Dec. 24, 1935. D. C. HIGBEE 2,025,450

CAN PERFORATOR AND HOLDER

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Fig. 1.

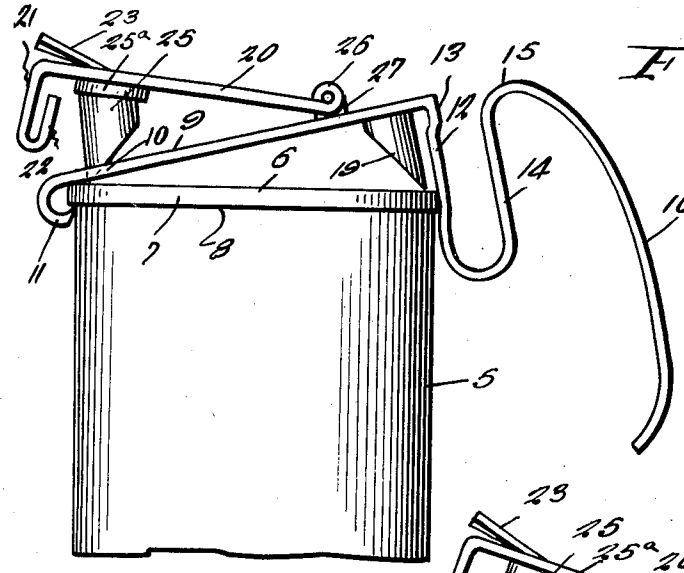


Fig. 2.

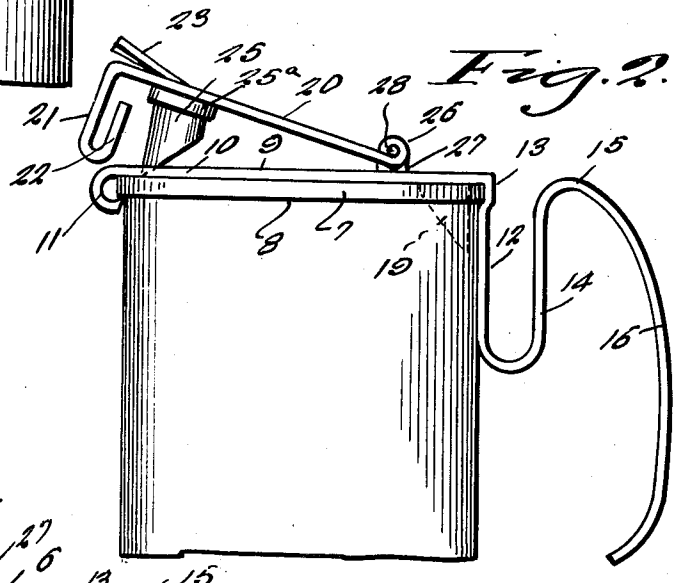


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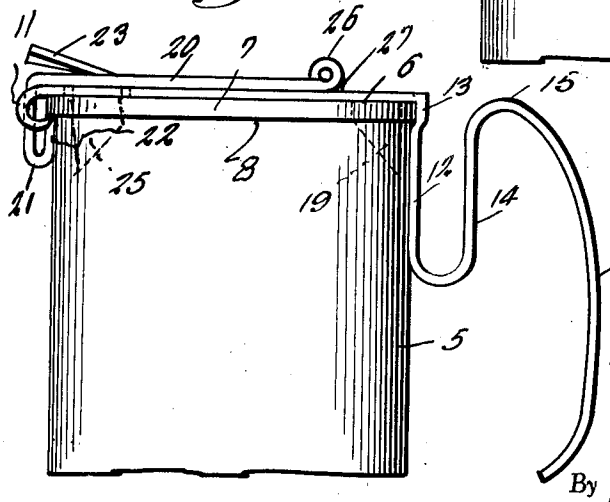
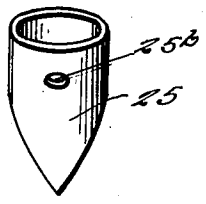


Fig. 4.



