No. 834,191. PATENTED OCT. 23, 1906.

W. J. CHAMBERS.

FRICTION TOP CAN.

APPLICATION FILED OCT. 2, 1905.

Fig. 1

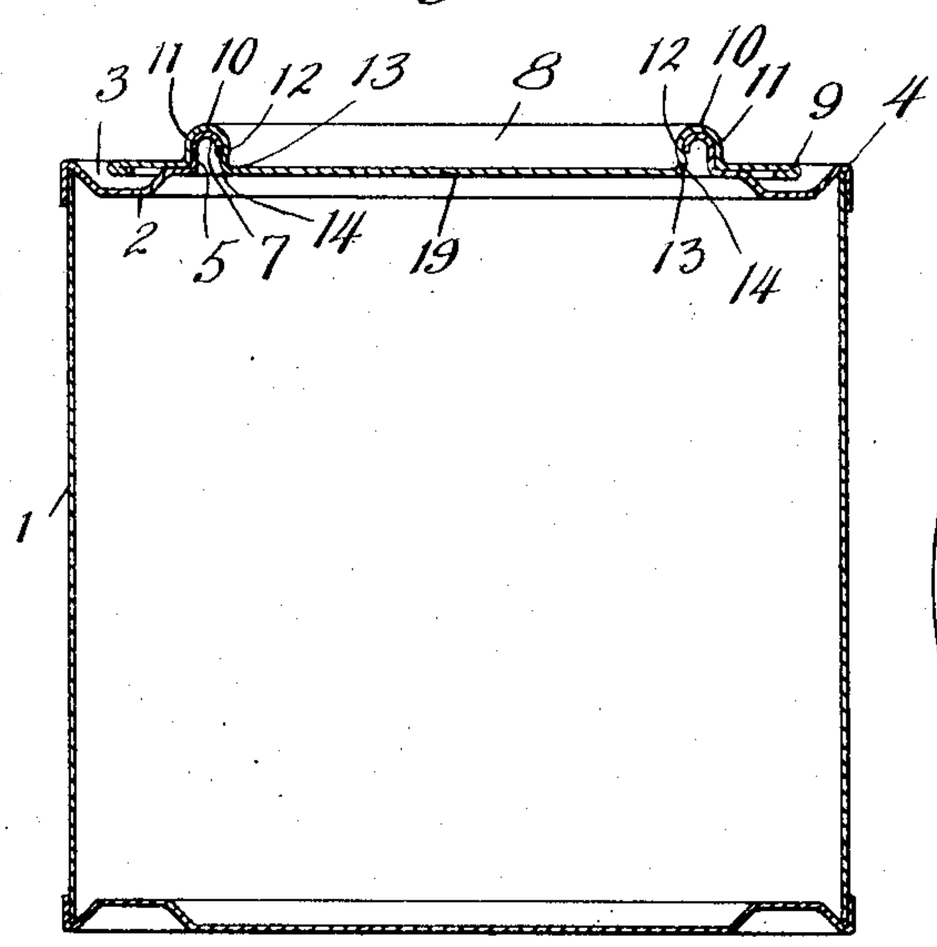


