprising a cap having a vertically movable top and locking sides operated thereby adapted under pressure exerted on the top to expand at the sides to permit its removal and upon pressure upon the sides to contract to lock it in place, and removable means for holding the sides in locking position.

2. A closure for nozzles, bottles and the like, comprising a cap having a vertically movable top adapted to be flexed from one side of a central plane to the other, said cap having locking means operated by said top for engaging the bottle or nozzle, said locking means opening and closing in accordance with the said flexure of the top to release and lock said cap in place, and tearable and removable means interlocked with the cap for holding said locking means in securing position.

3. A closure for nozzles, bottles and the like, comprising a cap having a movable top and locking sides operated thereby adapted under pressure exerted on the top to expand the said sides to permit its removal and upon pressure upon the sides to contract them to lock the cap in place, and a continuous strip adapted to be positioned about the sides of said cap to hold them in locking position, said strip being provided with a hand-hold portion for tearing the same away.

4. A container having a shouldered pouring opening, a cap having a slit flange embracing the part of the container about said opening and bent under said shoulder and having a domed and movable top cooperating with said flange for the expansion of the latter and also for holding its parts under said shoulder, and removable means embracing said slit flange to hold its parts in locking position under said shoulder.

JOHN M. HOTHERSALL.

Dec. 17, 1929. J. M. HOTHERSALL 1,739,759

CONTAINER CLOSURE

Filed June 6, 1927

Fig. 1

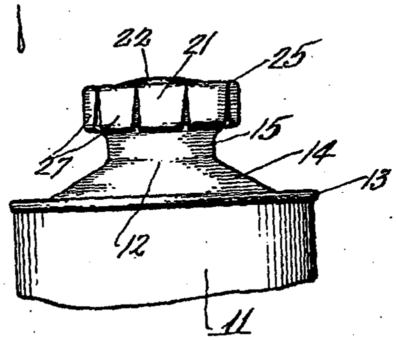
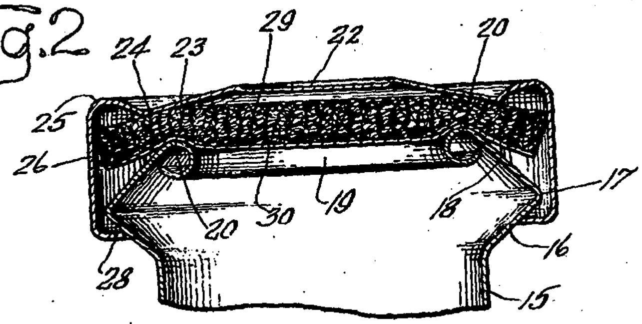


Fig. 2



INVENTOR
John M. Hothersall
BY Munday, Clarke & Carpenter
ATTORNEYS

Patented Dec. 17, 1929 **1,739,759**

UNITED STATES PATENT OFFICE

JOHN M. HOTHERSALL, OF BROOKLYN, NEW YORK, ASSIGNOR TO AMERICAN CAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY

CONTAINER CLOSURE

Application filed June 6, 1927. Serial No. 196,692.

This invention relates in general to closures for containers adapted to be flexed in different parts for releasing and applying the closure caps. Such closures are released by depressing a bulged top which spreads locking fingers at the sides, and pressure upon the top edge and sides contracts the fingers and restores the bulge of the top.

Unless the parts of a closure of this type are properly proportioned, it has been found that it opens more easily than it is closed, necessitating careful handling in shipment and storage to prevent accidental opening.

A principal object of the invention, therefore, is the provision of means for preventing accidental opening of the closure without the use of a locking band or other device separate from or additional to the cooperative construction of the container mouth and cap.

Another object of the invention is the provision of reinforced nozzle and cap construction which will withstand rough handling and prevent injury before filling and closing.

Numerous other objects of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

Figure 1 is a side elevation of a portion of a container provided with a closure embodying this invention; and

Fig. 2 is a vertical section showing the cooperative construction of the parts in detail.

In carrying out this invention, the container mouth or nozzle and the cap constructions are proportioned to provide an improved flexing leverage, so that it is difficult to open the closure accidentally, or by bumps and shocks which are incidental to the handling and transportation of filled containers.

