Aug. 4, 1964 B. V. STILLER 3,142,903

OPENER

Filed Oct. 2, 1961

FIG. 1

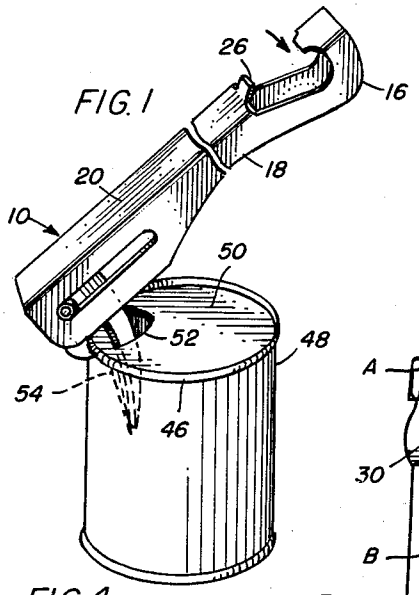


FIG. 2

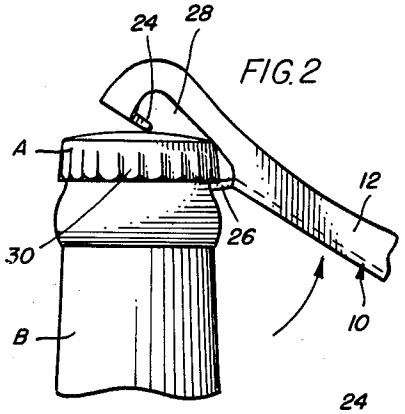


FIG. 3

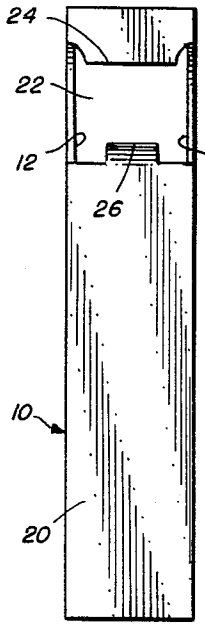


FIG. 4

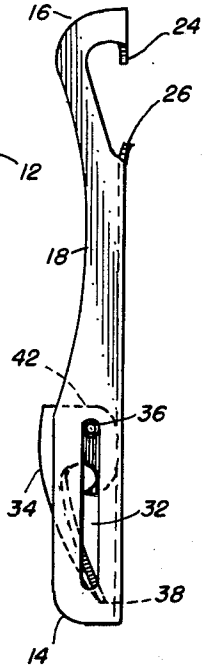


FIG. 5

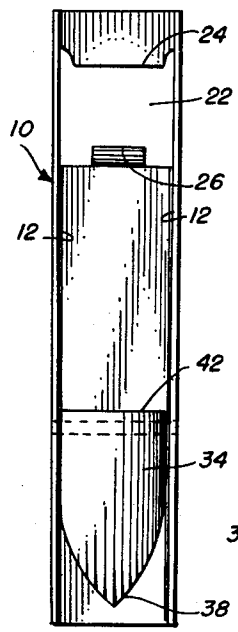
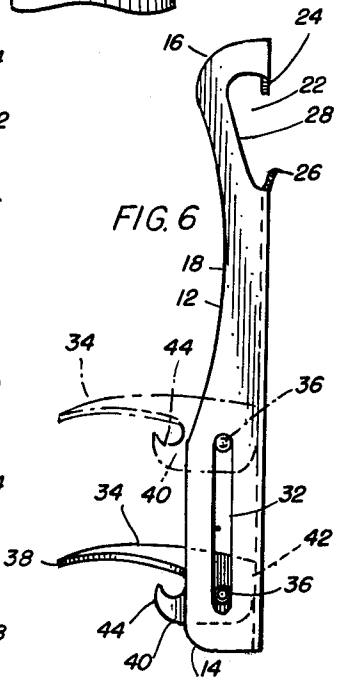


FIG. 6



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OPENER

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1 Claim. (Cl. 30—16)

This invention relates to an improved novel and unique device forming a combination push-can piercer, a bottle cap opener and remover, and a jar lid lifter. It may be applied to a can for juice or beverage, is operated by a leverage action, pushing the handle down which takes less effort and exertion in opening a can, and the operating blade which does the piercing is folded and nested inside of the handle when not in use.