Fig. 3

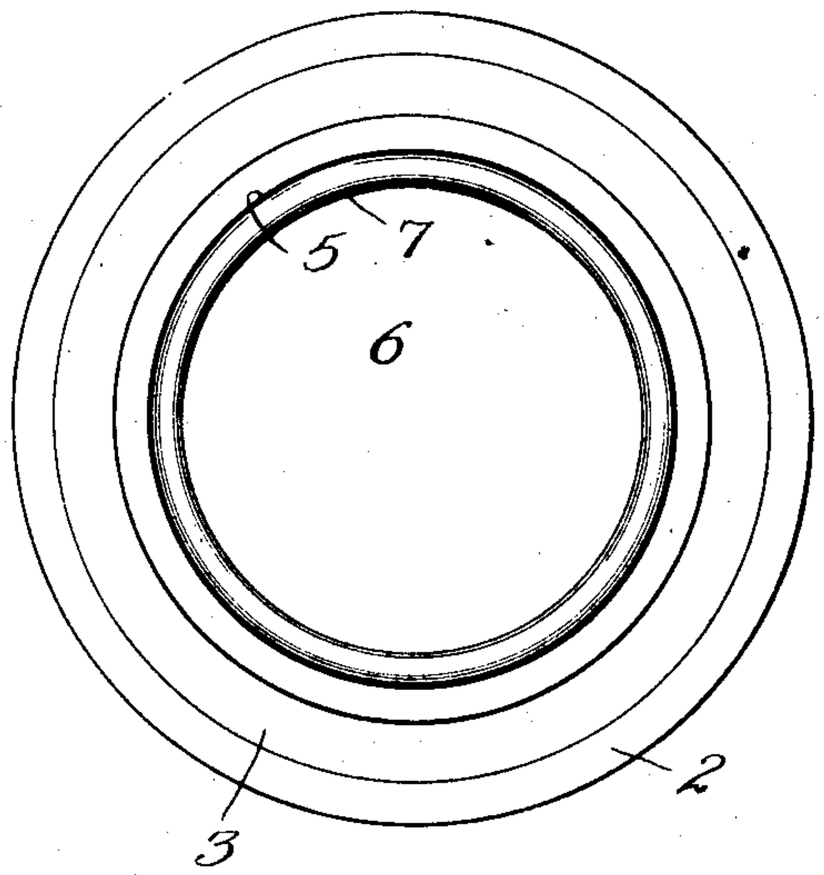


Fig. 2

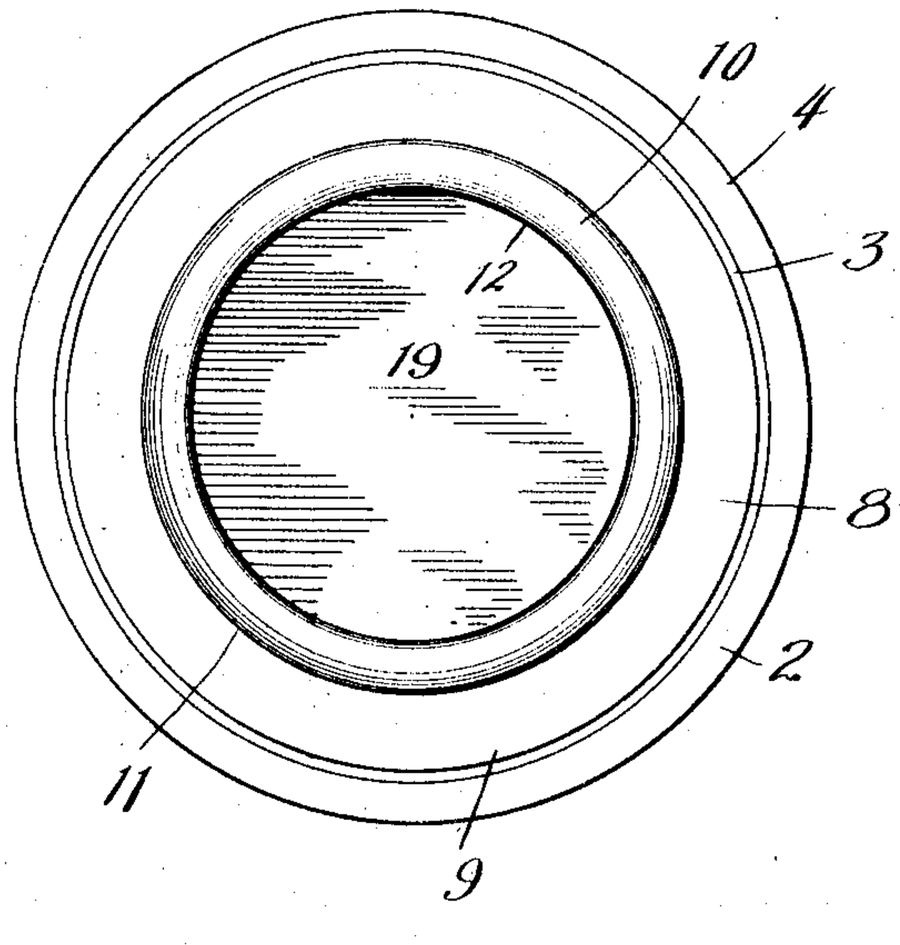
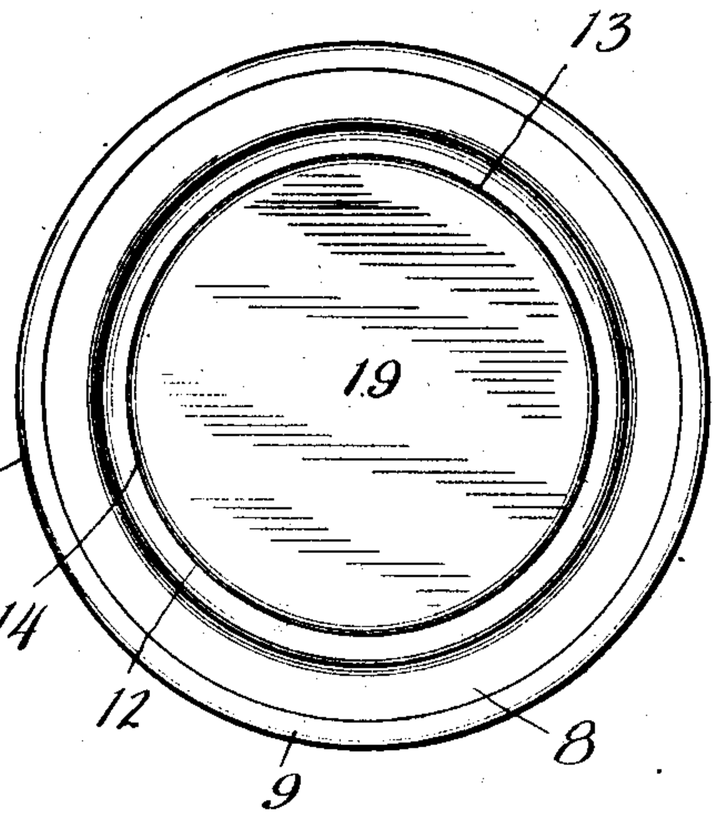