Referring more particularly to the drawings, a sheet metal container 11 of any well-known type and shape is provided with a pouring mouth or nozzle 12 secured to the upper edge 13 of the body. The nozzle has a tapered or conical breast 14 with an upright neck 15 rising therefrom, which is flared outwardly, forming an inclined surface 16 extending to an angular shoulder 17 and then gradually reduced, forming a conical surface 18 substantially at right angles to the inclined surface 16, the inner and upper edge being turned inwardly forming a strengthening curl or bead 19 and an upper, slightly rounded, sealing ridge 20.

The flexing cap 21 comprises a raised domed, or bulged central portion 22, and a connected frusto-conical portion 23, having a channel portion 24 which continues outwardly and upwardly to form an outer raised margin 25, thence turned downwardly to provide a depending skirt 26 slit at intervals to form segmental locking fingers 27 which have inwardly turned engaging flanges 28.

Insertable between the nozzle and the locking cap is a sealing disk or packing 29 of felt or other suitable material, which is compressible, and this packing has a facing or covering 30 of fluid tight material, such as lead foil, either on both sides of the packing or preferably only on that side which contacts with the sealing ridge 20. This sealing disk 29 is preferably of such diameter as to fit closely within the sealing cap by frictional engagement with the inner wall or skirt portion, even though the cap is not applied to the container.

In applying the cap to the container, pressure applied to the bulged top 22 forces it from the outer side of a central plane to the inner side thereof, which expands the fingers of the depending skirt, allowing the locking flanges 28 to clear the outer shoulder 17 of the container nozzle. Pressure is then applied to the rounded margin 25 and also against the skirt portion 26, which returns the central dome 22 to its original position and locks the segmental flanges 28 yieldingly against the inclined surface 16 of the container nozzle at a distance below the shoulder 17.

To remove the cap from the container, the dome 22 is depressed, which expands the outer ends of the fingers 27 and frees the flanges 28 from engagement with the inclined surface 16, clearing the shoulder 17, so that the cap can be freely lifted from the container.

If there is a sealing disk, as 29, in the cap

21, the application of a slight pressure in attaching the cap will distort the packing as indicated, for example, in Fig. 2, pressing the fluid tight material 30 tightly against the sealing ridge 20, so that the flanges 28 of the cap engaging the inclined surface 16 of the nozzle will hold the packing yieldingly in fluid tight engagement, the flanges sliding upon and engaging the inclined surface 16 depending upon the pressure applied to the cap.

In previous closures of this type the fulcrum of the cap being close to the outer edge provided a long leverage for the opening operation and a short leverage for the closing operation, resulting in a closure easily opened by a comparatively slight pressure upon the domed part, thereby causing accidental opening and spilling of the contents.

To prevent accidental unlocking of this cap, the sealing ridge 20 against which the cap acts in its flexing action, is disposed inwardly from the outer edge of the cap and as near to the central dome 22 as possible. The channel 24 is also at a distance inwardly from the outer edge of the cap with the adjacent frusto-conical part 23 disposed for engagement with the sealing ridge 20 or with the sealing disk 29 interposed therebetween. This brings the fulcrum point of the cap as far inwardly or as near to the central part of the cap as possible, thereby reducing the length of leverage for an opening pressure application, so that containers of this type are uniformly and substantially proof against accidental opening.

The nozzle bend between the parts 15 and 16, the shoulder 17 and the curl or bead 19 greatly reinforce the nozzle and help to protect it from injury before the container is filled.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A flexing closure, comprising a cap having a central domed portion and depending locking fingers operated by a flexing movement of the dome, the cap having an annular flexing line at a distance from the periphery thereof and a smaller circular flexing line at the top of the cap to equalize the flexing leverage of the domed portion and of the locking fingers.

2. A sheet metal flexing cap having at its margin depending locking fingers adapted to engage beneath a projecting part of a nozzle, said cap having an outer circular line of flexure near said fingers, a smaller inner circular line of opposite flexure near its top, said cap inclining upward from the outer to the inner line of flexure, and an elevated central panel adapted to be depressed to a plane below the plane of said first line of flexure, whereby said fingers are caused to move radially outward and disengage from said projecting part of the nozzle.

3. A sheet metal flexing cap having at its margin depending locking fingers adapted to engage beneath a projecting part of a nozzle, said cap having an outer circular line of flexure near said fingers, a smaller inner circular line of opposite flexure near its top, said cap inclining upward from the outer to the inner line of flexure, and an elevated central panel adapted to be depressed to a plane below the plane of said first line of flexure, whereby said fingers are caused to move radially outward and disengage from said projecting part of the nozzle, and a sheet metal nozzle bent outward to form a shoulder and having its margin curled inward and downward to form a circular rounded seat, and a gasket between said seat and the inclined part of the cap.

