May 9, 1939. D. M. ROSS 2,157,218

CLOSURE DEVICE

Filed Oct. 14, 1935

Fig. 1.

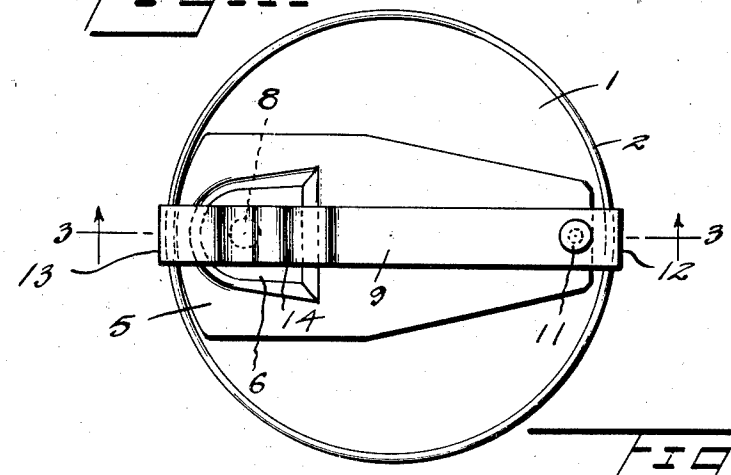


Fig. 2.

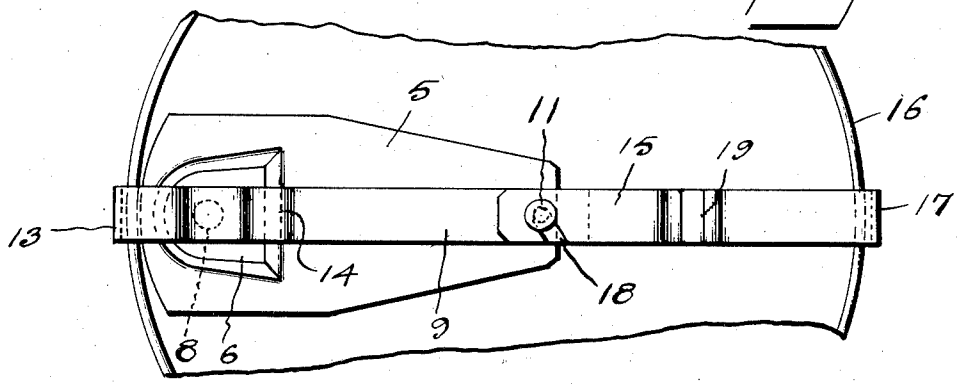
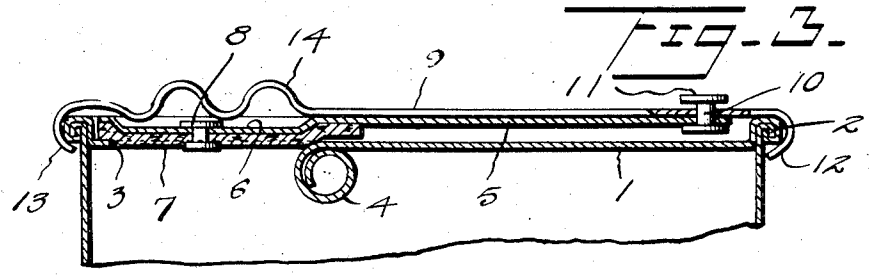


Fig. 3.



Inventor

D. M. Ross

By Watson E. Coleman Attorney

Patented May 9, 1939

2,157,218

UNITED STATES PATENT OFFICE

2,157,218

CLOSURE DEVICE

Donald M. Ross, Granger, Wash.

Application October 14, 1935, Serial No. 44,931

3 Claims. (Cl. 220—24)

This invention relates to the class of closure devices, and pertains particularly to devices designed for application to dispensing receptacles.

In the sale of lubricating oil from sealed containers, it frequently becomes necessary to put aside a partially emptied container, and at the present time no suitable means is available for closing the punctured top to prevent the entrance of grit or dirt into the receptacle.

The primary object of the present invention is to provide a device which may be applied to such a receptacle to close the opening formed in the top so as to keep the contents clean until the remainder thereof may be used.

A further object of the invention is to provide a device of the above described character which may be readily applied to receptacles of different sizes.

A still further object of the invention is to provide a plate member having a resilient pad upon one surface thereof, with means oscillatably attached to the plate whereby, upon placing the plate upon the top of the receptacle with the pad over the dispensing opening thereof, the said means may be resiliently engaged with opposite points on the periphery of the can top so as to resiliently secure the member and pad in position.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention, as expressed in the appended claims.

In the drawing:

Figure 1 is a view in top plan of a can or receptacle of the type usually employed for marketing certain types of lubricating oil, showing the device embodying the present invention applied to the top thereof.

Fig. 2 is a view of a portion of a can of a larger size than that shown in Fig. 1, showing the method of securing the closure element thereto by means of a supplemental unit.

Fig. 3 is a sectional view taken upon the line 3—3 of Fig. 1, and showing the structure of this figure upon an enlarged scale.

Referring now more particularly to the drawing wherein like numerals of reference indicate corresponding parts throughout the several views, the numeral 1 indicates the top of a receptacle which may be of the standard one-quart type and which has a beaded flange 2, as is usual with metallic receptacles of this character.

In preparing these receptacles for the discharge of the contents, a punching device is employed which forms an opening in the top 1 adjacent the periphery, as indicated at 3, and which is substantially triangular in outline, the portion punched out being rolled back upon the underside of the top, as indicated at 4.

