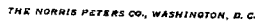


CAN OPENER.

974,484.

Patented Nov. 1, 1910.



UNITED STATES PATENT OFFICE.

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CAN-OPENER.

974,484.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE F. HALL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, 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, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

This invention has reference, generally, to improvements in can-openers; and, the present invention relates, more particularly, to a novel construction of can-opener provided with a piercing end or element which is adapted to be forced through the central portion of the head of a can, and is also provided with a slidably arranged and adjustable cutter which can be moved back and forth upon the main body or shank of the device, according to the opening desired in the head of the can, the device being provided with a simply constructed and easily operated clamping or locking means for holding the cutter in its positively fixed position, after adjustment has been made, and whereby the device can be used for cutting the heads of different sized cans.

The invention has for its principal object to provide a novel and simply constructed can-opener provided with a slidably arranged and adjustable cutter, and which is made with a simply constructed and readily operated clamping or locking means for rigidly fixing the cutter in its adjusted position against accidental displacement while cutting or severing the sheet-metal head of the can.

A further object of this invention is to provide a novel and slidably arranged cutter and a clamping or locking means therefor, the parts of which are arranged and constructed in such a manner, so that the member or element for manipulating the clamping means can not work loose and become lost; and, furthermore, to provide a knife or blade-carrier which can be readily moved along the body or shank of the can-opener without any undue friction between the said carrier and the marginal edges of the said main body or shank of the device.

A further object of this invention is to provide a novel knife or blade-carrier having the knife or blade separably connected therewith, so that the knife or blade can be removed and replaced by another knife or blade, or to be sharpened when so removed.

Other objects of this invention not at this time more particularly enumerated will be clearly understood from the following detailed description of my present invention.

With the various objects of the present invention in view, the same consists, primarily, in the novel can-opener hereinafter set forth; and, the invention consists, furthermore, in the novel arrangements and combinations of the various devices and parts, as well as in the details of the construction of the same, all of which are more fully described in the following specification and then finally embodied in the clauses of the claims which are appended to the said specification and which form an essential part of the same.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of a can-opener embodying the principles of the present invention, said view showing the knife or blade-carrier in two of its adjusted positions, with the said knife or blade-carrier clamped or locked in its fixed position after adjustment; Fig. 2 is a top view of the can-opener; and Fig. 3 is a bottom view of the same. Fig. 4 is a longitudinal vertical section of a portion of the main body or shank of the can-opener and the slidable blade or knife-carrier in its locked position, said section being taken on line 4—4 in Fig. 3 of the drawings; and Fig. 5 is a similar section of a portion of said main body or shank and the knife or blade-carrier, showing the clamping or locking means in its disengaged relation with the main body or shank of the can-opener. Fig. 6 is a transverse vertical section taken on line 6—6 in Fig. 1; and Fig. 7 is a similar section, taken on line 7—7 in said Fig. 1, looking in both instances in the direction of the arrow *x*. Fig. 8 is a detail sectional representation of showing a modified means of securing one of the cutters to the main body or shank of the device.

Similar characters of reference are employed in all of the said above described views to indicate corresponding parts.

Referring now to the several figures of the drawings, the reference-character 1 indicates the complete can-opener, the same comprising a main body or shank 2 which is provided at one end with a handle, as 3. At its opposite end-portion, the said main body or shank is provided with a piercing member or element 4 which is formed with a point 5 and has an angular or bent portion 6, said bent portion 6 being inserted in a hole or perforation 7 in the said end-portion of the main body or shank, and being suitably secured in its fixed position by means of an upset or riveted portion 8, as shown in Fig. 4 of the drawings, or by being otherwise suitably secured in its operative position. The said piercing member or element 4 is thus located upon one of the flat sides of the main body or shank 2 and extends in a forward direction from the free end of said body or shank so as to be readily applied to the head of a can for the purpose of forcing the pointed end of the piercing member or element through the said head of the can. Suitably secured upon the opposite side or face of the said main body or shank 2, at or near the end-portion thereof, by means of rivets 9, or by means of a double-pointed rivet, as 26, see Fig. 8, or other suitable fastening means, is the portion 10 of a suitable cutter for severing the heads of rectangular cans, and the like. Connected with the portion 10 is an angular part 11 provided with a forwardly extending knife or cutter 12 which has a piercing-point 13, and is preferably of the general configuration shown in the several figures of the drawings. The purpose of this form of cutter is to enable the device to be used for piercing and cutting the heads of square and other similar cans, such as sardine-cans, by forcing the point 13 through the metal and then using the handle 3 as a lever for forcing the knife or cutter through the sheet-metal head, as will be clearly evident.