JOHN M. HOTHERSALL.

[This Drawing is a reproduction of the Original on a reduced scale]

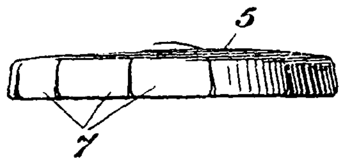


Fig.1.

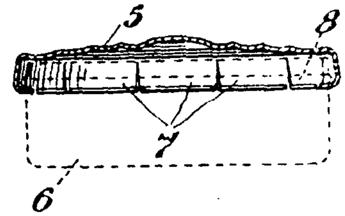


Fig.2.

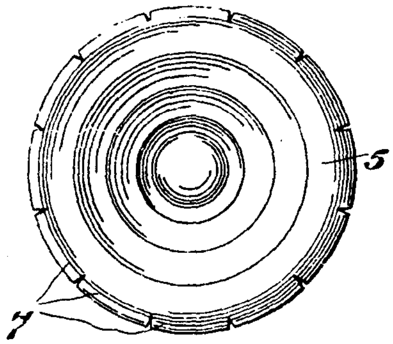


Fig.4.

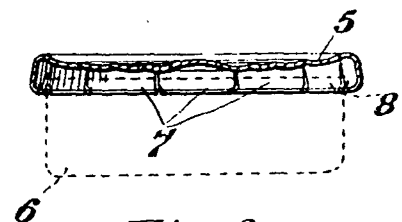


Fig.3.

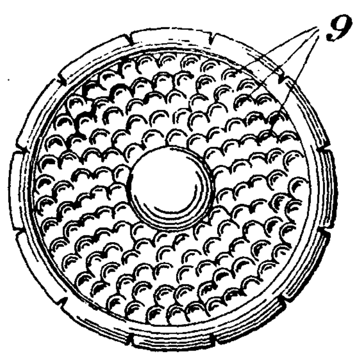


Fig.5.

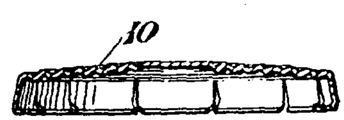


Fig.6.

PATENT SPECIFICATION

Convention Date (France): Aug. 4, 1922.

Application Date (in United Kingdom) July 18, 1923. No. 18,556/23.

Complete Accepted: March 6, 1924.

201,899

COMPLETE SPECIFICATION.

Improvements in and relating to Container Caps or Closure Members.

I, HENRY SPENGLER, a citizen of the United States of America, of 370, West 256 Street, City of New York, Borough of the Bronx, New York, United States of America, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to container closure members and more particularly to closure members of the kind disclosed in the Specifications and drawings accompanying my prior Patents Nos. 23,843 of 1912 and 105,547, in which a resilient bulged central area may be sprung selectively to both sides of a plane in order to selectively produce the spreading and contracting of a number of container gripping members extending from the margin of said central bulged portion.

The object of the invention is the provision of a closure member which may be made from thinner and less expensive metal than heretofore and in which the central bulged portion will be generally more resilient and flexible so that the actual manipulation will be facilitated, the range of spread of the gripping members will be increased and the members will be better able to accommodate themselves to malformed container rims.

The invention to these ends consists broadly in the construction according to which the central bulged portion is formed, over an area extending right up to and completely around the extreme margin of said bulged portion from which the gripping members extend, either with a plurality of circular undulations concentric with said bulged portion or with a plurality of contiguous dimples or pimples or corrugated dome portions.

I find that by stamping, over such an area, circular concentric undulations or contiguous dimples or pimples or corrugated dome portions, so as to slightly work and compress the material there seems to result a slight thinning of the material giving to the area a higher elasticity so that although the total bulge of the bulged portion may in such a case be considerable, the action will be much easier than if the same bulge were formed with uniform curvature and elasticity. Also the radial throw seems to be greater than would be produced by the same total bulge with uniform curvature, or what is the same thing, a greater throw seems to result from a given bulge.

I find also that the provision of such undulations or dimples or pimples or corrugated dome portions gives further beneficial results in that the closure member can be manipulated by moderate pressure which is progressively distributed in successive stages from the central portion of the cap to the boundaries thereof.

