

No. 627,752.

Patented June 27, 1899.

A. H. HERRON.

CAN OPENER.

(Application filed Jan. 17, 1899.)

(No Model.)

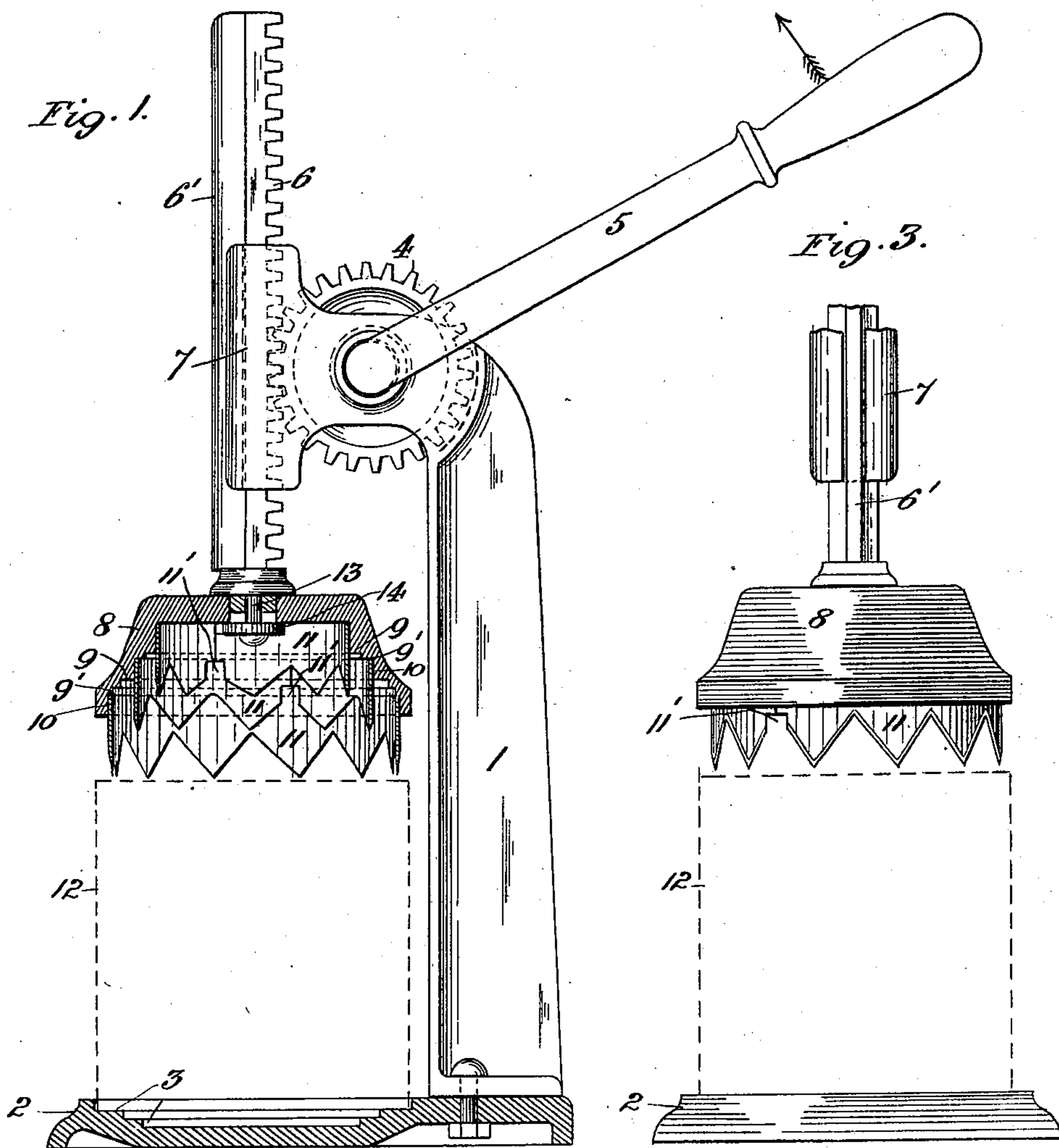
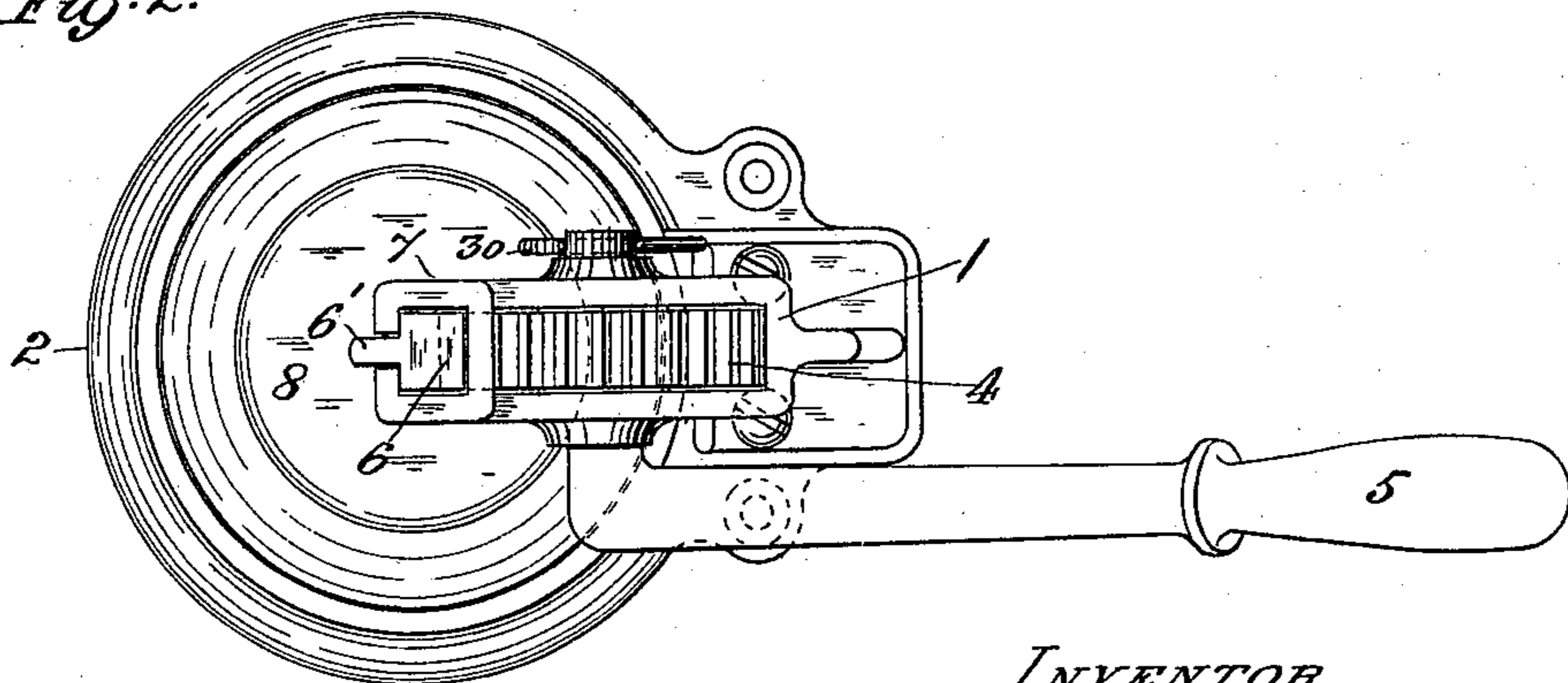


