Dec. 22, 1931. C. LORBER 1,837,783

CAN OPENER

Filed May 6, 1931

Fig. 1.

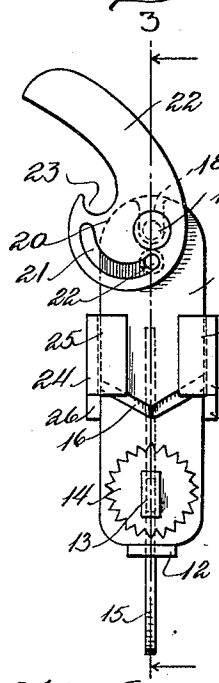


Fig. 2.

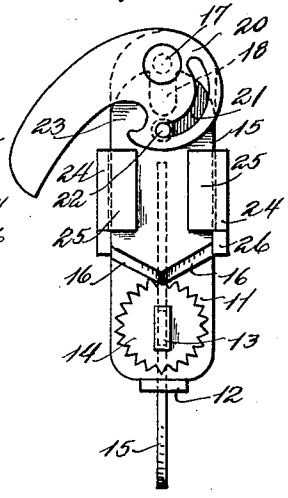


Fig. 3.

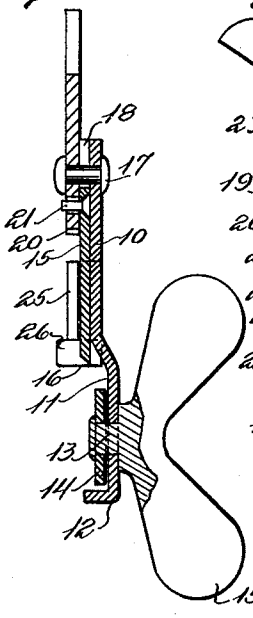


Fig. 4.

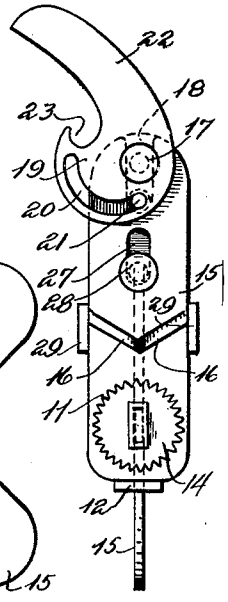


Fig. 6.

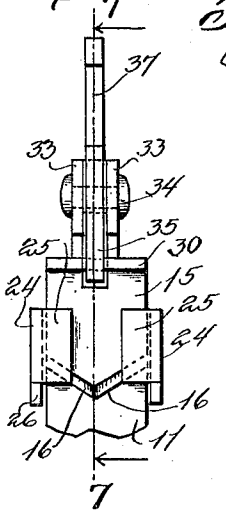


Fig. 7.

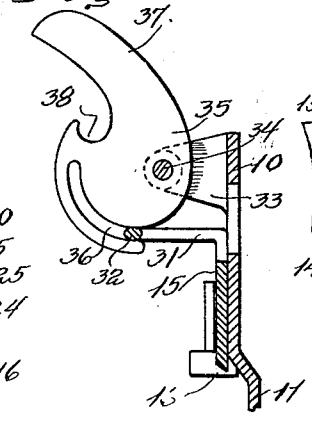


Fig. 5.

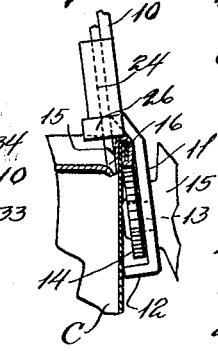


Fig. 8.

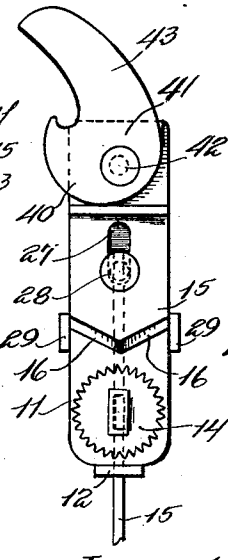
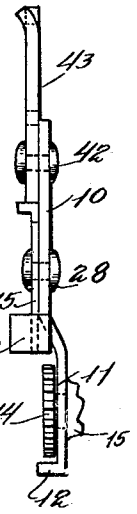


Fig. 9.



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UNITED STATES PATENT OFFICE

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CAN OPENER

Application filed May 6, 1931. Serial No. 535,460.

This invention relates to can openers of the type wherein a cutter is caused to travel around the top of a can by the action of a rotated serrated traction wheel.

One important object of the present invention is to improve the general construction of such can openers.

A second important object of the invention is to provide an improved form of such can opener wherein the cutter blade is caused to puncture the can prior to any rotation of the traction wheel.

A third important object of the invention is to provide a novel construction of such can opener wherein the cutter blade is guided for rectilinear movement toward and from the traction wheel.

A fourth important object of the invention is to provide a novel form of such can opener wherein the cutter blade is moved rectilinearly into and out of cutting position by a novel arrangement of cam lever.

A fifth important object of the invention is to provide an improved can opener of this class adapted to cut the can material in either direction, the cutter blade being double edged for this purpose.