In the accompanying drawings, Figure 1 is a view in side elevation of a closure cap member embodying the invention; Figure 2 is a view in vertical section of the cap member shown in Figure 1; Figure 3 is a view similar to Figure 2 showing the cap member in releasing position; Figure 4 is a plan view of the cap member shown in Figure 1; Figure 5 is a plan view of a modified c- cap member embodying t- and Figure 6 is a -

another form of cap member embodying the invention.

Referring to the drawings for a more detailed description of the invention, a closure member is shown at 5 which is adapted to close the mouth of a wide-mouthed container 6 such as is used for holding shoe paste or dressing. The closure member or cap 5 has a bulged or dome-shaped formation as indicated in Figures 1 and 2, and is sufficiently resilient to permit of the bending or buckling of the bulged portion through a plane coincident with the base of the dome portion as indicated in Figure 3.

In order to obtain a sufficient extent of movement of the bulged portion of the cap member to produce a proportionate and desirable spreading or gripping action of the container-gripping members 7 to cause them either to release their hold on the rim or bead 8 on the container 6 or to move inwardly into gripping relation with the bead, I have subjected the said bulged portion of the closure member to operation which form a plurality of concentric circular undulations extending up to the extreme margin of said bulged portion from which the gripping members extend, the thickness of the metal thus being variably reduced & the metal being expanded laterally within its own plane. It will be clear that the expansion of the metal laterally increases its superficial area and produces a bulged or bowed formation of the face of the cap. The accompanying thinning of the metal increases its resiliency while the changes of curvature even though slight seem to reduce the excessive rigidity and stiffness that otherwise inheres in the bowed or arched formation.

I find that the expansion and thinning of the metal facilitates the bending or buckling of the cap to cause it to grip or release the container. With this construction a moderate pressure applied to the bulged area at a central or other point results in a variable localized distribution of the bending or buckling action that is effective to produce the relatively extensive movement required with the exertion of only a moderate degree of force. The buckling of the cap member from the outwardly bulged position such as is indicated in Figure 2 of the drawing to the inwardly bulged condition shown in Figure 3 results in a corresponding swing of the gripping flange members 7 from their gripping to their releasing position. It will be seen that the relatively extensive movement of the bulged or crowned portion of the cap ·· extensive inward or outward swinging movement of the gripping members 7 about the juncture points of the gripping members with the margin of the bulged portion.

In producing the expanded area of metal to provide the bulged or crowned portion the metal forming the cap is compressed or stamped between metal working members that act to variably consolidate the metal. The change thus produced increases the elasticity and resiliency of the metal to an extent sufficient to insure the ready accomplishment of the buckling operation.

I find that the production of a bulge or crown in the cap made up of a multiplicity of differently worked areas and a resulting non uniform zoning results in an efficient and readily operable closure member than is particularly well adapted for use with containers having relatively wide mouths. In addition the working of the metal that is effected produces a toughening and strengthening effect that is turned to useful account in the use of metal of thinner gage and of relatively less cost than would be otherwise used.

In producing cap members embodying the invention I may so form the bulged portions as to cause them to automatically resume their outwardly bulged position when depressed, or to retain therein inwardly bulged position until released by inward pressure exerted on the gripping members, as circumstances may require.

In Figs. 5 and 6 embodiments are illustrated in which the central bulged portion is formed respectively, over an area extending right up to, and completely around, the extreme margin from which the gripping members extend, with a plurality of contiguous dimples or pimples 9 or corrugated dome portions 10.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A container closure member of the kind set forth wherein the central bulged portion is formed with a plurality of circular undulations concentric with said bulged portion and entirely covering an area extending right up to the extreme margin of said bulged portion from which the gripping members extend.

2. A container closure member of the kind set forth wherein the central bulged portion is formed with a plurality of contiguous dimples or pimples or corrugated dome portions which entirely cover an area extending right up to, and com-

pletely around, the extreme margin of said bulged portion from which the gripping members extend.

3. A container closure member substantially as herein described with reference to Figs. 1 to 4 of the accompanying drawings.

4. A container closure member substantially as herein described with reference to Fig. 5 or 6 of the accompanying drawings.

Dated this 18th day of July, 1923.

A. A. THORNTON,
Chartered Patent Agent,
Quality Court, Chancery Lane, London, W.C. 2,
For the Applicant.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1924.

[This Drawing is a reproduction of the Original on a reduced scale]

Fig. 1.

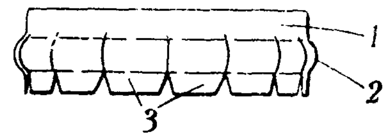


Fig. 2.