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Fig. 5.

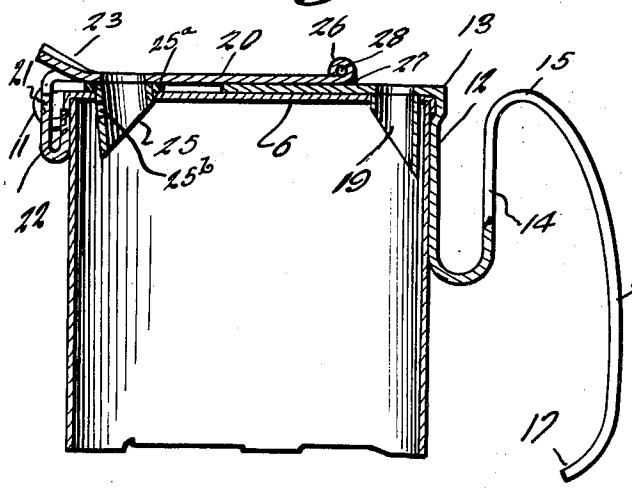


Fig. 8.

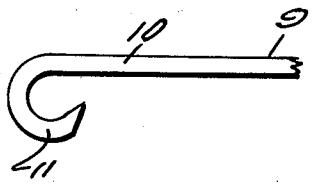


Fig. 4.

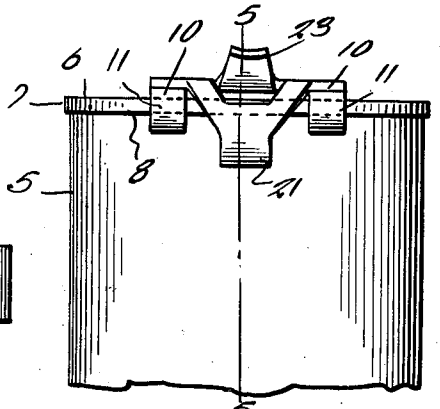


Fig. 6.

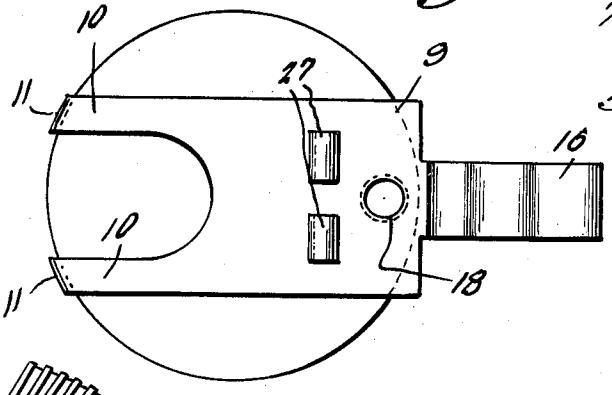


Fig. 7.

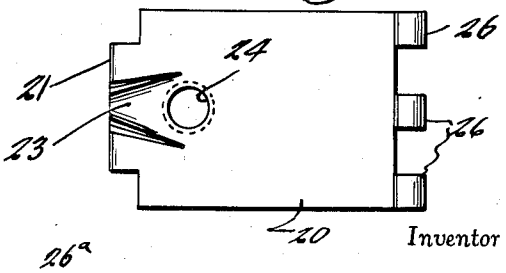
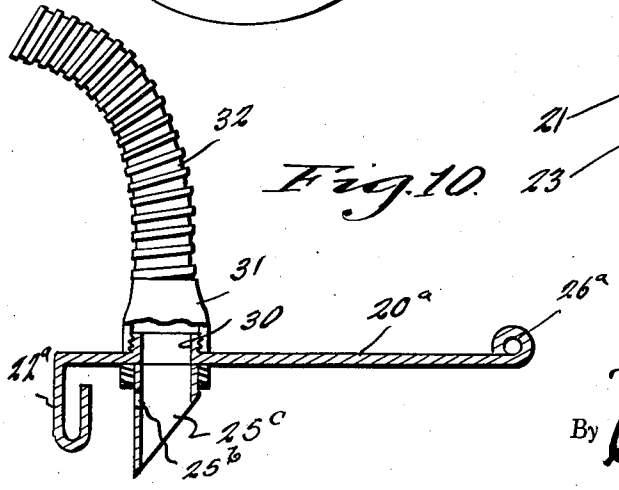


Fig. 10.



