No. 755,789. PATENTED MAR. 29, 1904.

R. P. NORTON.

CAN OPENER.

APPLICATION FILED JUNE 9, 1903.

NO MODEL.

Fig. 2.

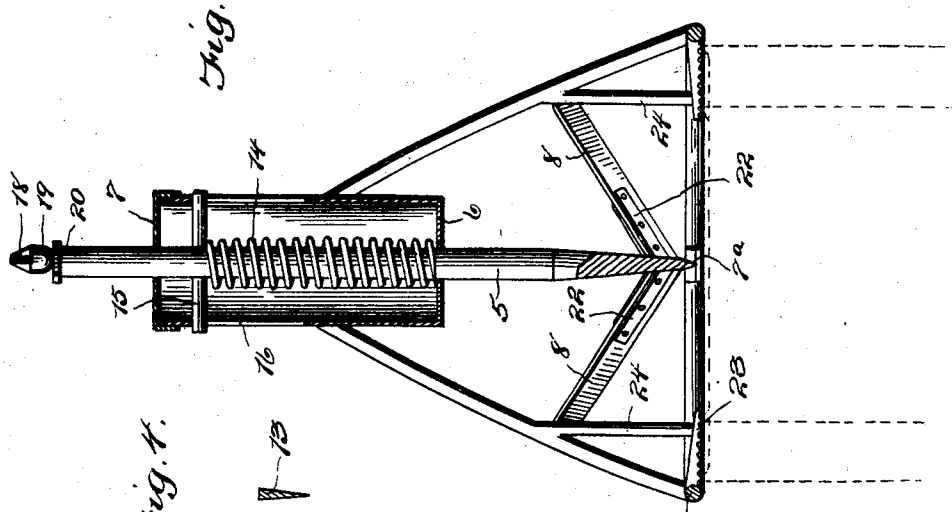


Fig. 4.

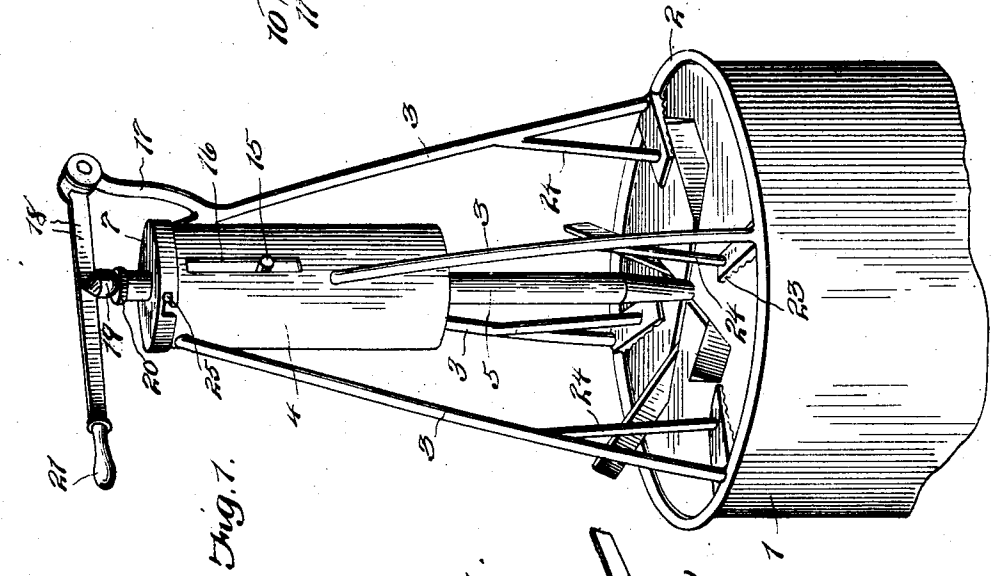
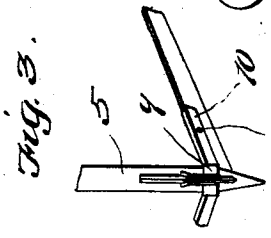


Fig. 1.