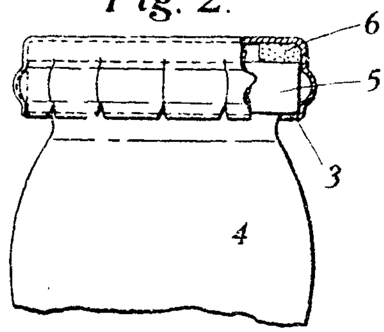


Fig. 3.

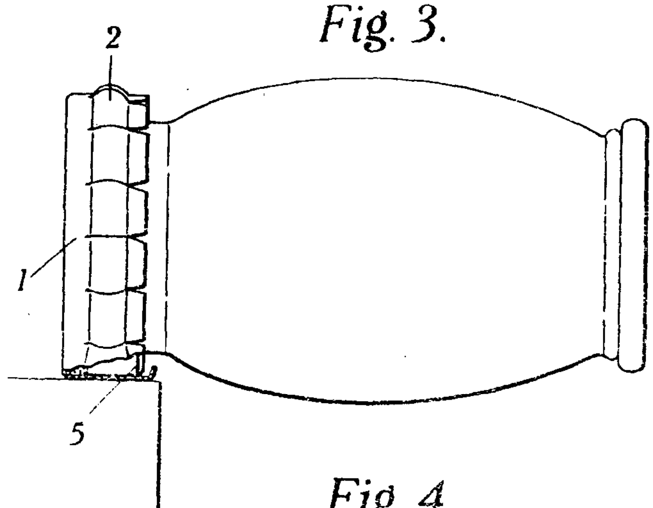


Fig. 4.

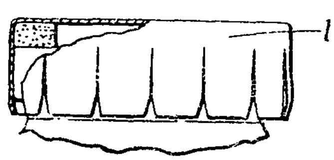
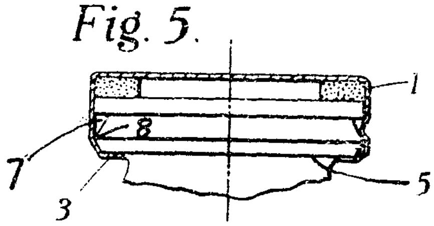


Fig. 5.



PATENT SPECIFICATION

Application Date: Nov. 26, 1928. No. 34,743/28.

Complete Left: Jan. 24, 1929.

Complete Accepted: Feb. 26, 1930.

325,811

PROVISIONAL SPECIFICATION.

Improvements relating to Capsules for Jars, Bottles & other Vessels.

I, LEONARD GORDON DAVIES, Inglenook, Pinner View, Harrow, Middlesex (British), do hereby declare the nature of this invention to be as follows:—

This invention relates to Capsules for Jars, Bottles and other vessels.

The object of the invention is to provide an improved form of one-piece capsule suitable for use upon such vessels as are generally fitted with such capsules or two-piece capsules of the disc and band type.

A capsule made in accordance with the present invention is formed in a single piece provided with a bulged portion on the skirt of the capsule and a plurality of marginal fingers made by a series of cuts in the skirt; the capsule is fitted by working its periphery in under the shoulders or into a recess below the rim of the vessel. It is removed by applying pressure on part or whole of the bulged portion of the skirt, when the parts of the capsule which have been already worked under the shoulder or into a recess of the vessel will be released to a sufficient extent to allow the complete capsule to be removed. The cap can be replaced to act as a re-seal or cover, and cannot fall off owing to the inturned lower portions of the fingers gripping the vessel.

The invention comprises the improved capsule and the novel features, combinations and arrangements embodied in the preferred form thereof, which it is now proposed to describe in order to render the nature of the invention clear.

The capsule is formed from a piece of metal or other suitable material. The skirt of the capsule is bulged on any line parallel to its periphery or covering the whole of the skirt. A convenient number of cuts, or V-slots of suitable length, are made in the skirt forming a plurality of marginal fingers. These fingers may be bulged independently if required instead of a continuous bulge as above mentioned.

The skirt of the capsule may be bulged, indented or grooved on any suitable part or portion or the skirt may be flat (in this case, the vessel being grooved or indented around the part in which the skirt of the capsule ordinarily fits) or any other suitable means employed whereby the capsule is released from the vessel by pressure on the skirt of the capsule.

The capsule is shaped to fit the top of the vessel by an ordinary stamping or pressing operation and is placed on the top of the vessel complete. The lower peripheral edge is worked in in a machine or by other suitable means in the same manner as the lower edge of the band is treated in the band and disc type.

