Jan. 17, 1950 H. J. HAUCK 2,495,004

RACK AND GEAR ACTUATED SCREW CAP REMOVER

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FIG. 1.

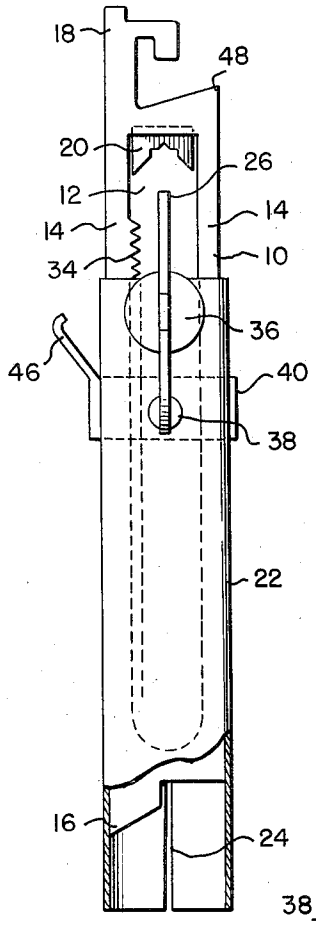


FIG. 2.

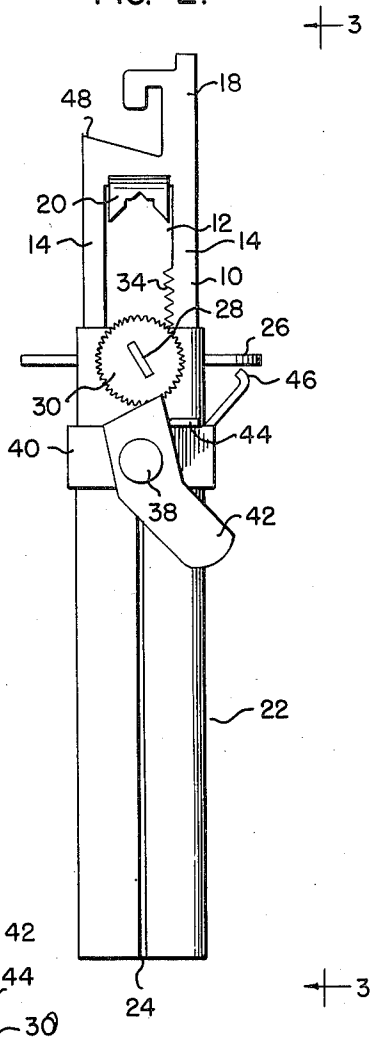
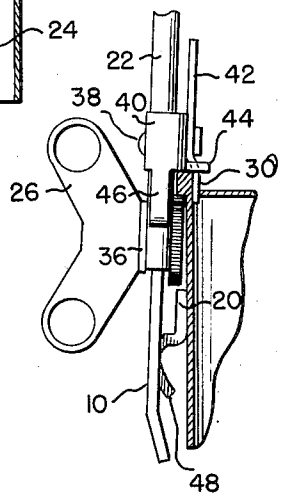


FIG. 4.



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FIG. 3.

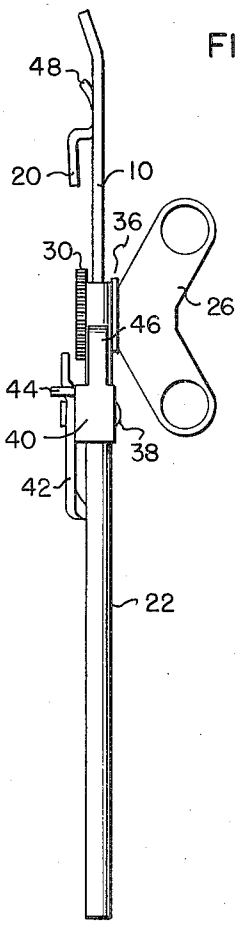


FIG. 5.

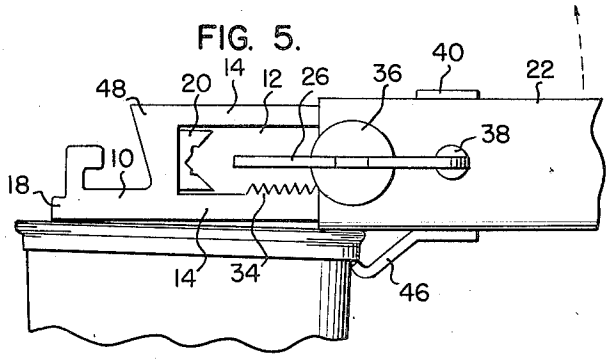


FIG. 6.