Fig. 3.



WITNESSES

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No. 755,789. Patented March 29, 1904.

UNITED STATES PATENT OFFICE.

ROBERT PUTNAM NORTON, OF ST. THOMAS, NORTH DAKOTA.

CAN-OPENER.

SPECIFICATION forming part of Letters Patent No. 755,789, dated March 29, 1904.

Application filed June 9, 1903. Serial No. 160,720. (No model.)

To all whom it may concern:

Be it known that I, ROBERT PUTNAM NORTON, a citizen of the United States, residing at St. Thomas, in the county of Pembina and State of North Dakota, have invented certain new and useful Improvements in Can-Openers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to can-openers; and it consists of certain novel features of construction and combination of parts, as will be hereinafter clearly set forth, and pointed out in the claims.

The prime object of my invention, among others, is to provide a machine which will be found reliably efficient in its operation in instantly severing the head of a can, whereby the severed portions of the lid may be easily raised upward out of the way for the removal of the contents.

A further object of my invention is to provide means for opening a can of any size and engaging the severed portions of the lid and elevating the same when the cutting-blades are withdrawn.

Other objects and advantages will be hereinafter made clearly apparent, reference being had to the accompanying drawings, which are made a part of this application, and in which—

Figure 1 is a perspective view of my invention complete as applied to use upon an ordinary fruit-can. Fig. 2 is a central vertical section of my can-opener, showing by dotted lines its capacity for operating upon cans of varying diameters. Fig. 3 is a perspective detail view showing the preferred means of attaching the cutting-knives in place. Fig. 4 is an end view of the knife-receiving arm or holder and also an end view of the knife-blade adapted to fit therein.

For convenience in referring to the details of my invention and coöperating accessories numerals will be employed, the same numeral applying to a similar part throughout the several views.

Referring to the numerals on the drawings, 1 shows a fruit-can of the average size and diameter, while 2 designates the base-section of my can-opener, which in this instance is a ring-like member adapted to fit upon a fruit-can of average size. Upon the circular base member I erect a plurality of standards 3, which extend upward and converge toward each other and are rigidly secured to the housing or member 4, which latter is designed to carry a reciprocating shaft 5, inasmuch as the bottom 6 of the housing and the lid-section 7 thereof are provided with a centrally-disposed aperture of proper size to permit the free movement of said shaft. The lower end of the shaft 5 is tapered to a sharp point, as indicated by the numeral 7^a, said point being designed to extend normally below the lower edges of the knives 8, which are connected to the lower end of the shaft in any preferred way, preferably by the construction illustrated in Figs. 3 and 4, wherein it will be observed that the collar 9 is provided to extend around the shaft 5, while said collar is so formed as to have a plurality of radiating arms 10, each arm having a dovetail groove or recess in its lower edge, as indicated by the numeral 11 in Fig. 4, wherein the back of the knife-blade may be inserted in said recess and held therein in any preferred way, as by inserting the pin 12. The back of the knife-blade is so formed that it will have an enlargement or rib 13 of a shape corresponding to the recess 11, thereby permitting the knife to be inserted and freely withdrawn from its seat in the arm 10, as will be clearly understood.

The shaft 5 is held normally upward by means of the spring 14, which is coiled around that part of the shaft within the housing 4, said spring being introduced between the bottom section 6 and the limiting-bar 15, as clearly shown in Fig. 2. The bar 15 is of sufficient length to extend through the openings or slots 16, formed in a contiguous part of the casing or housing 4. The purpose of the bar 15 is to limit the upward movement of the shaft 5, as will be clearly obvious.

