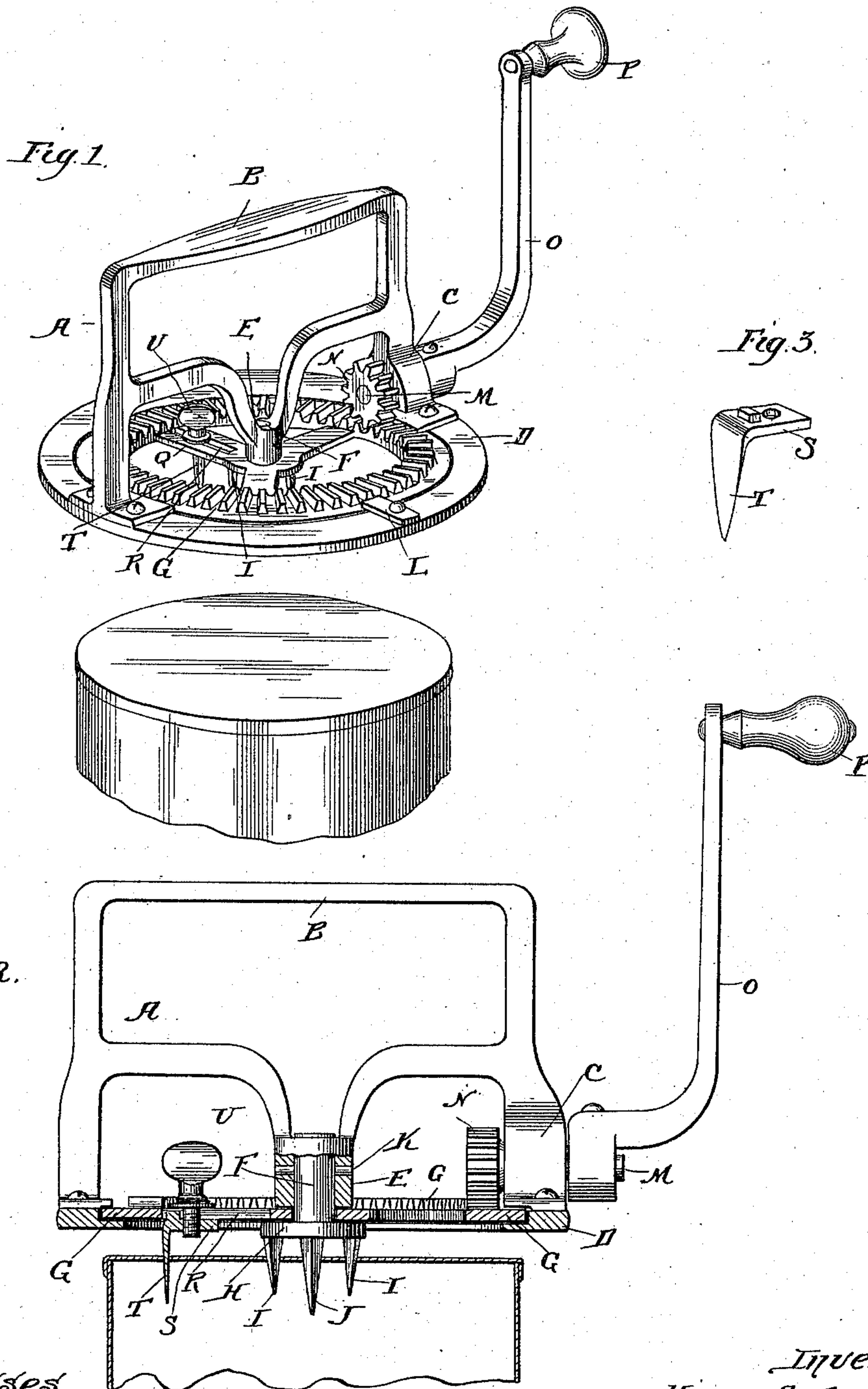


(No Model.)

H. A. FRANTZ.
CAN OPENER.

No. 579,089.

Patented Mar. 16, 1897.



Witnesses.

A. B. Hallock.

A. Williamson.

Inventor
Hiram A. Frantz.
By Geo. H. Holgate
Attorney

UNITED STATES PATENT OFFICE.

HIRAM A. FRANTZ, OF TAMAQUA, PENNSYLVANIA.

CAN-OPENER.

SPECIFICATION forming part of Letters Patent No. 579,089, dated March 16, 1897.

Application filed July 16, 1896. Serial No. 599,387. (No model.)

