

June 29, 1937.

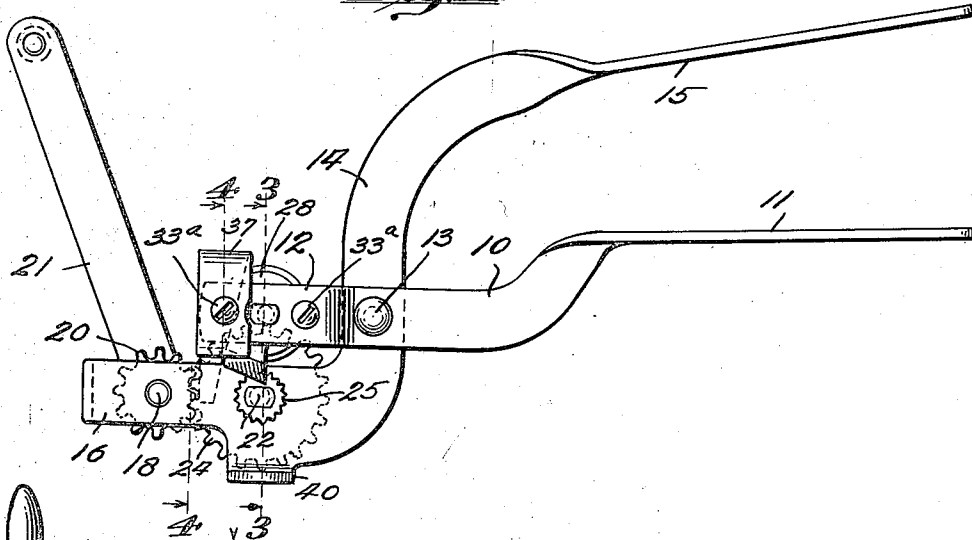
F. F. HOSMER

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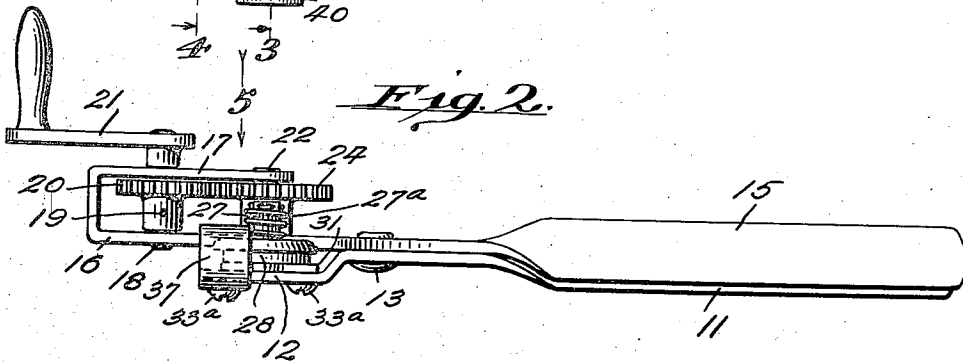
CAN OPENER

Filed Aug. 7, 1935

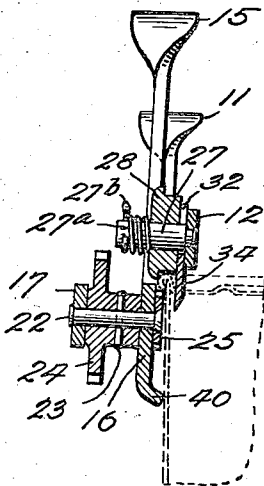
*Fig. 1.*



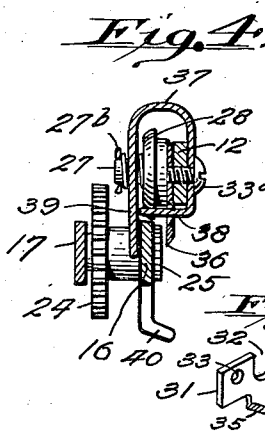
*Fig. 2.*



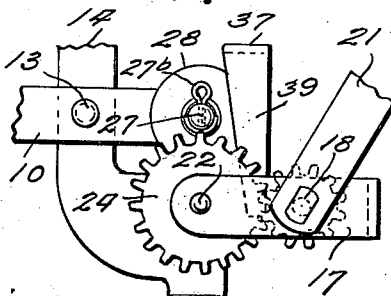
*Fig. 3.*



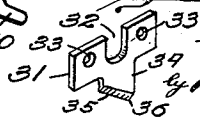
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



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# UNITED STATES PATENT OFFICE

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## CAN OPENER

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Application August 7, 1935, Serial No. 35,075

2 Claims. (Cl. 30—15)

My invention relates to a can opener and is an improvement on the can opener covered by United States Letters Patent, No. 2,028,778, issued to me January 28, 1936.