The device embodying the present invention by means of which the opening 3 may be closed when it is necessary to set aside or reserve a portion of the can contents, comprises a plate member 5 which may be of any suitable configuration but which is preferably of the elongated form here illustrated. This plate may be of a length to fit snugly between opposite points on the periphery 2 of the can or receptacle when lying upon the top 1 in the manner shown, and adjacent one end the plate is pressed to form an offset area 6 having a contour substantially conforming with the contour of the opening 3 in the can top 2. Overlying the out-pressed side of the area 6 is a flat gasket 7 which may be formed of cork or any other suitable material and which is of greater area than the opening 3 and the portion 6 against which it lies, and this is secured to the plate or body 5 by a rivet 8 or any other suitable securing means.

Overlying the top of the plate 5 is a strap of resilient metal 9 which is attached adjacent one end to the end of the plate remote from the area 6, by means of a rivet 10. This rivet has a head 11 which is in spaced relation with the strap 9, as shown in Fig. 3, for the purpose hereinafter described. The ends of the strap 9 are turned to form the hooks 12 and 13, and at any suitable point between one end and the rivet 10, the strap is provided with the transverse ribs or corrugations 14 which permit of a slight lengthening of the strap when the same is secured across the top of the can, as shown in Fig. 1, for the purpose of holding the plate 5 in position. As will be readily apparent from Figs. 1 and 3, the device is used by placing the plate 5 upon the top 1 with the gasket portion 7 over the opening 3, the strap 9 being disposed obliquely to the length of the plate with the hook 12, which is nearest the rivet 10, engaged across the flange or bead 2. By swinging the strap 9 into the position in which it is shown in Fig. 1 so as to slide the hook 13 under the bead 2, and so

as to bring the hooks 12 and 13 at diametrically opposite points with the strap longitudinally of the plate 5, it will be apparent that when the strap is designed of the proper length to span the top 1, the gasket 7 will be pressed firmly down over the opening 3 to thus effectively close the same.

When a can of larger capacity than that shown in Fig. 1 is opened and partially emptied, such, for example, as a five-quart capacity can, the device illustrated in Fig. 1 cannot be employed for closing the opening without the use of an accessory element such as that illustrated in Fig. 2, and indicated by the numeral 15. This larger capacity can, is indicated generally by the numeral 16. The closure device is placed upon the top of the large can with the gasket 7 overlying the discharge opening therein in the same manner as described in connection with its application to a smaller can, and the hook portion 13 of the strap 9 is engaged over the edge or bead of the can with the strap extending longitudinally of the plate 5. The auxiliary device comprises a resilient strap similar to the strap 9 and having at one end a hook 17 which engages over the bead of the can top at a point opposite from the hook 13, but at the opposite end of this auxiliary strap 15 a notch 18 is formed in one edge which is designed to receive the rivet 10 beneath the head 11 thereof. In forming the connection of the auxiliary strap 15 with the rivet 10 and securing the plate 5 upon the larger can, the strap 15 is first attached to the rivet 10 and is then oscillated in the plane of the can top so as to bring the hook end 17 into the desired engagement with the edge of the can, thus alining the two straps in the manner illustrated in Fig. 2. The auxiliary strap 15 is also provided with a transverse corrugation 19 to give a longitudinal resiliency to this strap and thus facilitate its tight application with the strap 9 across the can top.

From the foregoing it will be readily apparent that the device herein described may be easily and quickly attached to a can or other receptacle of this character so as to effect a positive closing of the discharge opening, and when it is necessary to discharge some of or all of the contents of the can, the device is easily removed by merely oscillating the strap 9, or either of the two straps 9 and 15 when the device is used upon a large-size can.

I claim:

1. Closing means for an outlet opening in a can top, comprising a plate adapted to lie upon the can top with a portion over the opening, a pivot member carried by the plate remote from the opening covering portion thereof, a flat securing strap secured by said pivot to the plate for oscillation across and in contact throughout the major portion of its length with the adjacent surface of the plate, and hook means at each end of the strap adapted to engage opposite points on the edge of the can when the strap is oscillated over and in contact with the plate, said strap having an inherent resiliency and being transversely corrugated to yield longitudinally when the hook means are moved into edge engaging position.

2. Closing means for an outlet opening in a can top, comprising a plate adapted to lie upon the can top with a portion over the opening, a pivot member carried by the plate remote from the opening covering portion thereof, a flat securing strap connected by said pivot to the plate for oscillation in a plane paralleling the adjacent surface of the plate, the said strap being arranged to contact through the major portion of its length with the plate, hook means at one end of the strap adapted to engage over the edge of the can when the strap is oscillated while the plate lies over said top, and a second strap of resilient material having one end pivotally coupled with said member and having a hook at its other end for engagement over the can edge opposite the first hook, said last strap having a portion transversely bowed to give a spring-like character thereto.

3. Discharge-opening closing means for a can-like receptacle in which said opening is formed in the receptacle top, comprising a plate having a sufficient width at one end to cover the opening and a length to extend a substantial distance across the top, a gasket carried by the plate to overlie the opening, an elongated securing means consisting of two strap portions, means securing one strap portion at one end to the top side of the plate at a point remote from the gasket, the other second strap portion having one end pivotally coupled with said securing means, said first strap portion being in contact thru the major portion of its length with the plate, a hook member at the remote ends of the strap portions for engagement over the opposite side edges of the receptacle, and means whereby a resilient elongation of the said securing means may occur when the said hook members are engaged with the said side edges of a receptacle.

DONALD M. ROSS.