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CAN PERFORATOR AND HOLDER

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Fig. 11.

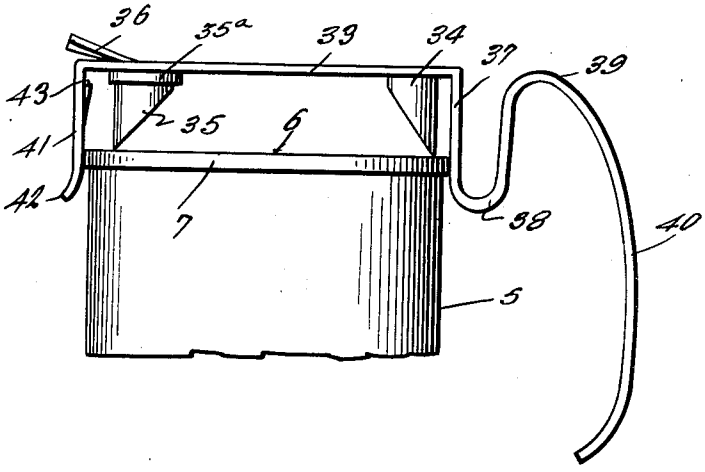


Fig. 14.

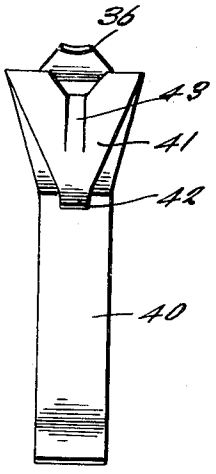


Fig. 12.

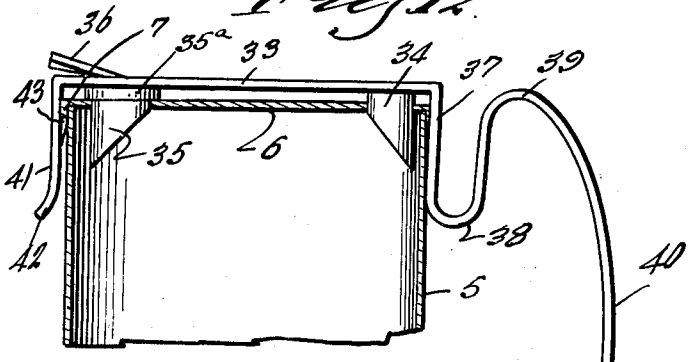


Fig. 15.

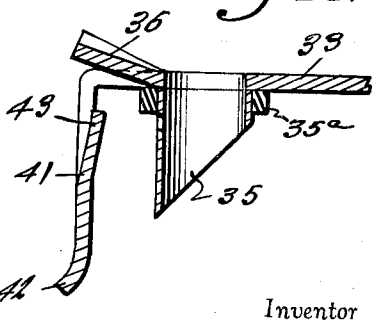
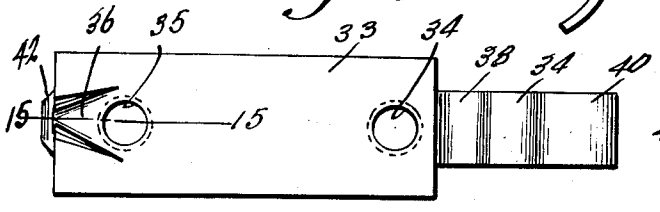


Fig. 13.



