June 4, 1940. J. S. KAHN 2,203,156

COMBINED CONTAINER OPENER AND LIQUID DISPENSER

Original Filed May 4, 1936

Fig. 1.

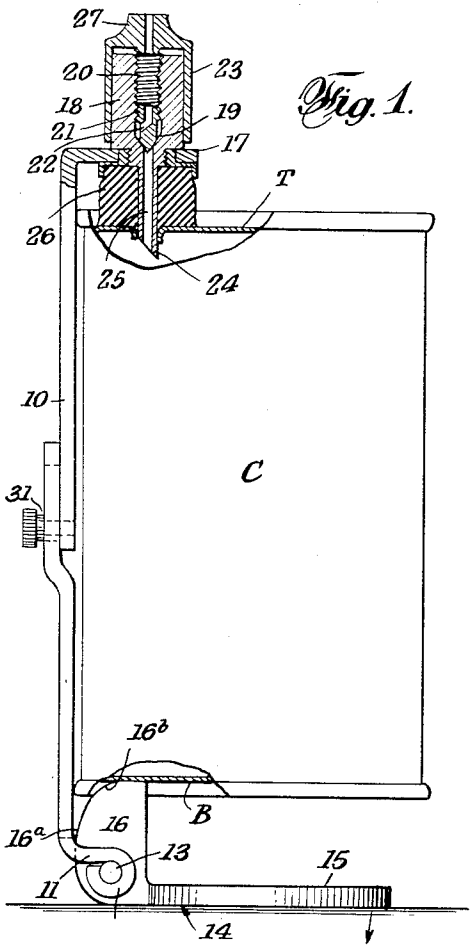


Fig. 3.

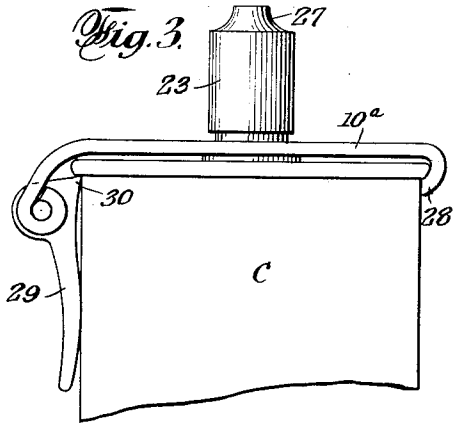


Fig. 4.

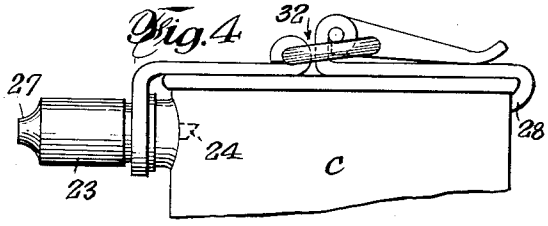


Fig. 5.

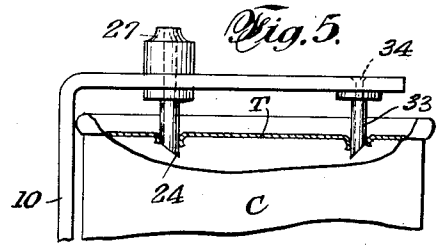


Fig. 2.

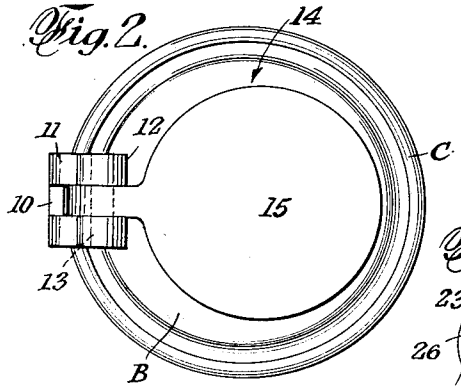


Fig. 7.

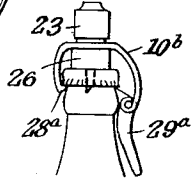
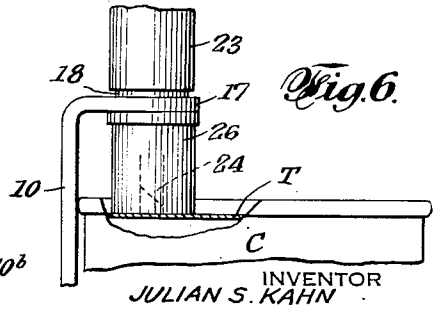


Fig. 6.



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COMBINED CONTAINER OPENER AND LIQUID DISPENSER

Julian S. Kahn, New York, N. Y.

