May 11, 1926. **1,583,934**

G. R. LEGGETT

CAN OPENER

Filed Nov. 23, 1922

Fig. 1.

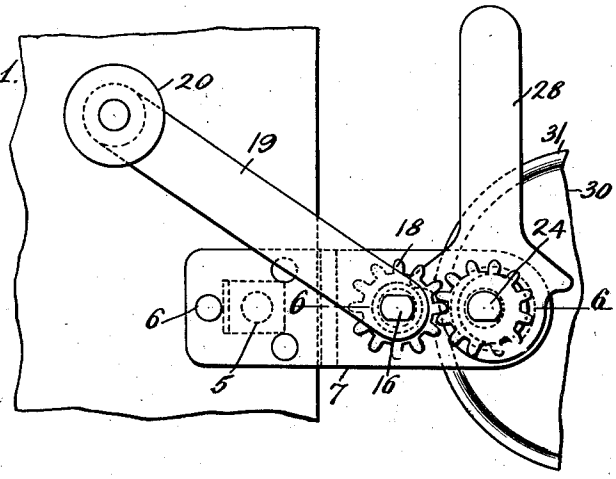


Fig. 3.

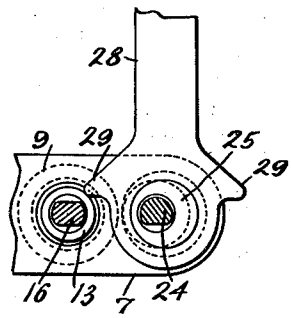


Fig. 2.

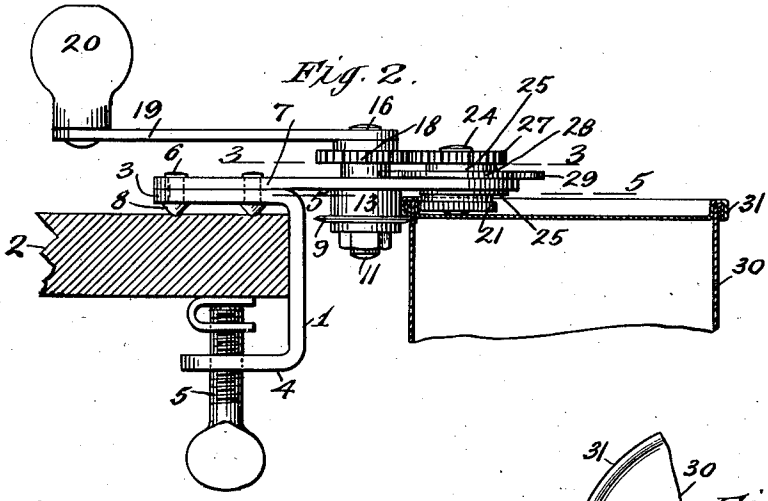


Fig. 4.

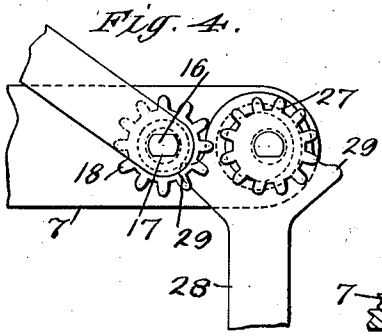


Fig. 5.

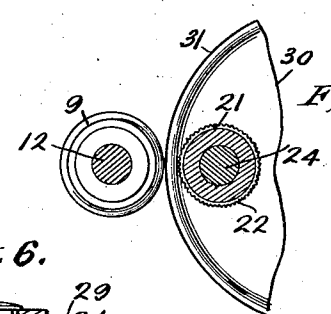
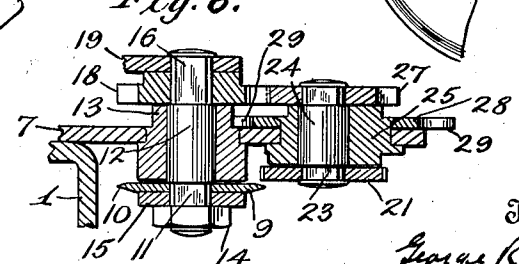


Fig. 6.