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UNITED STATES PATENT OFFICE

2,025,450

CAN PERFORATOR AND HOLDER

Don C. Higbee, Cantil, Calif.

Application April 11, 1935, Serial No. 15,871

4 Claims. (Cl. 221—23)

This invention relates to new and useful improvements in means for perforating cans and especially cans containing coffee cream and like liquids which must be poured from the can.

The principal object of the invention is to provide a combination can perforator and holder which in use will serve to permit punching of the can so that the contents thereof can be poured therefrom, while at the same time affording structure for holding the can while the said contents are being poured.

Another important object of the invention is to provide a device of the character stated which in construction is simple and of low cost to manufacture and which is easily handled and adapted for placement on a can.

Other important objects and advantages of the invention will become apparent to the reader of the following specification.

In the drawings:

Figure 1 represents a fragmentary side elevational view of a can showing the perforator and holder about to be disposed in place upon the can.

Figure 2 represents a fragmentary side elevational view of a can showing the combination device installed upon the can and just prior to the forcing through the top of the can of the punch.

Figure 3 represents a fragmentary side elevational view of a can with the combination device completely installed thereon.

Figure 4 represents an end elevational view of the combination device on a can.

Figure 5 represents a vertical sectional view through a portion of a can and the said combination device.

Figure 6 represents a top plan view of a can with the primary plate attached thereto.

Figure 7 represents a top plan view of the secondary plate.

Figure 8 represents a fragmentary edge elevational view of one of the claws of the primary plate.

Figure 9 represents a perspective view of the punch.

Figure 10 is a vertical sectional view through a slightly modified form of the invention showing a flexible conductor tube for the punch.

Figure 11 represents another modified form of the invention about to be engaged onto a can.

Figure 12 represents a vertical sectional view through a can showing in side elevation the form of the invention disclosed in Figure 11.

Figure 13 represents a top plan view of the combination device shown in Figure 12.

Figure 14 represents an end elevational view of the device shown in Figure 13 and Figure 12.

Figure 15 represents a fragmentary enlarged detailed sectional view taken substantially on line 15—15 of Figure 13.

Referring to the drawings wherein like numerals designate like parts, it can be seen that numeral 5 represents the can of conventional construction, such as is used for coffee cream and like liquids. This type of can is provided with a top 6 which is flexed over the side of the can as at 7 defining a shoulder 8.

The form of punch and holder shown in Figures 1 to 9 inclusive consists of the primary plate 9 which is substantially of rectangular construction and provided with a pair of spaced leg extensions 10—10 terminating inwardly directed hook-shaped claws 11, which are capable of engaging under the shoulder 8 in substantially the manner shown in Figures 1, 2 and 3. The plate 9 is provided with an elongated downwardly disposed extension 12, offset at its upper end as at 13 to receive the said flange 7. The extension 12 is bent upwardly as at 14 and then curves outwardly as at 15 and downwardly as at 16 and for a short ways inwardly as at 17 to define a handle which can be used to carry the can and the punch about intact with the parts in the relationship shown in substantially Figures 3 and 5.

The primary plate 9 is provided with an opening 18 from the edge portion of which depends the tubular punch 19 which when struck through the top 6 of the can provides an air vent.

Numeral 20 represents the secondary plate which as shown in Figure 7 is of substantially rectangular shape, the same being provided with a downturned portion 21 provided with an upturned lip 22 which engages the shoulder 8 of the top 6 in the manner substantially shown in Figure 5. This downturned portion 21 and a substantial portion of the secondary plate 20 is struck out to provide the inclined pouring lip 23. The secondary plate 20 adjacent the lip 23 is provided with an opening 24, from the edge portion of which depends the tubular punch 25 which when struck through the top 6 of the can forms an opening through which the contents of the can can be poured.

The secondary plate 20 is provided with hinge knuckles 26 which can be alined with the spaced barrels 27 on the primary plate 9 and a pin 28 can be disposed through these knuckles and bar-

rels to provide a hinged connection between the primary and secondary plates. It is to be understood that the extension 12 is of spring material so that the primary plate can readily snap in place over the flange portion 7 of the top 6.

