J. M. BUTCHER.

CAN OPENER.

APPLICATION FILED NOV. 6, 1920.

1,396,991. Patented Nov. 15, 1921.

Fig. 3.

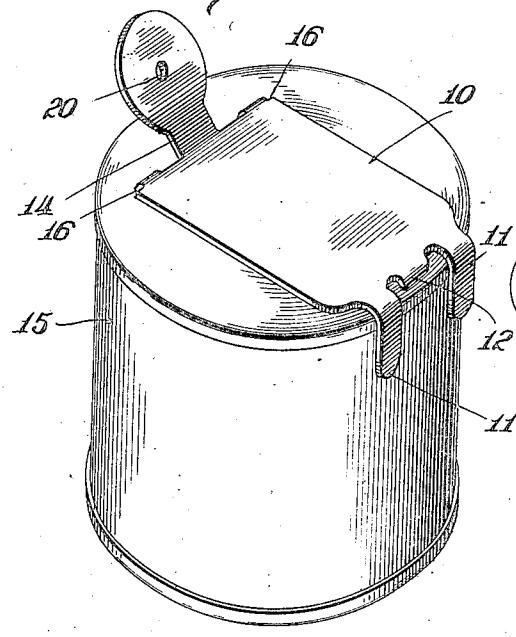


Fig. 1

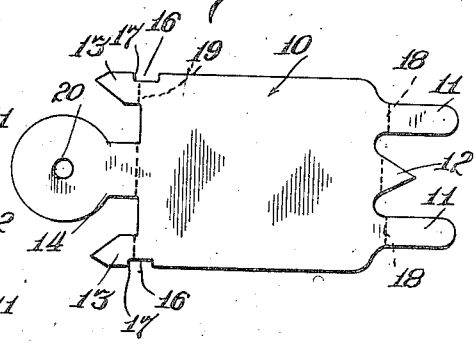


Fig. 4.

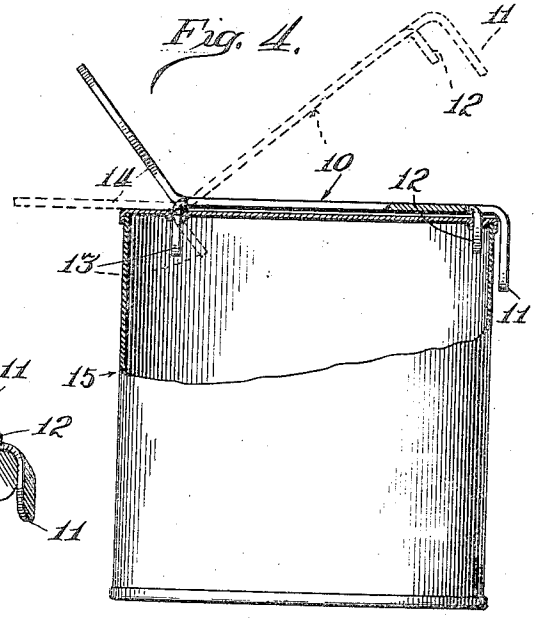
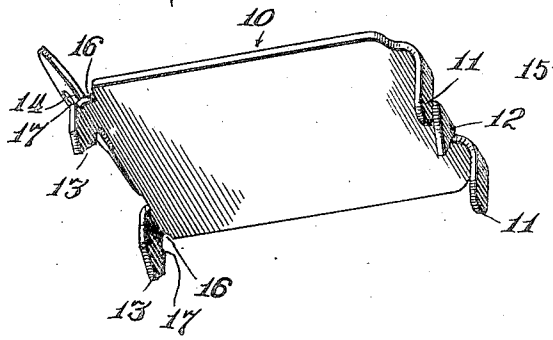


Fig. 2.



Witnesses
Milton Lenoir
F. A. Florall

Inventor
James M. Butcher,
Heidenway & Street.
Attorneys

UNITED STATES PATENT OFFICE.

JAMES M. BUTCHER, OF CHICAGO, ILLINOIS, ASSIGNOR TO KAKICHI NAKAMURA, OF CHICAGO, ILLINOIS.

CAN-OPENER.

1,396,991. Specification of Letters Patent. Patented Nov. 15, 1921.

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To all whom it may concern:

Be it known that I, JAMES M. BUTCHER, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Can-Openers, of which the following is a description, reference being had to the accompanying drawings, which form a part of my specification.