It will be seen that by applying pressure to a part of or the whole of the bulged portion or a number of portions of the capsule the depth of the skirt will lengthen and so release the capsule from its fixed position on the vessel. The capsule can also be removed by lifting the inturned edges of the marginal fingers away from the vessel with a penknife or other suitable instrument. The whole capsule now freed forms a cap which can thereafter be used as a removable closure. It will be observed that as no part of the capsule is removed or damaged in effecting the opening of same, its value as a re-seal or removable closure is enhanced considerably. It cannot fall off and gives a tidy and neat appearance. Furthermore, this improved closure is cheap to manufacture and simple and convenient to use.

10th December, 1928.

L. GORDON DAVIES.

COMPLETE SPECIFICATION.

Improvements relating to Capsules for Jars, Bottles and other Vessels.

I, LEONARD GORDON DAVIES, of Ingle Nook, Pinner View, Harrow, Middlesex, a British Subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to capsules for jars, bottles and like containers, and has for its object to provide a one-piece capsule adapted to afford a secure closure, and at the same time to be readily removable without the use of special tools.

The invention accordingly comprises a one-piece capsule which is provided with a pre-formed annular ridge or channel which is outwardly bulged. With this construction, I find that, utilizing ordinary or well known material, the permanent set of the bead or deformation is sufficiently strong to afford the requisite closing pressure when the bottom of the skirt is folded beneath the rim of the vessel without risk of failure.

In order to release the capsule, all that is necessary is to roll the bead over any flat surface or apply suitable pressure in any other suitable manner, whereupon the bulge is more or less flattened out so as to elongate the length of the skirt and to release the folded-in portion from its grip on the rim of the container. After the rolling pressure the capsule can then easily be withdrawn.

Preferably the skirt is divided by slots into a number of tongues in known manner, and the design of the bulge is such that the final removal of the capsule requires the tongues to be sprung outwardly by a slight amount facilitating the further use of the capsule as a lid or cover.

The invention further includes a modification of the above arrangement in which the jar or container has an annular depression in the external surface of the mouth wall, the capsule flange being cylindrical and in contact with said wall except over the height of said depression. With this construction the folded-in rim of the flange can be dislodged by depressing the cylindrical portion within said depression.

The invention is illustrated in the accompanying drawing in which

Figure 1 illustrates the capsule in side elevation,

Figure 2 showing the capsule in position on a small jar,

Figure 3 illustrates the capsule being rolled on a flat surface to flatten the bulge or protuberance, and

Figure 4 represents the deformed capsule in use as a cover,

Figure 5 illustrates the modified construction.

Turning now to the forms illustrated, Figure 1 shows a capsule in which the normally plane cylindrical skirt 1 is provided with a protuberance or bulge 2, comprising a convex bead or rim extending round the skirt. The skirt is divided by slots into tongues 3 in known manner, the slots being formed either prior to or after the formation of the bead 2.

Figure 2 illustrates the capsule set up in position on a container 4, the lower ends of the tongues 3 being folded beneath the rim 5 of the container. A resilient washer 6 is interposed between the container and the capsule, and I find that the construction utilizing ordinary material is sufficiently strong for the security of the closure to be maintained in use, the tension in the material between the tips of the tongues 3 and the top of the capsule being insufficient of itself to flatten out the bead 2.

In order to remove the capsule, the bead 2 is flattened as shown in Figure 3. This elongates the skirt and removes the tips 3 of the tongues a sufficient distance from the under side of the rim 5 to permit the capsule being readily withdrawn by hand, after which the capsule may be used as a replaceable cover as illustrated in Figure 4.

In this connection it is to be understood that the flattening process is not necessarily required to be complete as indicated in the Figure, as an amount of flattening which is less than the complete removal of the bead 2 will in many cases be sufficient to render the capsule removable.

In Figure 5 the skirt 2 appears rectilinear in section as shown in the left hand side of the Figure. The rim of the vessel, however, is formed with a recess 7, and a lower shoulder 8, as shown, intermediate the height of the skirt. The recess is sufficiently deep and close to the bottom of the rim of the vessel that if the capsule flange is depressed into it, the folded-in ends of the fingers will be dislodged from the holding position. Thus, by pressing, by means of any suitable edge, the skirt into the recess 7 as illustrated on the right hand side of Figure 5, the tips 3 of the tongues of the capsule will be pulled away from the underside of the rim 5 so that the capsule may be freed, as will be readily understood.