To all whom it may concern:

Be it known that I, HIRAM A. FRANTZ, a citizen of the United States, residing at Tamaqua, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Can-Openers, of which the following is a specification.

My invention relates to a new and useful improvement in can-openers, and has for its object to provide a device of this description by means of which a can may be quickly opened, and the piece cut from the top thereof will be removed without permitting impurities to fall within the can.

With these ends in view my invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction and operation in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective of my improvement, also showing the diagram of a can, illustrating how it would be operated upon; Fig. 2, a sectional elevation showing the relative position of the several operating parts, and Fig. 3 a detail perspective of the cutting-blade.

Referring to the drawings in detail, A represents the framework, which is so formed by casting as to provide a handle B and a bearing C for the crank-shaft; and to this frame is secured by means of suitable screws a ring D. A hub E is also formed with the frame and has secured therein a stud F, which projects downward and serves as the bearing upon which the gear-wheel G is adapted to revolve, said wheel having its teeth formed upon the upper face thereof, as clearly shown, and radial spokes connecting its outer rim with the hub thereof.

Formed with the lower end of the stud is a small disk H, from which project downward the prongs I, preferably three in number, and a central prong J, of somewhat greater length than the first-named prongs. This disk also serves to hold the wheel in place, and in practice I insert a pin K through the hub and

stud to retain the latter against withdrawal and turning.

The wheel is guided at its outer circumference, which is slightly beveled, by the overhanging lugs L, which are riveted or otherwise secured to the ring, and the feet of the frame may also overhang this beveled edge of the gear-wheel to serve as additional guides to hold it in place. The crank-shaft M is journaled in the bearing C and has in its inner end a pinion N, adapted to mesh with the teeth of the gear-wheel, and also secured to this shaft is a crank O, carrying a handle P, by means of which it is operated. One of the spokes Q of the gear-wheel is slotted at R and has set therein a shoe S, from which depends the cutting-blade T. A thumb-screw U is passed through said slot and threaded into the shoe, so as to hold the latter in any adjustment within the slot in operation.

From this description the operation of my improvement will be obviously as follows: After the cutting-blade has been adjusted to the desired distance from the center of the wheel the prongs I and J are forced through the top of the can, the latter penetrating the vent-hole in the center of the cap by sufficient force being brought upon the frame A, and this will also force the cutting-blade through the top of the can, when, by revolving the crank in the proper direction, the cutting-bar will be caused to move in a circle, severing from the top a circular piece, the radius of which is equal to the distance of the blade from the center of the wheel, it being understood that the frame A is held rigidly against rotation by the grasping of the handle B by one hand of the operator, while the crank is revolved with the other hand. The object of this is that the portion of the top which is being cut therefrom is not permitted to revolve or become displaced until it has been entirely severed, and when so severed will be removed with the device on account of the hold that the prongs I and J have thereon.

It is to be noted that the blade T should be constructed so as to place it at such an angle as to cut the circle, which is described, thereby during its revolutions it will facilitate its action upon the can-top.

The blade T is made adjustable by means of the thumb-screw for the purpose of adjusting it to large or small cans, and this adjustment is so simple as to require little or
5 no time.

One of the principal advantages of my improvement is that it may be readily applied to the top of a can without preliminary arrangement, and great power may be applied
10 to the cutting-blade by means of the small pinion acting upon the large gear, thus enabling a person to quickly open a can and to cut a smooth edge to prevent cutting the fingers and making dangerous wounds, and when
15 opened entirely remove the pieces cut therefrom, so that the contents of the can may be readily withdrawn.

Having thus fully described my invention, what I claim as new and useful is—

20 In a can-opener, a frame, a handle provided on said frame, a flat ring rigidly secured to said frame, a hub formed with said frame, a stud secured in said hub, a disk formed with

the lower end of the stud, prongs projecting downward from said disk, a gear-wheel jour- 25
naled on said stud, said wheel fitting at its outer circumference in annular groove of the outer ring, lugs overhanging said groove and guiding said gear-wheel, a crank journaled in a bearing of the frame, a pinion carried on 30
the inner end of the shaft, said pinion being adapted to mesh with the teeth of the gear-wheel, a blade, a shoe to which said blade is secured, a lug formed on said shoe adapted to slide in a slot formed in one of the spokes 35
of the gear-wheel, a thumb-nut passed through said slot and threaded into the shoe to hold said shoe in any adjustment, as and for the purpose described.

In testimony whereof I have hereunto af- 40
fixed my signature in the presence of two subscribing witnesses.

HIRAM A. FRANTZ.

Witnesses:

S. S. WILLIAMSON,
MILTON P. PRUTZMAN.