My invention relates to a device whereby the top or end of a hermetically sealed can may be provided with suitable perforations or openings which will permit the contents to be poured therefrom; while at the same time providing a device which will act as a lid or seal for said openings, when further extraction or pouring of the contents is no longer desired.

My invention relates more particularly to a device for use in connection with hermetically sealed tin cans containing liquids, such as condensed milk and the like, which can be readily poured from the can through a suitable sized opening without necessitating the entire removal of the can-top or end; the device being so formed as to not only provide a suitable opening for the passage of the liquid from the can, but also provide one or more openings sufficient to allow the air to enter and thus permit a ready flow of the contents from the can through the first mentioned or pouring opening.

One object of my invention is to provide a construction of the character mentioned which will be simple and inexpensive to manufacture and which will form such relation with the can on which it is used that the device will automatically lock itself in place and act as a suitable lid or cover for the perforations made by it in the can-top and at the same time provide a suitable grasp or holder whereby easy manipulation and handling of the can and device during pouring operation is made possible.

The objects and advantages of my invention will be more readily comprehended from the detailed description of the accompanying drawing, wherein:—

Figure 1 is a plan view of a blank of sheet metal cut to provide my improved opener.

Fig. 2 is a bottom perspective view of the opener stamped or bent into final form.

Fig. 3 illustrates, in perspective, the application of my improved opener to the end or top of a can after forcing the device into can perforating position.

Fig. 4 is a partial side and sectional view of my improved opener shown applied to a can; being shown in full lines in closing or sealing position and in dotted lines in open or pouring position.

My invention relates to a can opener whereby hermetically sealed cans may be provided with suitable apertures or perforations to permit the pouring of the liquid contents therethrough, while at the same time providing a device which will act as a lid or seal for the perforations when the can is not in use and in the particular exemplification of the invention as disclosed in the drawing, it consists of a suitable blank of sheet metal preferably cut so as to provide a substantially rectangular body portion 10 provided at one end with preferably two spaced extensions 11, 11, intermediate of which is provided a pointed extension 12 of less length than the extensions 11. The opposite end of the blank in its preferred form is provided with two spaced extensions 13, 13 preferably adjacent the sides and in longitudinal alinement with the longitudinal edges of the main portion of the blank. Intermediate of the two extensions 13, 13 is an extension 14 of greater length than the two extensions 13.

The extensions 11, 11 are intended to be bent substantially at right angles to the main portion of the blank 10, into the position indicated in Fig. 3 so as to engage with the side of the can 15 when the device is in use; and in order to obviate the necessity of providing the extensions 11, 11 with a transverse curvature corresponding with the curvature of the side of the can, I prefer to form the extensions 11 at points slightly within the planes of the longitudinal edges of the main portion of the blank 10 as clearly shown in Fig. 1.

The extension 12 is V-shape so as to provide a suitable sharp point adapted to puncture the top or end of the can 15 and provide an opening of sufficient size; it being understood, of course, that the pointed extension 12 is also bent substantially at right angles to the main portion of the blank 10 in a direction similar to that of the extensions 11, 11.

The extensions or lugs 13, 13 at the opposite end of the blank have their sides

which are disposed in longitudinal alinement with the sides of the main portion of the blank each provided with a notch or cut-away portion as at 16, thereby providing each extension 13 with a shoulder 17, see Fig. 1. The extensions 13, 13 are also intended to be bent substantially at right angles to the main portion of the blank 10 and in a direction similar to the direction in which the extensions at the opposite end of the blank are bent; the extensions 11, 11 and 12 being preferably bent along the dotted line indicated at 18 in Fig. 1, while the extensions 13, 13 and 14 are preferably bent along the dotted line indicated at 19 in Fig. 1, namely at a point intermediate of the ends of the cut-out or notched portions 16 so that the shoulder 17 will normally extend flush with the perforations in the can-top. The ends of extensions 13, 13 are likewise made pointed as indicated in Fig. 1 to enable said extensions to penetrate and perforate the top or end of the can 15 in the manner indicated in Figs. 3 and 4.