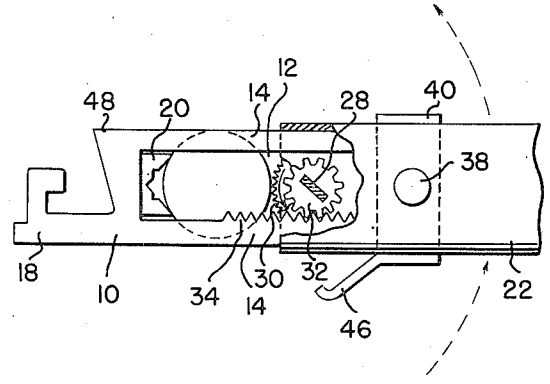
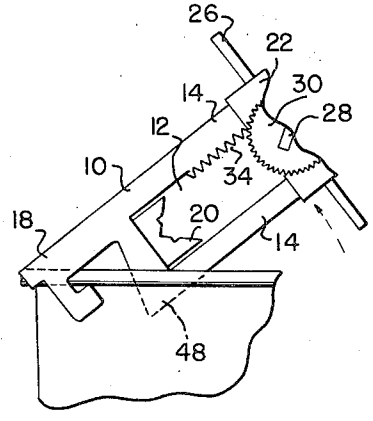


FIG. 7.



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RACK AND GEAR ACTUATED SCREW CAP REMOVER

Henry J. Hauck, Schenectady, N. Y.

Application January 25, 1946, Serial No. 643,309

1 Claim. (Cl. 81—3.42)

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This invention relates to improvements in can openers and has for one of its objects the provision of a tool which may be used universally for a number of purposes that arise in the kitchen or on a picnic.

Another object of the invention is to provide a tool that is simple in construction, efficient in operation and can be inexpensively manufactured and retailed at a low cost.

With the above and other objects and advantages in view the invention consists of the novel details of construction, arrangement and combination of parts more fully hereinafter described, claimed and illustrated in the accompanying drawings in which:

Figure 1 is a front view of an embodiment of the invention.

Figure 2 is a rear view thereof.

Figure 3 is a side view.

Figure 4 is a side view on the line 3—3 of Figure 2 with the tool applied to a can for the cutting thereof, the can being shown in section.

Figure 5 is a view showing the use of the device in prying a jar lid from the jar.

Figure 6 is a view showing the use of the device in removing a screw cap from the bottle and

Figure 7 shows the device in operation to punch holes in a can.

Referring more in detail to the drawings the numeral 10 designates a rectangular shaped plate member having a longitudinal slot 12 therein forming parallel relatively spaced bars 14. One end of the member 10 terminates in the relatively sharp punching point 16 while the other end terminates in the hooked guide member 18. Pressed outwardly of the member 10, adjacent the end formed with the hooked members 18 and positioned in the slot 12 are the relatively spaced jaws 20 which are sharpened at their outer ends as shown.

Slidably mounted on the member 10 is the sleeve member 22 which is longitudinally split at 24.

Mounted transversely of the member 22 is the key 26 having the rectangular shaped shaft 28 on which is mounted a toothed disc 30 a gear 32 which is adapted to mesh with the rack 34 formed on the inner side of one of the bars 14 and a washer 36. The disc 30 and washer 36 are mounted exteriorly of the sleeve 22 and the end of the shaft 28 is burred to retain these elements as a unit.

Secured to the sleeve 22 adjacent the disc 30 by means of a rivet 38 is the guide member 40 and the pivoted cutter member 42.

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The guide member 40 is provided with the upstanding stop member 44 which limits the movement of the pivoted cutter 42 and the outwardly inclined hooked member 46.

The member 18 has the punching point 48 intermediate the hooked end and the jaws 20.

This device can be used for a various number of purposes in Figure 5, the device is shown in use in lifting a lid from a jar, Figure 6 as a screw cap remover and Figure 7 for punching a hole in a can. When removing a screw cap as shown in Figure 6 the grip upon the cap is absolutely positive, it cannot slip which is the greatest handicap of devices in use at the present time. This positive grip is accomplished by placing rack 34 as shown with the disc 30 in contact with the cap and the gear 32 in contact with the rack on the underface of the member 10, therefore during the action of unscrewing the cap the disc 30 is forced against the cap thereby obtaining a more positive grip.

In Figure 4 the device is being used for cutting the top from a tin can. In addition to the uses illustrated the device can be used to pry open pressed in covers and is adjustable to fit caps and lids of various sizes.

It is believed that the various uses to which the device may be adapted and the method of operation thereof will be apparent to those skilled in the art and it is to be understood that changes may be made in the details of construction, arrangement and combination of parts without departing from the spirit of the invention or the scope of the appended claim.

Having thus described the invention what is claimed, as new and desired to be secured by Letters Patent is:

In a tool of the character described, an elongated sleeve, a substantially rectangular plate member slidably mounted in said sleeve, said plate member having a longitudinal slot therein, rack teeth formed on said plate member and facing said longitudinal slot, a shaft rotatably mounted in said sleeve, said shaft extending transversely through said longitudinal slot and said sleeve, a gear within said sleeve secured to said shaft for rotation thereby and meshing with said rack teeth, an operating key secured to one end of said shaft for manually turning the same, a toothed disc drivingly secured to the other end of said shaft, and a jaw secured to said plate member and extending toward said toothed disc, whereby said jaw and toothed disc are adapted to grip therebetween a cap for turning the same, the engagement between the cap and said disc

automatically increasing the grip of the same and said jaw on the cap as the cap turning force is applied.

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