

April 29, 1958

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2,832,134

CAN CUTTER

Filed Nov. 22, 1957

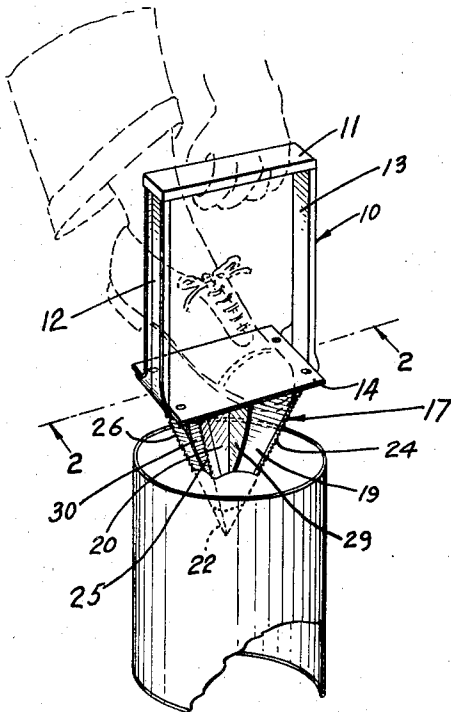


FIG. 1.

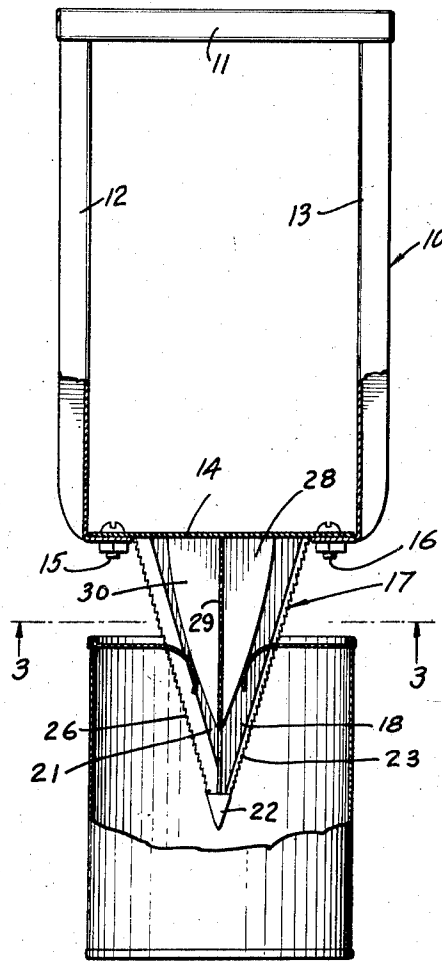


FIG. 2.

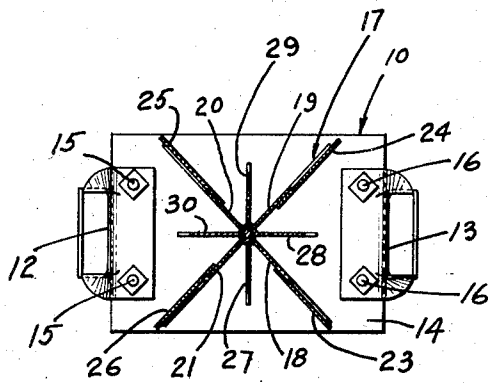


FIG. 3.

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CAN CUTTER

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Application November 22, 1957, Serial No. 698,080

7 Claims. (Cl. 30—16)

This invention relates to can cutting devices and has for an object to provide such a cutting device which can easily cut the end of a can or container, and lay it open.

Tin cans and the like of the type commonly used for containing food and other products are ordinarily opened by removing an end to expose the contents. After using the contents the can is disposed of. A cylindrical can is an inconvenient article to dispose of because a few such cans of relatively little weight occupy a relatively great volume. For this reason it is desirable to flatten the used cans so that they occupy less volume, with the result that many such flattened cans can occupy a relatively small space.

A can with an intact bottom is difficult to flatten, due to the strength of the bottom material. In accordance with the present invention, a cutting tool is provided, capable of cutting the can bottom and laying it open in a manner to remove most of the strength of the bottom material so that the cylindrical portion of the can can readily be flattened by stepping on it or the like.

The cutting tool comprises a pointed cutting element having a plurality of cutting edges converging toward each other downwardly toward the joint, and supported from a foot platform which is provided with a handle. The cutting edges are located at different angular positions from each other, and preferably are serrated, as sawblades. A convenient number of cutting edges is four, although some other number of edges than four could be used. According to a feature, roll back edges are provided at angular positions between the cutting edges to roll back the material of the can bottom as it is being cut by the cutting edges.