Fig. 4



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FRICTION-TOP CAN.

No. 834,191. Specification of Letters Patent. Patented Oct. 23, 1906.

Application filed October 2, 1905. Serial No. 280,925.

To all whom it may concern:

Be it known that I, WILLIAM J. CHAMBERS, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Friction-Top Cans, of which the following is a specification.

My invention relates to that class of can-closures generally known as "friction-top" cans, and in which the annular wall or flange of the can-top is frictionally engaged by a correspondingly-formed wall or flange of the can-cover to afford an effective joint or closure and which permits of the forcible removal of the cover without damage to the engaging parts, so that the closure may be repeated as required.

My invention has for its object a simple and efficient structural formation of the can top and cover whereby the above results or functions are attained in a ready and economical manner and whereby the strength, security, and liquid tightness of the closure is mechanically improved and perfected and the cover locked in place without interfering with its capability for ready removal and repeated closure of the can, all of which will hereinafter more fully appear and be more particularly pointed out in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a central section of a friction-top can to which my present improvement is applied. Fig. 2 is a plan view; Fig. 3, a plan with the cover removed, and Fig. 4 a bottom view of the cover.

In the drawings, 1 is the can-body, and 2 the orificed can-top, having the usual countersink 3 or annularly-concaved form, as shown, so as to afford a raised outer margin 4, which acts as a fulcrum in prying off the cover.

5 is an annular friction-seat wall integral with the can-top and forming the border of the opening or orifice 6 of such top. In the present construction such wall projects upwardly from the can-top and is provided with an inturned and downturned flange or margin 7, possessing resiliency in a limited degree, the inwardly and downwardly projecting flange 7 being preferably curved and substantially a semicircle, with its extreme inner edge projecting downwardly.

8 is the can-cover, comprising the usual marginal folded rim 9, adapted for engagement in the operation of prying the cover off the can. The main central web 9 or disk of the cover is integrally connected to the folded rim aforesaid by an annular upwardly-extended arch 10, the crowned walls 11 and 12 of which constitute friction-seats for respective engagement with the friction-seat wall 5 and the resilient flange or margin 7 of such wall, as shown.

In my present improvement the above-described construction is combined with the following special formation of the innermost upwardly-extending friction-wall 12 of the can-cover to afford a very efficient friction-top can. Such special formation comprises an annular bulge or swell 13 in said wall near where the same connects with the main web 9 of the cover and at a point below the depending free and resilient flange or margin 7 of the friction-seat wall 5 of the can-top and constituting by coöperation therewith an efficient lock for locking the cover securely on the can and also serving to somewhat contract the resilient curved flange 7 of the can-top as the cover is forced home on the can and to maintain said resilient curved flange 7 of the can-top under a degree of tension, as the seat therefor in the cover is normally somewhat smaller than the exterior thereof when the cover is in place. The annular bulge, swell, or lock 13 on the cover at the same time prevents the spring or resilient action of the curved flange from tending to loosen or displace the cover.