Inventor

George R Leggett

By his Attorneys

Philip Sawyer Rice & Kennedy

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UNITED STATES PATENT OFFICE.

GEORGE R. LEGGETT, OF WATERBURY, CONNECTICUT, ASSIGNOR TO SCOVILL MANUFACTURING COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT.

CAN OPENER.

Application filed November 23, 1922. Serial No. 602,680.

This invention relates to certain improvements in can openers of the type in which the bead of a can is inserted between a rotary cutting knife and a co-operating abutment and the top of the can cut off by the knife.

It is an especial object of the present invention to improve the structural features of this type of can opener whereby a simple and efficient opener will be produced and one having a small number of parts, and the parts of which are so formed that they may be easily and cheaply made, so that an inexpensive opener may be produced and one that will be durable and effective in operation.

It is a further object of the invention to provide an improved arrangement and action of the parts, whereby a rotative movement between the knife and abutment toward and from each other is provided for permitting the insertion of a can bead and the subsequent cutting operation.

With these and other objects not specifically referred to, the invention consists in certain novel arrangements, parts and combinations, which will be fully described in connection with the accompanying drawings and the novel features then pointed out in the claims hereunto annexed.

Referring now to these drawings—

Figure 1 is a top view, partly broken away of the improved can opener, the parts being shown in cutting position.

Figure 2 is a sectional view, partly broken away of the construction shown in Fig. 1, the parts being shown in position for opening the can.

Figure 3 is a detail partly sectional view, the section being taken on line 3—3 of Fig. 2.

Figure 4 is a top view of certain parts of the construction shown in Fig. 1, the parts being illustrated as separated to permit the positioning of a can bead.

Figure 5 is a detail plan view, partly sectional, the view being taken on line 5—5 of Fig. 2.

Figure 6 is a detail sectional view on an enlarged scale, the section being taken on line 6—6 of Fig 1

Referring now to these drawings, the improved opener includes a frame 1, from which the operating parts of the opener are supported. This frame 1 is arranged so that it can be conveniently secured to the edge of a table or other suitable support 2. While this frame may be varied somewhat, in the particular construction illustrated where the frame is such that it may be attached to the edge of a table the frame is U-shaped, having upper and lower legs 3, 4 arranged to extend over the edge of the table and above and below the same. Passing through an aperture in the lower leg 4 is a clamping screw, indicated at 5, by which the frame may be clamped to the table.

Mounted on the frame 1, as by rivets 6, is a support 7 in the form of a flat plate which may be stamped from sheet metal, this plate supporting the movable parts of the can opener, and projecting outwardly beyond the frame. If desired the rivets 6, by which the plate and the frame are secured together, may project through the frame and be formed with rounded points 8, which provide a grip for rigidly securing the frame to the table, and preventing a slip between the parts.

Can openers embodying the invention will employ a rotary cutting knife and a co-operating abutment, these parts being arranged so that they can be separated from each other for the insertion therebetween of the bead of a can and the parts then brought into operative relation, this movement of the parts being an eccentric movement so that the cutting knife is first forced through the wall of the can, the removal of the can top then being effected by the rotation of the knife. In the particular construction shown, the knife is arranged on the inside and the co-operating abutment on the outside with respect to the frame 1. The knife is in the form of a disc 9 having a circular cutting edge 10. This disc is secured on the reduced end 11 of a spindle 12 mounted to rotate in a hub 13 mounted in the plate 7, before referred to, this knife being secured to the spindle by a nut 14, a washer 15 being interposed between the nut and the

knife, if desired. The knife is spaced from the hub slightly, as shown in Fig. 6, so as to rotate freely beneath the same. The spindle 12, above the hub, has a reduced end 16, this end being preferably formed with flat sides, as indicated at 17, in Fig. 4, and fast on this spindle is a gear 18 and an operating handle 19, provided with a knob 20. By turning this handle, therefore, the knife and gear are given a rotary movement. Cooperating with this knife is a rotary abutment, this rotary abutment bearing against the inner side of the bead of the can. This abutment in the particular construction illustrated, is in the form of a disc 21 provided with a milled edge 22, so that a good grip on the can bead will be obtained. This disc is secured to the reduced end 23 of a spindle 24 which is eccentrically mounted in a hub 25, the spindle being rotatable in this hub. The opposite end of the spindle 24 is also reduced and carries fast thereon a gear 27. The hub 25 is rotatably mounted in the frame 7, before referred to, and means are provided for rotating the hub, which means may be in the form of a flat plate handle 28, this handle being provided with oppositely disposed projections 29 forming stops which may abut against the upper end of the hub 13, as shown in Fig. 6, and thus act to hold the parts in open or closed position.