Among the objects of the invention are to provide a can piercer having a foldable and slidable blade which does the can piercing that is nested smoothly within the sides of the handle when not in use.

A further object of the invention is to provide a can opener with a slidable and rotatable piercing device adapted to engage a projecting rim of a juice or beverage can which is opened by downward pressure on the top of the can so that less effort is required in piercing the top thereof.

A further object of the invention is to provide a downwardly operating can piercer in which a large opening is made in a can top confining any liquid which may escape at the instant of piercing the can being partially hoisted by the downwardly moving handle and the hand of an operator.

A further object of the invention is to provide a can piercer in which the sides of the handle are curved inwardly allowing the handle to be pressed downwardly past a 90° point making a large opening and pressing the pierced metal which is wedge-shaped back and within the inside of the can practically flush with the wall of the can to which the piercer is attached.

Another object of the can piercer construction is to form the handle with bent edges, the sides of which are curved inwardly permitting the handle to be pitched forward in applying a piercing device to the can which allows for better leverage and a larger angle of movement.

A still further object of the invention is to provide the handle of the piercer with a bottle cap engager and opener for application to press on lids of jars, bottles, and the like, in which the can piercer is smoothly confined within the handle for effective use and operation.

A still further object and safety feature of this can piercer is that the cutting blade which folds within the handle and slides on its pivot is smoothly contained within the formed sides of the handle and may be compactly carried in a pocket, golf bag tackle box, kitchen drawer and the like, without extension of the sharp end of the piercer and with the entire piercing device contained within the sides of the handle as a fold-away blade which cannot be used as an effective cutting weapon because the blade is not rigid except when used as a can piercer, and then engages a can by virtue of two small hooks in connection with the piercer and by engagement of the rear end of the piercer with the handle itself.

Other objects of the invention will appear in the specification and will be more apparent from the accompanying drawings in which,

FIG. 1 is a perspective view illustrating the application of the can piercer to the projecting rim of a metal can in which a wedge-shaped piece of metal is pressed rearwardly within the can top to form a large opener;

FIG. 2 illustrates the application of the bottle cap remover at the outer end of the handle as applied to a bottle top;

FIG. 3 is a top view of the piercer showing a large clear top space;

FIG. 4 is a side elevation of the piercer as shown in FIG. 1;

FIG. 5 is a bottom view of the piercer as shown in FIG. 1; and FIG. 6 illustrates the piercer with the blade extended for piercing a can in one position and showing the space to which the piercer is movable in a dotted position.

This opener makes a relatively large hole in a can top for juice or beverage so that the contents may be poured therefrom or easily dispensed by actually drinking from this one opening. The hole is made by piercing the top with a downward movement of the handle of the opener so that the lip formed by the cutter turns inwardly against the wall to which the device is attached at the rim of the can so that an increased leverage is applied to the cutter in a down direction which tends to seat the can and not to upset it, and the opening action is produced by a downward movement against the top surface.

Referring now more particularly to the drawings, a handle **10** is formed up preferably from sheet material, the edges are turned at right angles to form flanges **12** rounded at the ends **14** and **16** and formed with a depression or arcuate portion.

The outer surface **20** of the handle, opposite the flanges **12** is plain and has no metallic or other disfiguration so that it provides a substantial space for the application of the name of the device and direction for its use, or an advertisement of someone who supplies this device for use.

At one end, the handle is commonly provided with an opening **22** adapted to fit over the edge of a bottle cap A having an outer lip **24** substantially flush with the surface of the handle at the outer side of the opening **22** and a smaller and out-turned lip **26** at the opposite or inner side of the opening. Openings **28** also extend downwardly into the side flanges **12** opposite the main opening **22** and together with the lips provide means for engaging teeth or scallops **30** at the lower edge of the bottle cap with the outwardly turned lip **26** when the openings **22** and **28** are applied over the edge of a bottle cap A with the upper lip **24** engaging the top of the bottle cap so that this bottle cap may be disengaged from the neck of a bottle B in the ordinary manner by lifting up on the free end of the handle in the manner shown in FIG. 2.

At the other end of the handle and in both opposite flanges **12** are slots **32** parallel to the outer side of the handle and in these slots, a cutter **34** is mounted at a slight distance from one end upon a pintle **36** which extends into the slots **32** and allows the cutter to be rotated about 90° and moved longitudinally in the slots.