The principal objects of my present invention are, to generally improve upon and simplify the construction of the can opener disclosed in my aforesaid patent application; to mount on the upper one of the jaws of the opener, a bracket having a depending finger that engages the other jaw when the can opener is being used in order to firmly hold the jaws in proper operative position and prevent lateral separation thereof during the can top cutting operation, which bracket also serves to engage the top of the can so as to maintain the latter in proper position during the cutting operation; further, to mount one of the can engaging wheels so that it may slide for a short distance lengthwise upon its axis in order that the can opener will function properly while the blade thereof is passing around the corners of a square can and further, to provide on the lower one of the jaws a short lip or extension against which the wall of the can bears while the opener is in use in order to prevent the surface of the can and its wrapper from scraping against the toothed feeding wheel of the opener.

With the foregoing and other objects in view my invention consists in certain novel features of construction and arrangements of parts that will be hereinafter more fully described and claimed and illustrated in the accompanying drawing in which:

Fig. 1 is a side elevational view of a can opener of my improved construction.

Fig. 2 is a top plan view of the opener.

Fig. 3 is a vertical section taken on the line 3—3 of Fig. 1.

Fig. 4 is a vertical section taken on the line 4—4 of Fig. 1.

Fig. 5 is an elevational view looking in the direction indicated by the arrow 5 in Fig. 2.

Fig. 6 is a perspective view of the blade utilized in my improved can opener.

Referring by numerals to the accompanying drawing which illustrates a preferred embodiment of my invention, 10 designates a short section of strap metal, the rear end of which is bent into a horizontal plane to form a handle 11 and the forward end of the strap is bent outwardly to form a jaw 12 that occupies a plane offset from and parallel with that portion of the strap that connects said jaw and the handle 11.

Member 10 is pivotally connected preferably by means of a rivet 13, to the vertically disposed leg

14 of a combined jaw and handle and the upper portion of said leg is curved rearwardly so as to occupy a position above the member 10 and the rear portion of this member is bent so as to occupy a substantially horizontal plane to form a handle 15 that is positioned above and spaced apart from handle 11.

The horizontally disposed leg 16 of the combined jaw and handle and which horizontally disposed portion functions as a jaw, occupies a position just below and to one side of the jaw member 12 and the strap from which the combined jaw and handle is formed is extended outwardly at right angles from the forward end of the jaw 16 and thence rearwardly parallel with and spaced apart from said jaw 16, as designated by 17.

A shaft 18 has its ends journaled in the forward portions of members 16 and 17 and mounted on said shaft and retained thereon by a set screw 19 is a pinion 20.

Shaft 18 extends a short distance beyond member 17 and suitably secured to the projecting end is one end of a crank handle 21.

Journaled in the rear portions of members 16 and 17, is a shaft 22, the forward end of which projects a short distance beyond jaw member 16 and mounted on this shaft and secured by a pin or key 23 is a gear wheel 24 that meshes with pinion 20.

The end of shaft 22 that projects through member 16 has fixed thereupon a disc 25 having a notched or serrated edge.

The notched edge of disc 25 engages the bead or flange that is formed between the side wall and end of a can.

Rigidly secured to the intermediate portion of jaw 12, is one end of a stud 27 that occupies a position directly above shaft 22 and mounted to rotate freely upon said stud is a disc 28, the size of which is such that its periphery occupies a position immediately adjacent and spaced a slight distance apart from the points of the teeth on the periphery of disc 25 when the bead of a can is engaged between the jaws.

Mounted on stud 27 to the rear of disc 28 or on the opposite side from jaw 12, is an expansive coil spring 27<sup>a</sup> that is normally under light tension and said spring is retained on said stud by a cotter pin 27<sup>b</sup> that passes through said stud.

The periphery of disc 28 is formed with portions of slightly different diameters, thereby providing a groove or offset on said periphery and which arrangement accommodates both upstanding and outwardly presented beads or flanges that are

formed on the edges of the can between the side wall and end walls.

Positioned between the inner face of jaw 12 and the adjacent face of the disc 28, is a combined puncturing and cutting member comprising a substantially rectangular body 31, in the upper portion of which is formed a notch 32 for the accommodation of stud 27.

Formed through the end portions of the body member 31, are threaded apertures 33 that receive the threaded ends of screws 33<sup>a</sup>, which latter pass through apertures in the jaw member 12 and thus detachably secure the cutting member to said jaw.

Depending from the intermediate portion of the lower edge of body member 31, is a blade 34 having a beveled lower edge 35 that is inclined lengthwise and the lowermost portion of this beveled edge occupies a position just above the center of the shaft 22 that carries the notched disc 25, thus providing a point 36 that is adapted to puncture the can upon which the opener is used and the sharp edge on the lower end of the blade 34 extends forwardly and upwardly so as to cut through the thin sheet metal that forms the top of the can that is being opened.