One of the standards 3 is provided with the bracket or upwardly-extending arm 17, to the upper end of which I pivotally attach the operating-lever 18, which is provided on its under side with the contact-point 19, designed to engage the upper end or head 20 of the shaft 5, and

it will be clearly obvious that by grasping the handle 21 and forcing the same downward the shaft 5 will be moved, so that the extreme sharpened point 7 thereof will be forced through the central part of the can-lid, said puncture thus formed being followed by the plurality of knives 8, whereby the can-lid will be severed into triangular-shaped pieces, the apex of the triangular section pointing toward the center of the can, while the base-section thereof will still adhere to the can. When the knives are forced downward, the free ends of the triangular-shaped sections will be engaged by the arms 10 or the reinforcing members 22, as the case may be, and elevated thereby, thus permitting the contents of the can to be easily removed.

In order to compensate for fruit-cans of various sizes, and thus make it possible to use my can-opener upon very small cans, I provide a plurality of inwardly-projecting brackets 23, preferably corrugated upon their under sides in order to more securely engage the rim of the can and prevent my cutter from casually slipping off the same during the operation thereof. The brackets or members 23 are reinforced and reliably sustained in their operative places by means of the bracing-sections 24, extending up from the free end of the brackets to and in permanent engagement with a contiguous part of the standards 3.

The lid-section 7 is attached in place in any preferred way, as by means of a bayonet-joint 25, as clearly shown in Fig. 1.

It will thus be seen that I have provided a reliable efficient can-opener and means for removing the knives, whereby the same may be easily sharpened, and thus kept in good condition for use.

By the foregoing description it will be obvious that the various parts of my invention may be very cheaply manufactured and readily assembled each in its operative position, and while I have described the preferred combination and construction of my invention it is thought that the manner of using the same will be fully apparent, though it may be stated that the can-opener is placed upon the can to be opened, whereby the base-section 2 will rest directly upon the head of the can or the head will be engaged by the brackets 23 at some point or corrugation thereon, when by grasping the housing 4 and holding the same downward the controlling-lever 18 may be caused to force the point of the shaft 5 into the can to be followed by the cutting action of the plurality of knives, and when pressure upon the lever 18 is removed the force of the spring 14 will cause the shaft to reassume an elevated position, and thereby withdraw the knives from the severed head of the can, thus leaving the severed portions of the can extending upward by reason of their engagement with the arms 10 or the reinforcing or holding members 22.

Believing that the advantages and manner of using my improved can-opener have thus been made clearly apparent, further description is deemed unnecessary.

What I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described can-opener comprising a suitable base member, standards erected upon said base member and converging toward each other, a housing connnected to the upper ends of said standards, a reciprocating shaft operatively mounted in said housing and carrying at its lower end a plurality of radiating knives, a limiting-bar 15 passing through an orifice in the upper end of said reciprocating shaft and adapted to limit the upward movement thereof, a spring surrounding said shaft between said bar and the bottom of said housing, and a horizontally-disposed lever adapted to force said shaft downward when so desired, all combined as specified and for the purpose set forth.

2. A can-opener comprising a base member, standards connected thereto, a housing connected to the upper end of said standards, said housing having registering longitudinal slots therein, a reciprocating shaft operatively mounted in said housing, the lower end of said shaft being sharpened, a bar passing through said shaft near its upper end, the ends of said bar entering said registering slots whereby the upward movement of said shaft will be limited, a collar surrounding said shaft at its lower end and carrying a plurality of radiating knives, means adapted to hold said shaft normally elevated, and additional means pivotally secured to one of said standards adapted to force said shaft downward when so desired, all substantially as specified and for the purpose set forth.

3. In a can-opener, the combination with suitable cutting-knives and a controlling-shaft therefor, of a base member 2 having inwardly-converging brackets 23 rigidly secured thereto whereby said base member will operate on different-sized cans, said brackets 23 having ribs or corrugations on their under side adapted to prevent said base member from casually slipping, substantially as set forth.

4. The combination with a can-opener having a controlling-shaft, of a collar 9 secured to the lower end thereof, a plurality of radiating arms carried by said collar, each arm being provided with a dovetailed groove or recess in its lower end, knives 8 adapted to enter said grooves, and means to removably secure said knives in said grooves, substantially as specified and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT PUTNAM NORTON.

Witnesses:
T. A. MILLER,
H. G. VICK.