

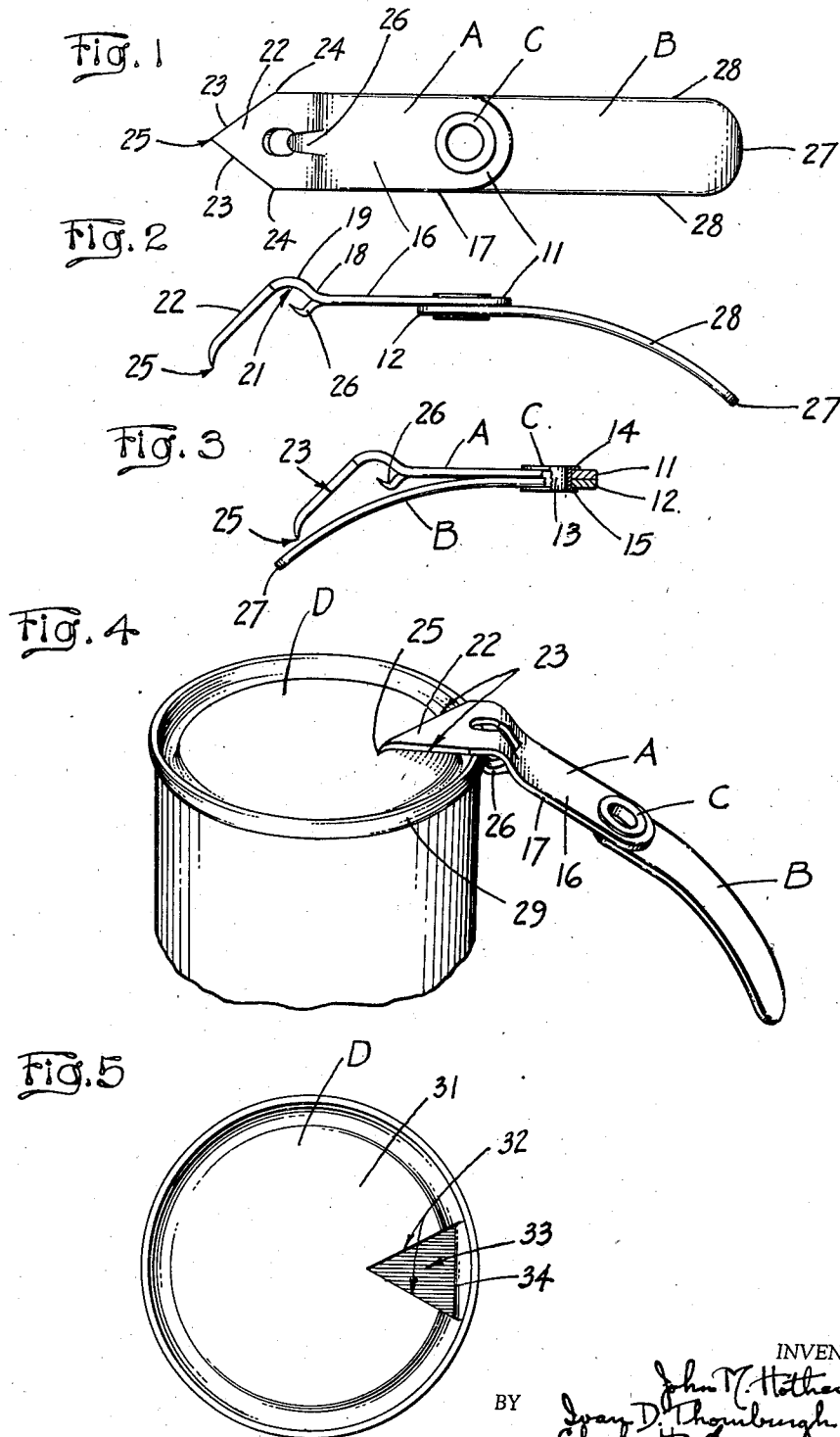
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J. M. HOTHERSALL

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CONTAINER OPENER

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INVENTOR.

BY

John M. Hothersall
Ivan D. Thompson
Charles H. Erbe
ATTORNEYS

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CONTAINER OPENER

John M. Hothersall, Brooklyn, N. Y., assignor to
American Can Company, New York, N. Y., a cor-
poration of New Jersey

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1 Claim. (Cl. 30—16)

This invention relates generally to container opening devices and more particularly to a punch opener of the lever type for quickly and easily producing a substantial pouring opening in liquid holding containers having a fulcrum serving projection such as an end seam or joint.

As such, the present invention is an improvement upon Patent Number 1,996,550 granted to me April 2, 1935, jointly with Dewitt F. Sampson.

A principal object of my invention is the provision of a punch opener which is foldable compactly into about one half the size of the device covered by my said prior patent and which when unfolded or extended to its full length is adapted to produce a substantial pouring opening, in one arcuate movement of the opener, in containers packed with liquids, such as beer cans, fruit juice cans, etc.

Another important object of the invention is the provision of such an opener made out of two pieces pivotally connected which when not in use may be carried compactly in a small space, if need be in a vest pocket of the user.