Fig. 2.



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AL H. HERRON, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE ANTHONY WAYNE MANUFACTURING COMPANY, OF SAME PLACE.

CAN-OPENER.

SPECIFICATION forming part of Letters Patent No. 627,752, dated June 27, 1899.

Application filed January 17, 1899. Serial No. 702,444. (No model.)

To all whom it may concern:

Be it known that I, AL H. HERRON, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Can-Openers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention has relation to improvements in can-openers; and it consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a side elevation of the standard, showing the knife-supporting cup and knife-blades carried thereby and the base of the standard in section. Fig. 2 is a top plan view of the device; and Fig. 3 is a front elevation with parts broken away, the can being shown in all instances in mere dotted outline.

The object of my present invention is to construct a can-opener by means of which the top or cover of the can can be severed in one operation, sufficient metal being left adhering to the severed section to prevent such section from being wholly detached from the body of the can.

A further object is to so arrange the cutting-knives of the device as to make the invention applicable to cans of various diameters, whereby the same apparatus can be employed whatever may be the actual size of the can operated on.

In detail the invention may be described as follows:

Referring to the drawings, 1 represents a suitable standard mounted on a base 2, the latter being provided with a series of concentric annular ledges 3 of different diameters, each ledge serving to support a can of a diameter to which the diameter of the particular ledge conforms. Mounted at the upper end of the standard is a pinion 4, to the outer projecting end of whose spindle is secured an operating handle or lever 5, the pinion meshing with the teeth of a rack-bar or plunger 6, operating in a housing 7, the walls of the latter being slit or open at the front to form a guide for the outer rib 6', with which the rack-bar is provided. To the base of the

rack-bar is secured an inverted cup 8, provided with a series of concentric annular ledges 9, separated by vertical walls 10 of substantially uniform depth, along which the cutting-knives 11 are disposed. Each knife is composed of a metallic serrated band and of such a length that when bent to bring its opposite ends to abut against each other it forms a circular blade of a diameter to fit snugly against the wall 10 supporting it, the spring of the metal being sufficient to hold the blade frictionally in place against such wall. The adjacent teeth at the abutting ends of each blade are cut so as to form a recess 11' of a sufficient depth to pass beyond the sphere of action of the cutting-teeth of the blade, the said recess 11' determining the size of the connecting-strip of metal by which the severed top of the can is allowed to adhere to the body of the can. The base of the innermost knife or circular blade 11 rests with its inner edge against the base of the cup, the bases of the subsequent blades resting on supplemental ribs or ledges 9', the ledges 9 proper striking and being limited in their descent by the top circular edge of the can 12 when the cup has been depressed to a position sufficient to sever the top of the can. Each knife has therefore a base or ledge to rest upon and a vertical wall to secure the blade frictionally against being withdrawn, the spring of the metal, as before stated, providing sufficient frictional contact for such purpose. The cup is secured to the rack-bar by means of a screw 13, limited by a washer 14. The width of the ledges 9 9' is such as to leave sufficient annular space between any two consecutive knives for a can of a given diameter to be out of the sphere of action of one knife while it is operated by a knife of the next smaller diameter. Again, the depth of the walls 10 and the depth of the cutting-teeth of any one blade are such as to bring the bases of the teeth of one blade substantially in the plane where the apices or ridges of the teeth of the next smaller blade begin—that is to say, the top of the can will be severed by any one blade before the teeth of the next succeeding smaller blade can cut into it. This arrangement is best seen in the section in Fig. 1. The ledges 3, as is obvious, are adapted to support cans of different diame-

ters, the smallest can being adapted to rest, of course, on the base direct and between the vertical wall separating the first ledge from the upper surface of such base.

5 In operating the device the can is placed on the base, as shown by dotted lines in Fig. 1, and the operating handle or lever is turned in the direction shown by the arrow, thus depressing the rack-bar and cutting-knives and
10 severing the top of the can, with the exception of a small connecting-strip, due to the recess 11', formed at the abutting ends of the band constituting the blade.

It is apparent, of course, that minor changes
15 might be made without departing from the spirit of my invention. The spindle of the pinion in the present case is held in place by split pin 30, a form of construction well understood.

20 Having described my invention, what I claim is—

1. In a can-opener, a suitable cup, a plunger for the same, a series of concentric ledges disposed in different planes along the inner
25 surface of the cup, said ledges being separated by suitable walls of substantially uniform depth, a series of blades having their bases resting on said ledges the blades being inserted between the walls separating the
30 ledges, the bases of the teeth of any blade being disposed out of the sphere of action of the apices of the teeth of the next succeeding or smaller blade, substantially as set forth.

2. In a can-opener, a suitable cup, a plunger for the same, a series of concentric ledges
35 disposed in different planes along the inner surface of the cup, said ledges being separated by vertical walls of substantially uniform depth, a series of blades or bands having their bases resting on the ledges, the
40 bands being inserted between, and held frictionally by, the vertical walls separating the

ledges, the bases of the teeth of any blade being disposed out of the sphere of action of the apices of the teeth of the next succeeding
45 or smaller blade, substantially as set forth.

3. A can-opener, comprising a base adapted to support cans of different diameters, a standard mounted on said base, a lever-controlled pinion carried at the upper end of the
50 standard, a rack-bar mounted in a housing adjacent to the pinion and meshing with said pinion, a rib forming a part of said rack-bar, a guide for said rib, an inverted cup secured to the lower end of the rack-bar above the base,
55 a series of concentric ledges disposed in different planes along the inner surface of the cup, supplemental ledges for the support of suitable knife-blades, the latter each comprising a serrated metallic strip bent to bring its
60 opposite ends, to abut against, or contiguous to one another, the adjacent teeth at such abutting ends being cut away a suitable distance on each side of such abutting ends and to a
65 depth to bring the resulting recess out of the sphere of action of the cutting edges of the teeth, the several blades being disposed to bring the base of the teeth of one blade substantially in the plane of the apices of the
70 teeth of the next succeeding blade, each blade resting upon a ledge, and held frictionally against the vertical wall separating any two ledges by the springing action of the blade, the parts operating substantially as and for the purpose set forth.

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

AL. H. HERRON.

Witnesses:

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JAMES J. O'DONOHUE.