This cutter is preferably of rounded and hardened material having a sharp extremity **38** at the outer end of the cutter, the surface of the cutter being rounded inwardly at the sides and downwardly at the ends to form a stiff resistant and cutting end. This cutter is formed with integral sides **40** extending at right angles to the body thereof from a point through which the pintle **36** also extends and one end **42** of the cutter is spaced at such a distance from the pintle that when the cutter is raised and turned inwardly, the end **42** will engage the inside of the handle, preventing the cutter from being raised any further and limting its movement in that direction. At the other extremities of these sides **40** of the cutter are small hooks **44** which open toward the inwardly curved portion of the cutter providing means for engaging the cutter when in raised position as shown in FIG. 6 with a projecting ridge or rim **46** of a can **48** having a top **50**.

With this construction, the cutter **34** is raised from its position within the handle until the blade of the cutter

extends at right angles to the handle as shown in FIG. 6, the small hooks 44 are then exposed beneath the cutter and they may be engaged under or beneath a rim or edge of a can 48 as shown in FIG. 1 and the extremity of the cutter may be moved against the top 50 of a can. In this position, the handle of the cutter is inclined materially to the top of the can when it rests upon a horizontal surface, and it is most natural for a person in opening the can to press the handle forwardly and downwardly until the end of the projecting cutter 34 pierces the can making a relatively large hole 52 therein depending of course, upon the size of the cutter and the material 54 cut from the hole is pressed rearwardly and ultimately against the adjacent side of the can if the opener is pressed downwardly.

At this time, arcuate portions 18 of the handle will naturally engage the opposite edge of the can if the movement is continued in that direction allowing a complete pressure of the cut material against the can to insure a large opening. When the cut has been made, the opener is removed from the can and if desired, the cutter 34 may be slid lengthwise of the slots 32 on the pintle 36 and the sides 40 turned downwardly and inwardly toward or against the inside of the handle, thus folding the cutter against the inside thereof and contained by and between the side flanges. In this position, the point of the cutter is moved inwardly upon its pintle until the end thereof is within the rounded end 14 of the handle, seated entirely in the handle with the point turned inwardly so that it has no tendency to project and to engage material outside of the handle. Thus the opener is folded to a compact size and may easily be carried in a pocket, a golf bag, a tackle box and with other implements in a drawer or other container. The flat outer surface of the handle lends itself readily to the impression of a name for the opener, and an address or other directions where the cutter may be obtained.

Some containers of beverages and other liquids may require simply a pull-up standard bottle opener which is supplied as a part of the same opener so that it may have more practical application as a combination push-down can piercer, a pull-up bottle cap opener and a jar-lid lifter.

With this construction, the opener is capable of universal application as an opener for cans, bottles and other receptacles.

While I have thus described a preferred form of my

invention in some detail, it should be regarded by way of illustration and example rather than as a restriction or limitation of the invention since various changes may be made in the construction, combination and arrangement of the parts without departing from the spirit and scope of the invention.

I claim:

A safety push down piercer for a metal can top having a projecting rim surrounding the top, the piercer comprising a channel-shaped hand graspable metal handle with longitudinal slots in the opposite webs near one end, a cutter with a sharp point at one end for piercing a can top and with a channel-shaped portion at the other end of the cutter movable within the channel of the handle, a pintle for the cutter extending through both sides thereof and into the slots of the handle for pivoting the cutter to move rotatably and longitudinally in the slots of the handle, the cutter having an abutment at the channeled end near the pintle for engaging the inside of the handle and limting the rotation of the cutter in one direction, the channel sides of the cutter having small hooks at the edges opening away from the abutment of the cutter end adapted to engage under and beneath the outside of a rim of a can when the cutter is in extended position from the handle with the abutment rotated against the inside thereof, the cutter being rotatable in the handle in a direction opposite to that in engaging the abutment thereof to conceal the sharp point and hooks within said channel shaped handle, whereby the handle is raised at an angle above a can and moved downwardly upon the small hooks to press the sharp cutter point through the top of a can, and the cutter enclosable within the handle and movable longitudinally on its pintles in the slots to move it within, and to substantially enclose the cutter in this slotted portion of the handle.

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