Another object of the invention is the provision of such a pivotally connected opener in which one of the foldable members acts as a shield for the sharp or cutting parts of the other foldable member.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawing, discloses a preferred embodiment thereof.

Referring to the drawing:

Figure 1 is a top or outer plan view of the opener;

Fig. 2 is a side view of the opener;

Fig. 3 is a side view of the opener folded into non-operative position, with parts broken away;

Fig. 4 is a perspective view showing the opener in starting position to open a container; and

Fig. 5 is a plan view of the top of a container showing the pouring opening produced by the opener.

To illustrate a preferred embodiment of the invention, the drawing shows in Fig. 1 a punch opener generally comprising a punch member A, a handle member B and a pivot member C, and in Fig. 4 a container D to be opened.

The members A and B are constructed from steel plate of like thickness and width which insures sufficient strength without superfluous bulk. The members A, B and C are preferably nickel plated to enhance their appearance and to protect them against rusting.

Both members A and B are perforated adjacent their pivot ends 11 and 12 (Fig. 2) for respective mounting upon the pivot member C, which comprises (Fig. 3) a rivet barrel 13 and rivet flanges 14 and 15. Preferably, the flange 15 is fixedly swaged to the handle member B, while the flange 14 makes a tight frictional fit with the punch member A, permitting the latter to pivot around it and the rivet barrel 13. But this arrangement may be reversed or both members A and B may frictionally rotate about the barrel 13.

The ends 11 and 12 are preferably rounded in semi-circular fashion to eliminate sharp corners.

The punch member A, forward from its pivot end comprises a flat plate section 16, having smoothly rounded side edges 17. At the bend 18, the section 16 merges into a concavo-convex container rim or seam engaging rounded part or hump 19, which provides a rounded recess 21 adapted to receive and loosely rock or pivot upon a container rim or similar projection, the recess 21 having sufficient range to receive and freely rock upon the rims of different kinds and sizes of containers.

The member 19 merges into the cutter punch proper. This punch member is curved or hooked inwardly (Fig. 4) from the plane of the section 16, and comprises a substantially triangular shaped cutting member 22, having two cutting edges 23 beginning at the terminal points 24 of the hump 19 and converging into a sharp slightly hooked cutting point 25, which comes first into cutting operation.

Cooperating with the hump 19 and in opposed alignment therewith, the member A is also formed with a container rim or projection engaging hook or lug 26. The lug 26 is preferably struck up, adjacent a central longitudinal line of the punch bearing member A, partially from the metal of the section 16 and partially from the metal of the hump 19. Its free end is beveled to a fairly sharp edge and terminates substantially in spaced alignment with the axis of the hump 19 and is adapted to engage the underside of a container rim, seam, or other projection.

The handle member B, rearward of its pivot end 12 (Fig. 2), is gradually curved inwardly or downwardly and terminates in a semi-circular smoothly rounded rear edge 27. Its side edges 28 are almost smoothly rounded.

When the opener is not in use or is to be carried or packed in a small space, the pivot member C upon which members A and B are mounted permits ready folding of the punch bearing member A upon the handle member B, as is clearly

illustrated in Fig. 3. In this compactly folded or non-operative position, the member A comes to lie over member B, the rounded rear edge 27 of the latter extending slightly beyond the cutter point 25 of the former, and thus the member B shields not only the sharp end of the hook or lug 26 but also the cutting edges 23 and the cutter point 25 and protects surrounding things from these sharp points. The folded opener may thus be conveniently carried in coat or vest pockets for ready use at picnics and at other places or occasions. In view of the fact that millions of beer, grapefruit and other beverage containers are being sold annually and are opened with this type of opener, its compactness and protection should greatly appeal to the ultimate consumer.

When the opener is to be used to punch a quick pouring opening in a container, it is unfolded from the position shown in Fig. 3 to the fully extended position of Fig. 4. It is positioned over the container D to be opened, with the hump 19 over the container rim or seam 29 and the hook or lug 26 engaging under the projecting rim or seam 29, and the cutter point 25 engaging the top end wall 31 of the container D.

A quick and steady upward pressure applied to the handle member B will then rock the opener about the rim 29 and cause the cutter point 25 to first pierce the metal at its point of contact and then the cutting edges 23 will cut the metal of the top along the lines 32 (see Fig. 5) thereby producing the triangular shaped pouring opening 33 in one arcuate stroke of the opener. The cut metal is thereby bent inwardly and outward-

ly against the side wall of the container D along the unsevered line 34.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

A device for producing a pouring opening in a container wall, comprising a punch member and a handle member pivotally secured thereto, said punch member at its outer end being deflected out of its plane and terminating in a piercing point, said handle member being of arcuate formation and having its outer end deflected in the same direction as the outer end of said punch member to permit said members to be folded into non-operative nested position, said handle member when in folded position being disposed against and shielding said piercing point when the device is in folded position, and fulcrum means on said punch member for engaging under the top rim of the container to rock said punch member inwardly when said handle and punch members are in extended position, whereby to cut a portion of a container wall and to deflect inwardly said cut portion, said fulcrum means when the device is in folded position being disposed between said handle and punch members.

JOHN M. HOTHERSALL.