No. 823,429. PATENTED JUNE 12, 1906.

J. J. MOSER.

CAN CLOSURE.

APPLICATION FILED DEC. 28, 1904.

Fig. 1.

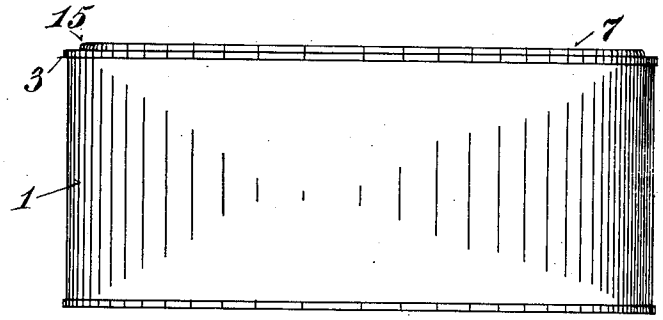


Fig. 2.

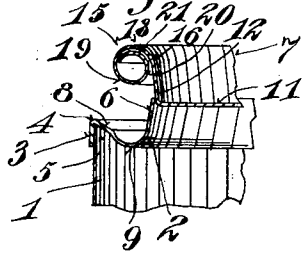


Fig. 5.

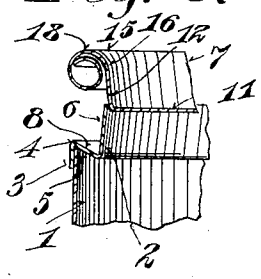


Fig. 4.

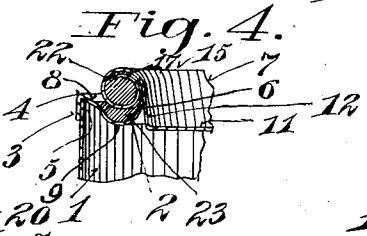


Fig. 3.

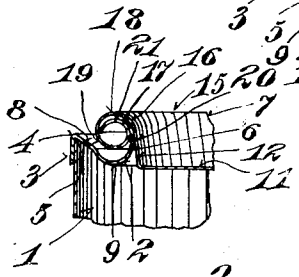
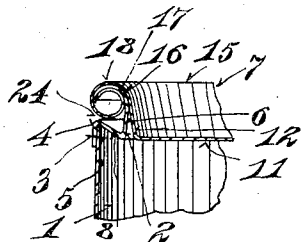


Fig. 6.



Witnesses.

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UNITED STATES PATENT OFFICE.

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CAN-CLOSURE.

No. 823,429. Specification of Letters Patent. Patented June 12, 1906.

Application filed December 28, 1904. Serial No. 238,636.

To all whom it may concern:

Be it known that I, JOSEPH J. MOSER, a citizen of the United States, residing in West Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Can-Closures, of which the following is a specification.

It is the object of my invention to provide a new and improved closure for cans, and the invention will be readily understood from the following description and claims and from the drawings, in which latter—

Figure 1 is a side elevation of a can provided with my improved device, showing the same in closed relation. Fig. 2 is an enlarged central vertical section of my improved device, partly broken away, illustrating the can and its cover in relation for applying the cover to the can. Fig. 3 is a similar view of the same, showing the cover in closed relation. Fig. 4 is a similar view of the same with packing applied thereto. Fig. 5 is an enlarged central vertical section of my improved device, partly broken away, with the outer edge of the bead of the cover substantially flush with the outer annular face of the can and showing the cover in relation for applying the cover to the can; and Fig. 6 is a similar view of the same, showing the cover in closed relation.

The body 1 of the can has a lip portion 2, which latter is preferably an annular rim portion suitably secured to the top of the can, as by having an outer depending wall 3, forming a shoulder 4, upon which the rim portion rests, upon the upper edge 5 of the side of the can-body. The lip portion projects inwardly and has an upwardly-projecting lip 6, forming a mouth, preferably in the form of an upright frusto cone, for receiving the cover 7 in the manner hereinafter explained. The inwardly-projecting part of the rim portion may consist of an inner depending wall 8, which, with the outer depending wall 3, forms a groove, in which the upper edge 5 of the side of the can-body is received when the rim portion is secured to the can-body. As shown in Figs. 2 and 3, a web 9 may connect the depending wall 8 and the lip 6, forming a groove between the outer edge of the upper end of the can-body and the lip. The cover is formed with a transverse web 11, from which a preferably annular wall 12 projects upwardly and outwardly, preferably tapering or in the form of an inverted frusto cone, adapted to be received within the upright frusto-cone-formed mouth of the can. The mouth of the can and the side wall of the cover are tapered in opposite directions, the cover forming a plug for the mouth. The cover is provided with a doubled bead 15, which comprises an outer bead which merges into the upper edge of the wall of the cover with a transverse curve 16, about the inner face of which the upper edge of the lip is adapted to curl, as shown at 17, when the plug is seated. The upper edge of the wall of the cover is curled for forming the curve 16, the curl being continued for projecting the wall of the cover to the side outwardly, as shown at 18, the curve or curl being still continued for projecting the material of the cover downwardly and inwardly, as shown at 19, and continued farther, as shown at 20, for projecting the curl or curve upwardly and inwardly and, as shown at 21, for continuing said curl or curve outwardly within the outer bead and forming an inner bead, between which beads of said doubled bead the lip 6 is held and clamped with a double side joint. The curled portion 20 and the adjacent side face of the inverted frusto-conical wall of the plug thus form a widened plug-mouth for the ready reception of the cut lip of the can-mouth.