The foregoing and other features of the invention will be better understood from the following detailed description and the accompanying drawing of which:

Fig. 1 shows an isometric view of a cutting tool according to this invention in relation to the bottom of a can which is being cut;

Fig. 2 is a view partially in cross-section taken at line 2—2 of Fig. 1; and

Fig. 3 is a cross-section view taken at line 3—3 of Fig. 2.

Referring to the drawing, the tool comprises a U-shaped handle 10, the upper arm 11 of which is adapted to be grasped by the hand as indicated in Fig. 1, and the lower ends of the side arms 12 and 13 of which are fastened to a platform 14. This may easily be done by bending the lower ends of arms 12 and 13 beneath the platform 14 and fastening by bolts 15 and 16. Obviously any other suitable means of forming the handle and fastening to the platform could be used instead, if desired. The platform 14 acts as a foot platform, and should be of a convenient size and dimension to enable the foot of a person to be placed thereon as shown in Fig. 1.

A cutting element 17 is supported beneath the platform 14. This cutting element comprises four webs 18, 19, 20 and 21 in the form of vertical triangular sheets fastened

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at their upper edges to the bottom of plate 14 and joined together at their vertical edges substantially along the vertical longitudinal axis of the tool. These webs may be fastened to the plate 14 and to each other in any suitable manner, for example by welding. At its lower end the tool terminates in a pointed pyramidal member 22 which can likewise be welded to the lower extremities of the webs.

There are provided along the outer edges of the four webs, suitable cutting serrations or surfaces 23, 24, 25 and 26 respectively. The serrations can conveniently be of the type commonly used as the teeth of hacksaw blades; and they are in fact shown as being in the nature of portions of hacksaw blades having their sides welded to the respective webs so as to leave the cutting teeth protruding. The arrangement is such that all the cutting edges converge downwardly toward the point.

For the purpose of rolling back the can material between the principal webs 18, 19, 20 and 21 as cuts are being made, there are located rollback webs 27, 28, 29 and 30 respectively, which are somewhat smaller than the principal webs. Each of these rollback webs is triangular in shape and may be somewhat similar in its proportions to the proportions of the principal webs. The upper edges of these rollback webs are fastened to the bottom of the foot platform in the same manner as the principal webs; and the vertical inner edges of the rollback webs are fastened to the principal webs along the longitudinal axis. These rollback webs are located at angular positions between the principal webs and since they are smaller than the principal webs, their outer slanting edges do not extend outwardly as far as the slanting cutting edges of the principal webs.

The operation of the tool should be apparent from its description. To cut a can, the can is turned upside down with its open end resting on a firm bottom; and the point 22 is then placed approximately on the center of the up-turned bottom. By grasping the handle to guide it, and by pressing the foot on the foot platform as shown in Fig. 1, the point will pierce the bottom of the can and the cutting edges will make four cuts as the tool moves downward, these cuts extending in a substantially radial direction from the center. Shortly after the cutting operation starts, the rollback edges 27, 28, 29 and 30 will engage the material of the can bottom, rolling it down into the can and outwardly as indicated in Fig. 2. By the time the cutting edges have made their cuts substantially to the periphery of the bottom, the rollback of the material will have produced a gaping hole in the bottom which will leave the bottom substantially open. In the absence of the rollback webs, the cutting edges and webs may tend to bind in the cuts which they are making; and furthermore there will be much less tendency to open up a substantial hole in the bottom of the can which is desirable for the purpose of producing the maximum weakening of the bottom material.

After the tool is withdrawn, it may then be laid on its cylindrical side and stepped on to flatten it down.

It will be recognized that by the present invention there is provided a convenient and efficient tool for opening can ends, which produces a maximum cutting effect with a minimum of binding, and leaving a maximum opening in the can end.

I claim:

1. A can cutting tool comprising a foot platform, a handle extending upwardly from the platform and a cutting element extending below the platform, said cutting element comprising a lowermost point and a plurality of angularly spaced webs having outer edges and provided with cutting surfaces, and slanting downwardly from the bottom of the platform to said lowermost point.

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2. A can cutting tool comprising a foot platform, a handle extending upward from the platform, a cutting element extending below the platform, said cutting element comprising a lowermost point and a plurality of angularly spaced webs having outer edges in the form of cutting surfaces, and slanting downwardly from the bottom of the platform to said lowermost point, and means located between said webs for rolling back the material of a can while it is being cut.

3. Apparatus according to claim 2 in which there are four outer edges.

4. Apparatus according to claim 2 in which said means

for rolling back the material comprises triangular webs joined to the first mentioned webs along the longitudinal axis of the tool.

5. Apparatus according to claim 2 in which the said outer edges converge to the lowermost point.

6. Apparatus according to claim 5 in which said roll-back means comprises secondary webs positioned between the first-mentioned webs and angularly spaced therefrom.

7. Apparatus according to claim 5 in which said handle is a U-shaped handle.

No references cited.