Preferably, the shoulder 8 is provided in order to provide a certain amount of leverage tending to pull the tips 3 outwardly when the skirt is pressed in the recess.

Obviously, in certain cases it may not be necessary to flatten the bead throughout the whole circumference as a flattening of half or two thirds the bead may be sufficient to effect the release.

Having now particularly described and

ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. Capsule for bottles, jars or like vessel of the kind having a depending skirt adapted to have its lower edge bent inwards under a continuous rim of the vessel, characterized in that said skirt is pre-formed with an outwardly directed bead or bulge, and is adapted to be extended in length by deforming said bead to facilitate removal substantially as and for the purpose described.

2. Capsule as claimed in Claim 1 in which said skirt is divided by slots into a plurality of fingers or tongues.

3. The combination of a capsule or like container-sealing means having a continuous flange broken only by slots to form fingers with a container having an annular depression in the external surface of the mouth wall, said surface being in contact with said flange except over the height of said depression, said depression being sufficiently deep and close to the bottom of said wall that if the capsule flange is depressed into it, the folded-in ends of the fingers will be dislodged from the holding position.

4. The combination claimed in Claim 3 when constructed and arranged substantially as shown in Figure 5 of the drawings.

5. The improved capsule substantially as described with reference to Figures 1 to 4 of the drawings.

Dated the 22nd day of January, 1929.

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Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1930.

Albert Stalder

Brevet N° 132764
1 feuille

Fig. 1.

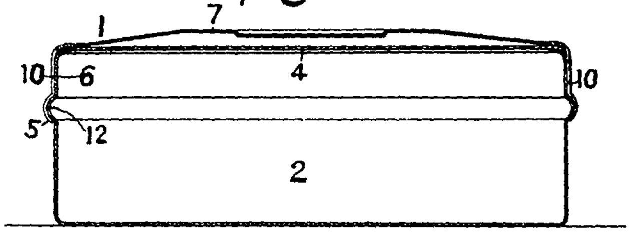


Fig. 2.

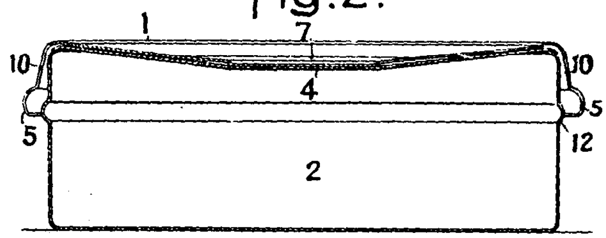


Fig. 3.

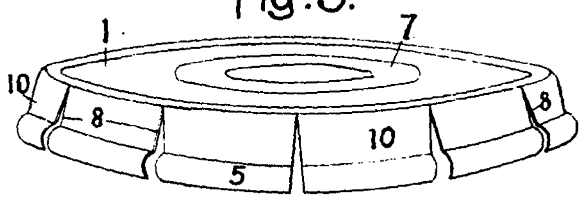
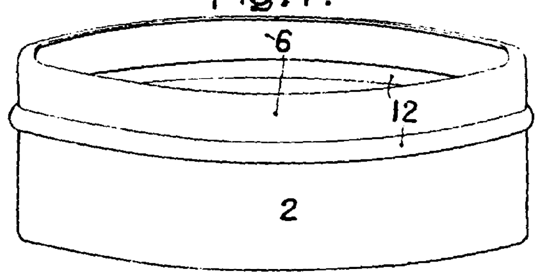


Fig. 4.



N° 132764

Classe 125 b

CONFÉDÉRATION SUISSE

BUREAU FÉDÉRAL DE LA PROPRIÉTÉ INTELLECTUELLE

EXPOSÉ D'INVENTION

Publié le 2 septembre 1929

Demande déposée: 30 juillet 1928, 18½ h. — Brevet enregistré: 30 avril 1929.

BREVET PRINCIPAL

Albert STALDER, Bévilard (Jura-Bernois, Suisse).

Dispositif de fermeture pour boîtes d'emballage et récipients similaires.

L'objet de la présente invention est un dispositif de fermeture pour boîtes d'emballage et récipients similaires. Suivant l'invention, le dispositif comporte un couvercle à fond déformable destiné à être placé sur le col d'un récipient, ce couvercle ayant des parties de serrage latérales disposées pour pouvoir s'écarter dudit col ou se resserrer sur lui suivant qu'une pression est exercée sur le fond ou sur les parties latérales du couvercle.