To enable the can-opener to be used upon the ends or heads of cylindrical cans of various diameters, a knife or blade-carrier is slidably arranged upon the main body or shank 2. This knife or blade-carrier consists, essentially, of a base-plate 14 arranged against that face or side of the main body or shank 2 from which the piercing member or element 4 extends, said base-plate 14 being provided at its respective end-portions with suitably formed loops or eyes, as 15, which embrace the said main body or shank 2, substantially in the manner shown in the several figures of the drawings, and by means of which the said base-plate 14 is slidably connected with the said main body or shank 2. Suitably mounted upon that face of the said base-plate 14 nearest the face of the main body or shank 2 is a plate or member 16, said plate or member extend-

ing through one of the said loops or eyes 15 and being provided with an angular finger or extension 17 of a triangular configuration, said finger or extension having a piercing point 18 and a knife or cutter-edge 19, substantially as illustrated in Fig. 6 of the drawings. The plate or member 16 may be secured to said base-plate 14 by means of any suitable fastening means, and one manner is by means of a removable screw which permits of the removal of said plate or member 16 from said base-plate 14 so that it can be replaced by another plate or member 16 and its cutter, or for the sharpening of the knife or cutter-edge after which it can again be secured in its operative position, as will be clearly evident. That the said slidably arranged cutter or knife-carrier, thus provided, may be clamped or locked in any one of its adjusted positions upon the said main body or shank 2, the said base-plate 14 is formed with a pair of upwardly extending and perforated ears or lugs 21, said ears or lugs embracing the longitudinal edge-portions of the said main body or shank 2 and extending above the upper face of the said body or shank, substantially in the manner illustrated in the several figures of the drawings. Suitably secured in the perforations of the said ears or lugs 21 and extending across the space between the said ears or lugs is a pin 22, and pivoted upon said pin 22 are a pair of substantially centrally located lugs or ears 23 which extend downwardly from a plate-like operating element or finger-piece 24, in such a manner that the said element 24 will be provided on opposite sides of its pivotal support with push-pieces, one of which is used for clamping the parts in their fixed positions, and the other push-piece being used for releasing the said parts. The said lugs or ears 23 are eccentrically pivoted upon said pin 22, so that the preferably cam-shaped edge-portions 25 of the said lugs or ears 23 can be brought into fixed locked or clamped engagement with the face of the main body or shank 2, as indicated in Figs. 1 and 4 of the drawings, so that the knife or blade-carrier and its cutter are immovably locked or clamped in position upon the said main body or shank 2; or, when the said fingerpiece is brought into the position illustrated in Fig. 5 of the drawings, removing the said cam-shaped edge-portions 25 from their clamping or holding engagement with the face of the said main body or shank 2, as shown, to allow the knife or blade-carrier and its cutter to be moved in a backward or forward direction, as may be desired.

The manner of employing the can-opener for cutting out the heads of cylindrical cans will be clearly evident from the foregoing description and from an inspection of the

several figures of the drawings. The piercing member or element 4 being forced through the central portion of the head of the can, and the knife or blade-carrier being properly adjusted, according to the diameter of the head of the can, and being rigidly fixed by means of the clamping or locking device, the pointed end of the blade or knife is forced into and through the head of the cam at or near the outer peripheral edge of the head where it is joined to the body of the can. Now using the piercing member or element 4 as a pivot and the handle 3 as a lever for drawing the knife or cutter-edge 19 through the sheet-metal head, the latter can be readily cut out of the body of the can, as will be clearly evident.