Application May 4, 1936, Serial No. 77,701
Renewed September 30, 1939

9 Claims. (Cl. 221—23)

This invention relates to improvements in combined means for opening a container and dispensing liquid therefrom. More particularly, the invention deals with means of this type for dispensing liquids under pressure, such as beer, carbonated water, and the like.

The present manner of putting up beer for home consumption in metal containers, has met considerable commercial success. However, this success is not, at present, as universal as it might be for the reason that opening methods of said containers are more or less haphazard. Due to the pressure in the containers, the consumer and the surrounding napery are often subjected to uncontrolled drenchings despite the fact that the pressure in the containers has been reduced to a minimum. The brewers, however, would like to increase the pressure now employed, in order to provide the beer, when poured, with the creamy, foamy "head" or "collar" so much desired.

The present invention, therefore, seeks to provide improved means for safely and quickly opening a pressure stored liquid container and for simply dispensing said liquid from the container in desired quantities without wholly dissipating the pressure within the container until the entire contents thereof are dispensed.

The invention also contemplates means whereby the brewer may provide an increased pressure in the container to provide the beer therein with a desirable foamy head when poured.

More specifically the invention seeks to provide an instrument applicable to beer cans or the like, for rupturing a portion of said can, sealing said ruptured point against inadvertent loss of liquid or pressure, and dispensing the liquid under controlled valve means.

With the above and other objects, advantages and features in mind, the invention resides in the novel device as illustrated in several forms in the accompanying drawing which is described in the following specification.

In the drawing, which is intended for illustrative purposes only:

Fig. 1 is a side view partly in section, of a device as contemplated in this invention and as applied to a usual form of beer can.

Fig. 2 is a plan view of the clamp end thereof.

Fig. 3 is a side view of an alternate form of device.

Fig. 4 is a similar view of still another form.

Fig. 5 is a broken side view of a modification of the form shown in Figure 1 as applied to a non-pressure container.

Fig. 6 is a fragmentary side view of the opening and valving means of the form of the invention shown in Figure 1, before rupturing of the can.

Fig. 7 shows the device engaged upon the crown cap of a bottle.

In greater detail, the can C of usual design, is provided with end walls T and B. The device, shown in Figures 1, 2, and 6, as applied to this can, is provided with a longitudinal strap member **10** inturned at **11** to form a bearing **12** for the pin **13** upon which is mounted a clamp member **14**. This member, in the present form, comprises a handle portion **15** and a cam portion **16** adapted to engage against, for instance, the wall B.

As shown, the handle portion **15** is preferably formed as a support for the can when the contents are not being poured.

The other end of the strap **10**, is also inturned as at **17** and upon this inturned portion is mounted a valve body **18**, provided with a valve seat **19**, and threaded for a needle valve member **20**. This member is apertured at **21**, said aperture being in communication with the valve chamber **22**. Suitable means, such as the skirt **23**, may be provided for manipulation of the valve stem **20**.

The above valve structure is preferably arranged above the inturned portion **17**, while below said portion there is provided an extension of the valve body in the form of a sharpened stem **24** having a passage **25** in communication with the valve chamber **22** and controlled by the valve stem **20**.

Surrounding the stem **24**, and extending beyond the end thereof, there is preferably provided a compressible sealing member **26**.

As shown, in Figure 6, the device is positioned so the sealing member rests upon the can wall T. In this position the clamp handle **15** is vertically pendent, the low part **16a**, of the cam **16** being clear of the can bottom B. As the handle **15** is swung upwardly to the position shown in Figure 1, the high part **16b** engages the bottom B to draw the strap **10** downwardly, thus initially compressing the sealing member **26** as shown and then forcing the sharp end of the stem **24** through the can top T. It will be noted that the can interior is effectively sealed during the rupturing operation and said interior remains sealed so long as the valve stem **20** is on its seat.

When the liquid is to be dispensed the can is inverted so the valve nozzle **27** is directed towards a glass or other container into which the liquid is to be poured and the valve is opened. The gases within the can will rise to the top, that

is towards the wall B, and the liquid will be forced thereby through the passages 25 and 21 into the receiving vessel. The rate of flow may be varied at will by manipulation of the valve skirt 23 and the valve quickly and easily closed when a desired amount has been thus dispensed. Any liquid remaining in the can will not deteriorate since the pressure therein is dissipated only in proportion to the amount of liquid poured. Hence, the can may be stored, partly full, until used again.

When the can is empty, the device may be easily removed by swinging the handle 15 in the direction of the arrow. It is then ready for application to another can.

While this device is shown as applied to a metal can, it is apparent that it may be designed for application to a glass bottle having a crown seal. In this event, the cam 16 would engage the bottom of the bottle and the stem 24 would pierce through the top of the crown cap in the manner above outlined.