Une forme d'exécution du dispositif objet de l'invention, appliquée à une boîte d'emballage, est représentée, à titre d'exemple, au dessin annexé.

La fig. 1 en est une coupe verticale, le dispositif se trouvant en position de fermeture;

La fig. 2 en est une même coupe, mais avec le dispositif se trouvant en position d'ouverture;

La fig. 3 est une vue en perspective du couvercle enlevé, et

La fig. 4 une vue analogue de la boîte sans couvercle.

Dans les figures du dessin, 6 désigne le col d'une boîte métallique 2. Le dispositif de fermeture comporte un couvercle métallique 1, dont le fond flexible peut être incurvé vers l'intérieur ou vers l'extérieur grâce à la présence d'un bossage 7. Le bord latéral du couvercle 1 est entaillé de fentes verticales 8 et constitue de la sorte des parties de serrage en forme de griffes 10. L'extrémité inférieure de ce bord possède un rebord circulaire creux 5 disposé pour épouser la forme d'un bossage circulaire en relief 12 prévu au col 6 du récipient 2. Un disque d'étanchéité 4 garnit le côté intérieur du fond du couvercle.

Le fonctionnement du dispositif décrit est le suivant:

On place le dispositif sur le col du récipient, le fond du couvercle étant poussé vers l'intérieur dans la position représentée à la fig. 2. Dans cette position du fond les fentes 8 s'ouvrent et les griffes 10 sont écartées laissant le diamètre du rebord 5 assez grand pour passer sur le bossage 12 du col du récipient. Quand le dispositif est ainsi mis en place, on opère une pression sur le bord latéral du couvercle; cette pression provoque la flexion du fond de celui-ci vers l'extérieur et applique fortement les griffes 10 du couvercle sur le bossage circulaire 12 du récipient, provoquant ainsi une fermeture étanche, grâce au disque d'étanchéité 4 interposé entre le fond du couvercle et la tranche supérieure du bord du col et qui peut par exemple être en carton, imprégné ou non, les griffes 10 faisant ainsi fonction de ressort, en épousant jointivement la forme du col 6 du récipient, de façon à bien fixer le couvercle à l'état de fermeture.

Pour l'ouverture du récipient, on opère une pression centrale sur le fond du couvercle 1 pour le faire s'incurver vers l'intérieur. La flexion de ce fond entraîne les griffes latérales 10 du couvercle qui s'écartent d'entre elles, le diamètre du rebord 5 se trouve ainsi agrandi et le dispositif est libéré de sa fixation au col du récipient.

Le dispositif décrit et représenté offre l'aspect d'un couvercle ordinaire dont le pourtour est muni de fentes verticales et dont l'extrémité du bord est munie d'une gorge circulaire. Il présente l'avantage de donner instantanément, et sans le secours d'instrument une ouverture et une fermeture étanche. Ceci est particulièrement avantageux si le dispositif décrit est appliqué à des boîtes d'usage domestique ou contenant des produits devant être à l'abri de l'air libre.

Revendication :

Dispositif de fermeture pour boîtes d'emballage et récipients similaires, caractérisé par un couvercle destiné à être placé sur le col d'un récipient et comportant un fond déformable pouvant s'incurver entre deux positions extrêmes et des parties de serrage latérales disposées pour pouvoir s'écarter dudit col ou se resserrer sur lui suivant qu'une pression est exercée sur le fond ou sur les parties latérales du couvercle.

Sous-revendications :

1 Dispositif suivant la revendication, caractérisé en ce que les parties de serrage latérales du couvercle sont établies pour faire fonction de ressort de façon à bien fixer le couvercle à l'état de fermeture.

2 Dispositif suivant la revendication et la sous-revendication 1, caractérisé en ce que les parties de serrage latérales du couvercle sont formées par la présence de fentes pratiquées dans un bord latéral du couvercle.

3 Dispositif suivant la revendication et les sous-revendications 1 et 2, caractérisé en ce que les griffes latérales du couvercle sont disposées pour épouser la forme du col du récipient dans la position de fermeture en venant s'appliquer sur un bossage en relief de ce col.

4 Dispositif suivant la revendication, caractérisé en ce que le couvercle est combiné avec une garniture d'étanchéité disposée pour être interposée entre son fond et le bord supérieur du col du récipient.

Albert STALDER.

Mandataire: Amand BRAUN succ. de A. Ritter, Bâle.