I am aware that some changes may be made in the arrangements and combinations of the devices and parts, as well as in the details of the construction of the same, without departing from the scope of my present invention as set forth in the foregoing specification and as defined in the claims which are appended to the said specification. Hence I do not limit my invention to the exact arrangements and combinations of the devices and parts as described in the said specification, nor do I confine myself to the exact details of the construction of the said parts as illustrated in the accompanying drawings.

I claim:—

1. A can-opener comprising a main body provided with a piercing member, a blade-carrier slidably arranged upon said main body, a clamping means consisting of a plate-like fingerpiece formed with oppositely extending push-pieces, and eccentrically pivoted ears extending from said fingerpiece, said ears extending centrally from the marginal edges of said finger-piece, the marginal edge-portions of said ears being adapted to be brought in clamping engagement with said main body so as to clamp said blade-carrier in any one of its adjusted positions upon said body, said push-pieces being arranged so that a downward pressure upon one of said push-pieces will clamp said ears, and a downward pressure upon the other push-piece will release said ears from their clamped relation.

2. A can-opener comprising a main body provided with a piercing member, a blade-carrier slidably arranged upon said main body, a clamping means consisting of a plate-like fingerpiece formed with oppositely extending push-pieces, and eccentrically pivoted ears extending from said fingerpiece, said ears extending centrally from the marginal edges of said finger-piece and said ears being formed with cam-shaped marginal edge-portions adapted to be brought in clamping engagement with said main body so as to clamp said blade-carrier

in any one of its adjusted positions upon said body, said push-pieces being arranged so that a downward pressure upon one of said push-pieces will clamp said ears, and a downward pressure upon the other push-piece will release said ears from their clamped relation.

3. A can-opener comprising a main body provided with a piercing member, a blade-carrier comprising a base-plate provided with loop-shaped portions embracing said main body, a second plate extending from said base-plate, said second plate being provided with an angular finger formed with a knife-edge, a clamping means consisting of a plate-like fingerpiece formed with oppositely extending push-pieces, said ears extending centrally from the marginal edges of said finger-piece, and eccentrically pivoted ears extending from said fingerpiece, the marginal edge-portions of said ears being adapted to be brought in clamping engagement with said main body so as to clamp said blade-carrier in any one of its adjusted positions upon said body, said push-pieces being arranged so that a downward pressure upon one of said push-pieces will clamp said ears, and a downward pressure upon the other push-piece will release said ears from their clamped relation.

4. A can-opener comprising a main body provided with a piercing member, a blade-carrier comprising a base-plate provided with loop-shaped portions embracing said main body, a second plate extending from said base-plate, said second plate being provided with an angular finger formed with a knife-edge, a clamping means consisting of a plate-like fingerpiece formed with oppositely extending push-pieces, and eccentrically pivoted ears extending from said fingerpiece, said ears extending centrally from the marginal edges of said finger-piece and said ears being formed with cam-shaped marginal edge-portions adapted to be brought in clamping engagement with said main body so as to clamp said blade-carrier in any one of its adjusted positions upon said body, said push-pieces being arranged so that a downward pressure upon one of said push-pieces will clamp said ears, and a downward pressure upon the other push-piece will release said ears from their clamped relation.

5. A can-opener comprising a main body provided with a piercing member, a blade-carrier comprising a base-plate provided with loop-shaped portions embracing said main body, a second plate extending from said base-plate, said second plate being provided with an angular finger formed with a knife-edge, perforated ears extending upwardly from said base-plate, said ears embracing the opposite edge-portions of said main body, a clamping means consisting of

a plate-like finger-piece, and ears extending from said fingerpiece, said ears extending centrally from the marginal edges of said finger-piece and said second-mentioned ears
5 being eccentrically pivoted to the ears of said base-plate, the marginal edge-portions of said eccentrically pivoted ears being adapted to be brought in engagement with said main body so as to clamp said blade-
10 carrier in any one of its adjusted positions upon said body, said push-pieces being arranged so that a downward pressure upon

one of said push-pieces will clamp said ears, and a downward pressure upon the other push-piece will release said ears from their
15 clamped relation.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 17th day of February, 1909.

GEORGE F. HALL.

Witnesses:

FREDK. C. FRAENTZEL,
FREDK. H. W. FRAENTZEL.