In the operation of the device, and assuming the parts to be in the position shown in Fig. 4, the hub 25 has been rotated by the handle 28, to cause the eccentric spindle to separate the milled disc 21 from the cutting knife 9 and the gears 18 and 27 are out of mesh. The bead 31 of the can 30 is then inserted between the milled disc and the cutting knife. The handle 28 is then rotated to the position shown in Fig. 1, and the eccentric movement of the spindle 24 forces the milled disc and the knife toward each other and the continuation of this movement causes the knife to cut through the side of the can, as shown in Fig. 2, which shows the parts in the position they assume when the knife has cut through the metal of the side of the can. The completed movement of the handle 28 engages the gears 27 and 18 whereupon by the rotation of the handle 19 the top of the can is cut off, the bead of the can being jammed between the hub 13 and the milled disc 21, by the rotation of the disc the can is turned and the top is or may be completely severed from the can body, it being understood that the can is held in the hand during the opening operation, in the particular construction illustrated.

It will be observed that with the construction described a very simple and efficient opener has been provided and one which can be very cheaply made and an efficient and durable structure provided. While the abutment plate has been shown as movable relatively to the knife, it will be understood that if desired the knife might be mounted so as to be movable relatively to the abutment plate.

It will be further understood, that while the invention has been shown in its preferred form, that certain changes and variations may be made in the particular construction illustrated and described without departing from the invention as defined in the claims hereunto annexed.

What I claim is:

1. In a can opener of the class described, the combination of a frame and means for securing it to a support, said frame including a flat plate, a pair of hubs mounted to extend through the frame, a pair of spindles mounted in the hubs, one of said spindles being eccentrically mounted, a rotary cutter carried on one of said spindles, a flat arm extending to form a handle affixed to the cutter spindle for rotating it, a cooperating abutment on the other spindle, a pair of gears on the spindles, a flat arm extended to form a handle for manipulating the eccentric spindle and stops on said handle cooperating with a portion of said can opener to limit the movement of said arm.

2. In a can opener of the class described, the combination of a frame and means for securing it to a support, said frame including a flat plate, a pair of hubs mounted to extend through the frame, a pair of spindles mounted in the hubs, one of said spindles being eccentrically mounted, a rotary cutter carried on one of said spindles, a flat arm extending to form a handle affixed to the cutter spindle for rotating it, a cooperating abutment on the other spindle, a pair of gears on the spindles, and a flat arm extended to form a handle for manipulating the eccentric spindle.

3. In a can opener of the class described, the combination of a frame, a plate secured to the frame, a rotary cutting knife and a spindle therefor, a cooperating rotary abutment also having a spindle mounted in the plate, an operating handle on one of the spindles, an eccentric mounting for the abutment, cooperating gears on said spindles, one of said gears being shiftable, a lever for operating the eccentric mounting and stops for limiting the movement of the lever.

4. In a can opener of the class described, the combination of a frame, a supporting plate secured to the frame, a rotary cutting knife and gear unit and a cooperating rotary abutment and gear unit mounted in the plate, an eccentric mounting for one of the parts, a handle for operating one of the units, means for moving the eccentri-

cally mounted unit toward and from the other unit, and limit stops for limiting the movement of the moving means.

5. In a can opener of the class described, the combination of a frame, a supporting plate secured to the frame, a rotary cutting knife and gear unit and a cooperating rotary abutment and gear unit mounted in the plate, an eccentric mounting for one of the units, a handle for operating one of the units, and a second handle for moving the eccentrically mounted unit toward and from the other unit.

In testimony whereof, I have hereunto set my hand.

GEORGE R. LEGGETT.