Secured by means of one of the screws 33<sup>a</sup> to the outer face of the forward end of member 10, is the outer leg of an inverted U-shaped yoke 37 that functions as a brace and strengthening member and formed integral with and projecting inwardly in a horizontal plane from the lower end of the outer leg of this yoke, is a finger 38.

Depending from the lower end of the inner vertical leg of this brace 37, is a finger 39 which, when the jaws are closed, bears against the inner face of the jaw 16 (see Fig. 4).

Formed on the lower edge of jaw 16, directly below the shaft 22 that carries disc 25, is an outwardly and downwardly presented lip or flange 40 which functions as a bearing to engage the wall of the can during the operation incident to the cutting of the top therefrom and the engagement of the wall of the can against this bearing lip prevents the upper portion of the wall of the can and its wrapper from scraping against the toothed feeding wheel 25.

In the use of my improved can opener, the handles 11 and 15 are swung away from each other on the pivot formed by rivet 13, thus separating the jaws 12 and 16 and the beaded edge of the can that is to be opened is positioned directly over the top of the toother disc 25.

The handles 11 and 15 are now brought together by the pressure of one hand so that the point 36 punctures the top of the can immediately adjacent the bead on the edge thereof and as the jaws are brought together, the bead will be firmly clamped between the disc 28 and the teeth on the edge of disc 25.

Crank handle 21 is now manipulated so as to rotate pinion 20 and rotary motion will thus be imparted to gear wheel 24, shaft 22 and toothed disc 25, with the result that the can will be slowly rotated with the engaged bead passing between the edge of disc 28 and the teeth of disc 25, which teeth engage the bead so as to impart rotary motion to the can.

As the can is thus rotated, the sharp beveled edge 35 of the blade produces a clean edged cut through the top of the can immediately adjacent the bead on the edge thereof so that when the can has been completely rotated a clean

edged disc of metal is cut from the top so that the contents of the can may be readily removed without encountering rough or jagged edges such as are produced by certain types of manually operated can openers.

The disc or wheel 28 that clamps the beaded edge of the can against the toothed disc 25, provides a rolling bearing for that portion of the bead that is directly engaged by the teeth of said disc 25 and as a result the rotation of the can when properly engaged by the jaws of the can opener may be readily accomplished and further, such operation is conveniently accomplished through the use of a crank handle and pinions of different sizes for imparting rotary motion to the shaft 22 that carries toothed wheel 25.

During the can cutting operations, the horizontally disposed finger 38 bears on top of the can directly in front of the blade 34, thereby preventing the can from tilting while engaged by the opener and at the same time the finger 39 bears against the jaw 16 so as to firmly hold jaw 12 against outward flexing movement, particularly while the toothed wheel 25 and wheel 28 are passing around the corner of a square can.

When the opener is used for opening square cans and the wheels 25 and 28 pass around the corners, wheel 28 may slide a slight distance lengthwise on stud 27 against the resistance offered by spring 27<sup>a</sup> and after the parts reach the straight edge of the can, wheel 28 returns to its normal position.

During the can opening operation, the wall of the can that is engaged by the device bears against lip or flange 40, which bearing tends to hold the can firmly during its rotation and the upper portion of the wall of the can and its wrapper is held away from the toothed wheel 25 so that said wall and wrapper will not scrape against said wheel.

Thus it will be seen that I have provided a can opener that is relatively simple in construction, inexpensive of manufacture and very effective in performing the functions for which it is intended.

It will be understood that minor changes in the size, form and construction of the various parts of my improved can opener may be made and substituted for those herein shown and described without departing from the spirit of my invention, the scope of which is set forth in the appended claims.

I claim as my invention:

1. In a can opener, a pair of pivotally connected handles, jaws projecting from the forward ends of said handles, a shaft journaled in the lower jaw, a toothed wheel carried by said shaft, manually operable means for imparting rotary motion to said shaft, a blade carried by the upper jaw, a roller journaled on the upper jaw and positioned adjacent said blade and above said toothed wheel, a bracket secured to the end of the upper jaw, a portion of which bracket is extended downwardly to form a bearing finger that overlies the face of the lower jaw on the opposite side from the toothed wheel and a portion of said bracket below the upper jaw occupying a horizontal plane and overlying the upper edge of the lower jaw.

2. In a can opener, a pair of pivotally connected handles, jaws on the forward ends of said handles, a shaft journaled in one of said jaws, a toothed wheel carried by said shaft, manually operable means for imparting rotary motion to said shaft, a can engaging member projecting outwardly from the jaw below said toothed wheel, a blade

carried by the other jaw, a stud projecting from the jaw that carries said blade, a roller loosely mounted on said stud and positioned above the toothed wheel on the other jaw, means for yield-  
5 ingly resisting the movement of said roller in one direction upon said stud, a bracket secured to the jaw on which the stud and roller are mounted, a

portion of which bracket overlies the jaw that carries the toothed wheel and another portion of said bracket projecting downwardly so as to overlie one of the side faces of the jaw that carries the shaft and toothed wheel.

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