The form of the invention illustrated in Figure 3, shows the clamp 10^a extending across one end of the container with a hook portion 28 engaging the edge head thereof and a pivoted locking member 29 having a point 30 engaging a diametrally opposite portion of said head.

Both forms of the invention shown in Figures 1 and 3 may be provided with sizing means such as the adjustment 31 (Figure 1).

Another form of the invention (Figure 4) may comprise a device having toggle means 32 for clamping on a can. The device may be designed to be applied longitudinally of the can or, as shown, across one end thereof. In the latter instance, the piercing stem 24 and the valve structure would be arranged laterally at a point adjacent the can top.

The invention may also be practised on non-pressure containing cans, such as cans of condensed milk and the like. In that event, it is not necessary to seal the point of rupture as heretofore, but the device is provided with an additional piercing member 33 which is hollow to permit ingress of air to the can as its contents is being poured through the nozzle 27 (Figure 5).

While this specification makes mention of cans, it is understood that the invention may be applied to any container having like properties and while the foregoing applications of the invention contemplate whole containers, the device may be designed to be engaged upon the crown cap of a bottle as shown in Figure 7. In this case, the member 10^b may have a hook end 28^a to engage the cap skirt in a manner similar to the hook 28 of the device shown in Figure 3, and a locking member 29^a may be adapted to engage a diametrally opposite portion of the crown cap.

Although the invention has been shown in many different forms, still other embodiments thereof may be apparent to skilled persons. For this reason, the invention as claimed, should have its scope limited by the prior art rather than this specific disclosure.

I claim:

1. A device of the character described comprising a hollow member adapted to pierce a wall of a container, means for sealing before piercing, the area of the container to be pierced, valve means for controlling and regulating the flow of liquid through said hollow member, and means for engaging a portion of the container opposed to the mentioned wall for retaining the device upon said container.

2. A combined container opener and liquid dispenser comprising a member adapted to be co-extensive with a major dimension of a container, means for clamping said member upon said container, tubular means carried by said member for piercing a wall of the container, means operative prior to the piercing, for sealing the tubular means adjacent to and surrounding the area to be pierced, and means for controlling the flow of liquid through the rupture formed by the piercing means.

3. A combined container opener and liquid dispenser comprising a strap member, means for clamping said member upon a container, means carried by said member for piercing a wall of the container, means operative prior to the piercing, for sealing the piercing means adjacent to and surrounding the area to be pierced, and means for controlling the flow of liquid through the rupture formed by the piercing means.

4. The combination with a pressure filled liquid container having rupturable portions, of a combined rupturing and dispensing device comprising a clamp adapted to engage opposed portions of the container, a rupturing member, sealing means for the ruptured portion of the container, said sealing means extending beyond the rupturing member to seal said member to the container in advance of the rupturing, and valve means for controlling the flow of pressure impelled liquid from the container.

5. In a device of the character described, means for rupturing a pressure filled liquid container comprising a hollow stem having a sharpened end and means disposed at a point opposite to the rupturing point for forcing said stem through a wall of the container, and means for sealing said rupture against the pressure in said container, said sealing means comprising a compressible member arranged about the mentioned stem and extending beyond the sharpened end thereof so that the stem may be sealed to the container in advance of the rupturing thereof and valve means for regulating and controlling the flow of liquid from the container.

6. As an article of manufacture, a device for puncturing and dispensing liquid from a pressure-filled container comprising a compressible tubular sealing member, a piercing stem wholly within said sealing member, a valve communicating with one end of said stem, and clamp means for forcing the other end of said stem through a wall of the container against the tension of said sealing member whereby the stem is effectively sealed to the container prior to and after the piercing thereof.

7. As an article of manufacture, a device for puncturing and dispensing liquid from a pressure-filled container comprising in combination a puncturing member, sealing means for the area surrounding the puncture, said sealing means extending beyond the puncturing member to seal said member to the container in advance of the puncturing thereof, and a clamp adapted to engage opposed portions of the container and to initially compress the sealing member and then to force the puncturing member through the wall of the container, and valve means for regulating and controlling the flow of liquid from the container.

8. The combination with a pressure charged liquid container having a penetrable wall, of an opener and dispensing device having a body, a puncturing member on said body, compressible sealing means associated with said puncturing

member, and means cooperating with said body for simultaneously urging said sealing means into contact with said container and actuating said puncturing member to penetrate the wall of said container and valve means for regulating and controlling the flow of liquid from the container.

9. The combination with a pressure-filled liquid container having rupturable portions, of a combined rupturing and dispensing device comprising a rupturing member, sealing means to surround the portion of the container to be ruptured, said sealing means extending beyond the rupturing member to seal said member to the container in advance of the rupturing, and valve means for controlling the flow of pressure-impelled liquid from the container.

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