Figure 10 shows a slightly modified form of the invention which is only in reference to the secondary plate. In this form of the invention numeral 20a represents the secondary plate and numeral 26a the hinged knuckles at one end thereof. The outer end of the secondary plate 20a is provided with the can cover engaging hook 22a, while adjacent this hook 22a the secondary plate 20a is provided with an upstanding externally threaded neck 30, which engages the connector 31 from which extends the flexible conduit 32. Depending from the under side of the plate 20a at the neck 30 is the tubular punch 25c. This type of secondary plate is specially adapted for use in conjunction with containers for dispensing oil into automobile crank cases.

Another form of the invention is shown in Figure 11 wherein a single plate 33 is employed and provided at one end with an air vent punch 34 and at its opposite end with a tubular punch 35 through which the contents of the can 5 can be poured, and poured over the lip 36 which is struck from this end of the plate 33. One end of the plate 33 is provided with a downwardly extending spring strip 37 which is turned upwardly as at 38 and downwardly again as at 39 to provide the handle 40, while the opposite end of the plate 33 is provided with the downwardly extending leg 41 disposed obliquely at its lower end as at 42 and provided with a shoulder 43 thereon. The leg 41 is of spring material, so that when the plate 33 is forced downwardly over the top of the can 5 the plungers 34—35 will be driven through the top 6 to provide an air vent opening and a pouring opening while the shoulder 43 will engage under the flange 7 and retain this perforator and holder in place.

As is clearly shown in Figures 5 and 10, the tubular punches 25 and 35 are provided with resilient collars 25a—35a, respectively, which bear against the can top over the opening made by the punch to prevent leakage when the can is tilted to pouring position. It can also be seen that the punches 25 and 35 are each provided with an opening 25b through which the last small quantity of fluid in the case can be poured.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit or scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

1. A can perforator and holder comprising a primary plate having a can engaging hook at one end and a depending inwardly disposed spring member at its opposite end for engaging a can, a secondary plate swingably attached at one end to the primary plate, said primary plate being provided with an opening therein, said secondary plate being provided with a tubular punch thereon adapted to be disposed through the opening in the primary plate to pierce the top of a can engaged by the primary plate.

2. A can perforator and holder comprising a primary plate having a can engaging hook at one end and a depending inwardly disposed spring member at its opposite end for engaging a can, a secondary plate swingably attached at one end to the primary plate, said primary plate being provided with an opening therein, said secondary plate being provided with a tubular punch thereon adapted to be disposed through the opening in the primary plate to pierce the top of a can engaged by the primary plate, said secondary plate being provided with an opening registering with the said tubular punch and a spout extending inclinedly upwardly from the secondary plate from a point adjacent the opening in the said secondary plate.

3. A can perforator and holder comprising a primary plate having a can engaging hook at one end and a depending inwardly disposed spring member at its opposite end for engaging a can, a secondary plate swingably attached at one end to the primary plate, said primary plate being provided with an opening therein, said secondary plate being provided with a tubular punch thereon adapted to be disposed through the opening in the primary plate to pierce the top of a can engaged by the primary plate, said inwardly disposed spring member being bent backwardly and then downwardly to provide a handle whereby a can on which the perforator is applied can be carried.

4. A can perforator and holder comprising a primary plate having a can engaging hook at one end and a depending inwardly disposed spring member at its opposite end for engaging a can, a secondary plate swingably attached at one end to the primary plate, said primary plate being provided with an opening therein, said secondary plate being provided with a tubular punch thereon adapted to be disposed through the opening in the primary plate to pierce the top of a can engaged by the primary plate, said hook-end of the primary plate being bifurcated, and a hook member on the free end of the secondary plate for disposition through the bifurcated hook-end of the primary plate to engage the upper portion of a can, to hold the said secondary plate in a downward position on the primary plate.

DON C. HIGBEE.