The inner and outer beads form curved faces lying adjacent to each other and extending in the same general direction, between which the outer edge of the lip is adapted to be forced by applying pressure to the top of the cover, and thereby assume a similar curve projected in the same general direction taken by said previously-curved inner and outer curls of the doubled bead, which thereby forms a die therefor, thus forming a double seal, each of which is formed by the side faces of the material of the plug and lip, respectively, and each of which aids in clamping and maintaining the other in clamped position, the continuously transversely curved connection of the beads with said side wall permitting the lip to be inserted between said side wall and the bead and forced therebetween to any desired extent for forming the double seal. The reduced end of the plug is received by the outwardly-projected free end of the lip of the mouth of the can—that is to say, the free end of the lip of the mouth is presented to the plug when the latter is inserted, the plug tapering to a size larger than the diameter of the outer end of the mouth when the latter is

in normal or unspread relation, the mouth being resilient. Upon pressure being applied to the top of the cover the cover is forced into the mouth and caused to be hugged by the lip of the mouth, the tapering sides of the depending part of the cover spreading the same and in turn being squeezed thereby for causing a close joint between the plug and lip, extending for a substantial width between the mating inner face of the lip and the outer face of the tapering wall of the plug. The outer edge of the lip is preferably the cut edge of the material of which the lip is composed—as tin, for instance. The cut edge of the material composing the lip affords additional resiliency to the lip increasingly toward the outer edge of the lip for permitting the outer edge to spread relatively more than the inner portion of the lip and permitting a greater belt of contact between the plug and lip. Forcing the tapered cover within the outwardly-projecting lip causes the inner face of the lip to conform to the contour of the outer face of the wall of the plug, the lateral pressure of the lip acting against the wall of the plug for seeking and finding a close fit.

The inner curl of the bead is closely adjacent the inner face of the outer curl, the outer face of the lip taking against and being pressed by the inner curl of the bead, the plug-mouth permitting ready insertion of said cut lip between the beads. The said inner curl of the bead presses upon the outer face of the lip and forms a seal therewith, forming a belt of contact between the side faces of the lip and curl, respectively. In this manner a double seal is formed between the lip and the inner and outer curls of the bead, said seals forming comparatively wide belts of contact between said respective faces, said respective faces being pressed toward each other by the peculiar construction of the parts.

A body of packing 22, composed, preferably, of sticky substance slightly subject to evaporation, may be inserted within the doubled bead, the outer edge of the lip taking into the same for forming an additional seal, and a body of packing 23 may be placed in the groove of the annular lip portion, into which the bead may take.

In the form shown in Figs. 5 and 6 the lip of the can projects upwardly immediately adjacent the downwardly-projecting inner wall 8 of the ring, and the outer face of the bead is substantially flush with the outer annular face of the can-body, thereby affording a larger mouth for the can-body and less liability of any of the contents of the can being retained thereby when emptying the same, the bead being spaced from the upper outer annular edge of the can-body, as shown at 24.

The bead as constructed forms a strong reinforce for the can, and the can can be easily opened by the insertion of a suitable instrument, as a knife-blade, between the bead and top edge of the can-body. After initial opening of the can the cover can be repeatedly removed and replaced for gradual consumption of the contents of the can.

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

1. A can having a mouth formed of an annular wall of sheet metal terminating in an outer cut edge of said sheet metal, with a sheet-metal plug therefor comprising a connecting-web and an annular wall of inverted frusto-conical shape terminating at its upper end in a double bead having the cut end of the sheet metal composing the plug projected a considerable distance into the inside of said double bead, the inner and outer curls of said double bead forming adjacent mating side faces curled in similar general direction facing each other, with said annular wall of said can-mouth extending a considerable distance between said mating side faces and said cut edge of said can-mouth located a considerable distance into the interior of said double bead for forming side contacting faces between both sides of said annular wall of said can-mouth and said adjacent mating side faces of said double bead, substantially as described.

2. A can having an outwardly-extending mouth formed of an annular wall of upright frusto-conical shape terminating in a cut edge, and a plug having a transverse web and a wall of inverted frusto-conical shape merging into an outward double-curl bead having inner adjacent mating side faces projecting in the same general direction and the inner curl of which is curled upwardly from the lower part of said double-curl bead toward said inverted frusto-conical plug-wall and into the outer curl of said double-curl bead for forming a widened plug-mouth for the ready reception of said annular upright frusto-conical wall of said can-mouth, said can-mouth taking between and engaging said inner adjacent mating side faces of said double-curl bead for forming side contact-belts of considerable width formed by the said inner adjacent mating side faces and the side faces of said annular wall of said can-mouth, said belts of contact extending a considerable distance below the upper cut edge of said can-mouth to both sides of the wall of said mouth, substantially as described.

In testimony whereof I have signed my name hereto in the presence of two subscribing witnesses.

JOSEPH J. MOSER.

Witnesses:
HENRY N. BAUER,
FRED ABEL.