The extension 14 may be given any desired configuration, terminating preferably in a substantially circular portion and it is preferably bent in a direction opposite to the other extensions, for example at an obtuse angle to the main portion of the blank, as shown in Fig. 3. The extension 14 is intended to provide a suitable grasp or handle for the device which will enable the user to tilt the opener into the position shown in dotted lines in Fig. 4 by slight downward pressure against extension 14, at which time the extensions 13, 13 will constitute the pivotal or fulcrum points for the device, as is clearly evident from the illustration in Fig. 4. The extensions 13, 13 are formed with the cut-out portions or notches 16 in order to provide suitable air-admitting openings in the can-top or end whereby sufficient air will be permitted to enter the can when the device is tilted into the position indicated in dotted lines, Fig. 4, namely into the pouring position when the can is also tilted and the puncturing extension or lug 12 withdrawn from its perforation in the can-top. The shoulders 17, formed on the extensions 13, will substantially close the perforations in the can-top formed by said extensions when the device is in normal position, namely flush with the can-top as shown in Fig. 3, thereby preventing the ingress of dirt, insects and the like, while the perforations produced by extension 12 will, of course, be substantially closed by said extension.

It is evident from the construction shown and described, that the extensions 13, 13 will prevent the accidental removal of the device from the can top when said device has been tilted into pouring position indicated in Fig. 4, because the extensions 13 will then be disposed to one side of the perforations produced thereby and will therefore occupy a position beneath the can-top as indicated in dotted lines in Fig. 4.

The extension or grasp portion 14 may be provided with a suitable aperture, as at 20, whereby the device may be suspended when not in use.

My improved device or can opener is not only made from a single blank of sheet metal, but it may be formed in two operations, namely first stamping or cutting the blank into the shape shown in Fig. 1 and then subjecting it to a press or former whereby the extensions are bent into the positions shown and described. The device enables a can-top to be readily opened upon placing the device in position with the extensions or lugs 11 overlapping the side of the can and then applying sufficient pressure on the device to induce the pointed extensions or lugs 12 and 13 to puncture the can-top or end as shown; the lug or extension 12 completely filling and therefore substantially sealing the perforation produced thereby when the device is left in position on top of the can, while the shoulders 17 of the extensions 13 will be flush with the lower side of the can-top and thus seal the openings produced thereby when the device is dropped down into the position shown in Fig. 3. The tilting of the device by pressure on the extension 14 causes the shoulders of lugs or extensions 13 to be moved away from beneath the perforations formed by said extensions, a distance sufficient to permit proper admission of air and thus enable a flow of the liquid contents from the can through the perforation produced by the extension or lug 12. My improved device therefore not only is adapted to properly open hermetically sealed cans, but the device at the same time acts as a cover or lid for the perforated can-top when left in place, as shown in Figs. 3 and 4.

I have shown and described what I believe to be the simplest and best adaptation of my invention, but modifications may be made in certain details of construction without, however, departing from the spirit of my invention.

What I claim is:—

1. A device of the character described, comprising a single blank of sheet metal, one end whereof, adjacent opposite longitudinal sides of the blank, is provided with a pair of integral extensions, bent at an angle to the main portion, adapted to engage with the sides of the can and with an integral intermediate perforating extension adapted to penetrate the can-top, while the opposite end of said blank adjacent opposite longitudinal sides is provided with a pair of integral pointed extensions, the outer longitudinal edges of said extensions being each

provided with a notch or cut away portion to provide air-inlets when the device is in a tilted position, said extensions being bent at an angle to the main portion of the blank in a direction similar to the extensions at the opposite end of said blank and at a point adjacent to one end of said notches or cut-away portions, and an extension intermediate of the said last mentioned extensions bent in a direction opposite to said extensions to constitute a handle portion.

2. As an article of manufacture, a rectangular flat blank of sheet metal provided at one end with integral extensions constituting can-side engaging and can-penetrating portions, while the other end is provided with integral extensions constituting can-penetrating and handle portions, the can-penetrating portions of the last mentioned extensions and all of the first mentioned extensions being bent toward one side of the blank while the handle portion of the last mentioned extensions is bent toward the other side of the blank, the outer longitudinal edges of the blank adjacent the can-penetrating portions of the second mentioned extensions being cut away longitudinally to provide air-admitting passages when the device is tilted about said can-penetrating portions and to provide sealing shoulders when said device lies flush with the can-top.

JAMES M. BUTCHER.

Witnesses:
G. HEIDMAN,
F. A. FLORELL.