As the cross-sectional interior of the annular arch of my friction-cover is slightly smaller than the cross-sectional exterior of the correspondingly-shaped resilient curved flange on the can-top, the result is that when the cover is forced home and the resilient curved flange of the top surrounded and embraced by the arch of the cover the resilient curved flange is held and maintained under tension, and this adds greatly to the tightness and perfection of the closure. The cover has a rounded shoulder 14 at the junction of the annular locking swell or bulge 13 with the flat or disk portion of the cover, so as to give a somewhat wedging mouth to the annular channel (U-shaped in cross-section) in the cover formed by the upturned projecting annular arch 10, the wedging mouth serving to facilitate the application of the cover to the can-top. It is within the scope of the present invention to form said locking

annular bulge or swell 13 in the walls 12 of the cover during the manufacture of the same before the can is filled or the cover applied or to form the same by suitable expanding appliances after the cover is in place upon the can-top.

I claim—

1. In a friction-top can, the combination of an annular top provided with an integrally upwardly projecting friction-seat wall terminating in an inwardly and downwardly turned resilient flange, and a friction-cover having an annular upwardly-extending arch, the outer and inner curved walls of which constitute friction-seats engaging the friction-seat wall and resilient flange of the can-top, the innermost of said arch walls on the cover having an annular locking bulge or swell projecting under and engaging the free edge of said inwardly and downwardly turned resilient flange of the can-top, said friction-cover having an annular rim projecting horizontally from the lower edge of the outer wall of said upwardly-extending arch to strengthen and stiffen said outer wall substantially as specified.

2. In a friction-top can, the combination with an annular top of a friction-cover, said top and cover being provided with interengaging annular friction-seat walls, the friction-seat wall on the top terminating in a resilient inwardly and downwardly curved flange, and the friction-seat wall on the cover having an annular locking bulge or swell engaging said resilient curved flange on the can-top to lock the cover in place, said friction-cover having an annular rim projecting horizontally from the lower edge of the outer wall of said upwardly-extending arch to strengthen and stiffen said outer wall substantially as specified.

3. In a friction-top can, an annular countersunk top having a marginal raised rim for prying off the cover, and an upwardly-projecting friction-seat wall terminating in an inwardly-curved resilient flange, and a friction-cover having a marginal folded rim for prying the same off, and provided with an annular upwardly-projecting raised arch, the inner and outer walls of which constituting friction-seat walls engaging the friction-seat wall and resilient flange of the can-top, said inner wall of the arch having an annular locking bulge or swell projecting under and engaging said inwardly and downwardly projecting resilient flange of the can-top, said marginal folded rim of the cover projecting horizontally from the lower edge of said outer annular wall of said upwardly-projecting arch of said cover to stiffen and strengthen the same substantially as specified.

4. In a friction-top can, the combination of an orificed top having an integral upwardly-projecting annular friction-seat wall, the upper end of which is formed into an inturned and downturned flange, said wall and flange forming a resilient border for the can-orifice, and a friction-cover having an integrally-formed central web and an annular upwardly-extending arch, the crowned walls of which constitute friction-seats for engagement with the friction-seat wall and flange of the can-top, the innermost of said arch walls having an annular bulge or swell near its point of connection with the central web of the can-cover projecting under and engaging said downwardly and inwardly turned flange of the can-top, said friction-cover having an annular rim projecting horizontally from the lower edge of the outer wall of said upwardly-extending arch to strengthen and stiffen said outer wall substantially as specified.

5. In a friction-top can, the combination of an orificed top having an integral upwardly-projecting annular friction-seat wall, the upper end of which is formed into an inturned and downturned flange, said wall and flange forming a resilient border for the can-orifice, and a friction-cover having a main web and a folded marginal rim integrally connected together by an annular upwardly-extending arch the crowned walls of which constitute friction-seats for engagement with the friction-seat wall and flange of the can-top, the innermost of said arch walls having an annular bulge or swell near its point of connection with the main web of the can-cover projecting under and engaging said downwardly and inwardly turned flange of the can-top, said marginal folded rim of the cover projecting horizontally from the lower edge of said outer annular wall of said upwardly-projecting arch of said cover to stiffen and strengthen the same substantially as specified.

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