A sixth important object of the invention is to provide a novel combination of such a can opener with a bottle cap remover.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:

Figure 1 is a front elevation of one preferred form of this invention, the view showing the blade raised and in inactive position.

Figure 2 is a view similar to Figure 1 but showing the blade in lowered and cutting position.

Figure 3 is a section on the line 3—3 of Figure 2.

Figure 4 is a view similar to Figure 1 showing a slight modification thereof.

Figure 5 is a side view showing a portion of the device shown in Figure 1 as applied to a can.

Figure 6 is a front view of the upper part of a second modification of the invention.

Figure 7 is a section on the line 7—7 of Figure 6.

Figure 8 is a front elevation of a third modification of the invention.

Figure 9 is a side view of the third modification.

In the several embodiments of the invention here shown there is provided a base or body consisting of a vertically elongated plate having a flat upper portion 10 and a rearwardly offset lower portion 11 provided at its lower end with a can side engaging flange 12. Also, in each form there is provided a shaft 13 which extends through the lower part of the body 11, being revolubly mounted therein. On the forward end of this shaft is fixed a serrated traction wheel 14 which rests against the front face of the portion 11 and on the rear end of the shaft 13 is fixed an operating handle 14′ here shown of "butterfly" form for operation by the thumb and forefinger of a user.

In the several forms shown a blade member 15 is mounted to slide on the front face of the part 10 and is provided with a pair of synclinal and bevelled cutting edges 16.

In the form shown in Figures 1 to 5 inclusive a pivot stud 17 is provided at the upper end of the body portion 10 and projects forwardly therefrom, the blade being provided with a slot 18 at its upper end to receive this pin as the blade is moved upwardly. A cam member 19 is pivotally mounted on the stud 17 and is provided with an eccentric cam slot 20 into which extends a cam pin 21 fixed on the blade 15. This cam member is provided with an operating handle 22 which is positioned to extend eccentrically from the cam member to provide a notch 23 which constitutes the notch of a bottle cap remover.

In the form shown in Figures 1 to 3 and 6 guide flanges 24 having inturned lips 25 are formed at the side edges of the part 10 and embrace and guide the blade 15. Below these guide flanges are can rest flanges 26 also pro-

jecting forwardly from the body portion 10.

In the form of the invention shown in Figures 4, 8 and 9 the blade 15 is provided intermediate its ends with a guide slot 27 and a guide stud or pin 28 passes through this slot and is fixed in the part 10. Also can rest flanges 29 project forwardly from the side edges of the part 10 and assist in guiding the blade 15.

In the form of the device shown in Figures 6 and 7 the upper end of the blade 15 is provided with a forwardly extending flange 30 wherein is a slot 31 arranged to leave a cross bar 32 forming a cam bar. Projecting forwardly from the upper end of the part 10 is a pair of arms 33 which support a pivot pin 34 whereon is mounted a cam member 35 having an eccentric cam slot 36 receiving the cam bar 32. The member 35 is provided with an operating handle 37 arranged to form a notch 38 as before.

In the form shown in Figures 8 and 9 there is provided on the upper end of the blade 18 a forwardly projecting flange 39 whereon rests the cam edge 40 of a cam member 41 pivoted on a stud 42 fixed at the upper end of the body part 10. This cam member is provided with the usual handle 43 and notch 44.

In all forms except that of Figures 8 and 9 the cam acts to push the blade down upon movement in one direction and to raise the blade upon movement in the other direction. In the form shown in Figures 8 and 9 the cam acts only to push the blade down, retraction of the blade being effected manually.

In all forms the device is applied to the can C (see Fig. 5) with the blade raised and the traction wheel beneath the edge bead of the can. The blade is now forced down by the cam member and penetrates the can top, this being effected without movement of the device as a whole. After penetration is effected the traction wheel is rotated and the can opener moves around the can, the blade cutting the top close to the bead as it thus moves.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that minor changes may be made in the form and construction of the invention without departing from the material spirit thereof. It is not, therefore, desired to confine the invention to the exact form herein shown and described, but it is desired to include all such as properly come within the scope claimed.

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

In a can opener, an elongated plate forming a body and having one end offset out of the plane of the main upper portion of the plate, a short shaft extending through said offset end centrally of its width, a toothed traction wheel carried by the shaft and resting against the offset end on the face adjacent the body of the plate, a butterfly head on the opposite end of said shaft, a headed stud projecting from the upper part of the plate centrally of its width and on the same side as the traction wheel, a knife blade having a slot therein engaging on said stud and held by the head thereof, said knife blade having a pair of cutting edges at the end adjacent said wheel, said edges being arranged to form a point in alinement between the stud and shaft, said blade having its upper end also slotted, a pivot pin carried by the upper end of the plate and passing through the last mentioned slot to form a guide means for the blade, a handled lever mounted on said pivot pin and provided with a cam slot, a pin fixed to the blade and engaged in said cam slot, a pair of arms projecting from the sides of the plate and engaging the side edges of the blade to form additional guide means therefor, said arms projecting beyond the blade to engage and rest on the top of a can rim in use, and a flange projecting forwardly from the lower extremity of the plate to rest against the side of a can and hold the traction wheel out of contact with said side.

In testimony whereof I affix my signature.

CHARLES LORBER.