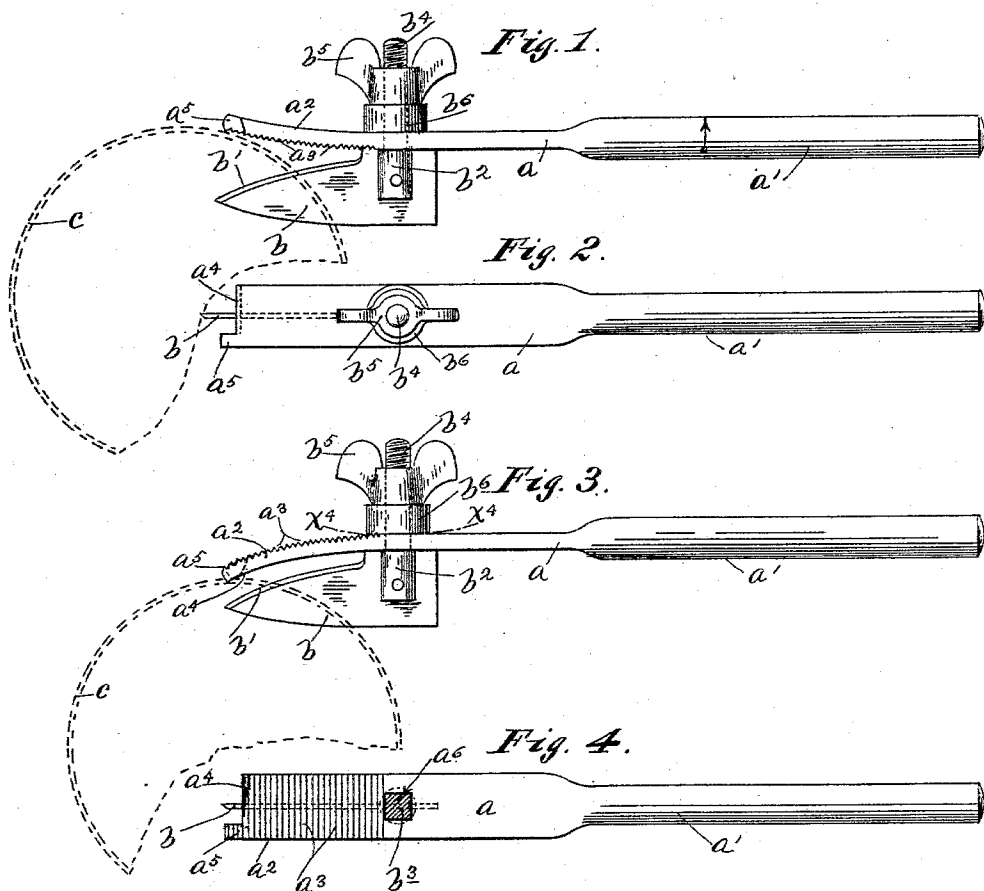


(No Model.)

O. A. BURNES.
CAN OPENER.

No. 569,609.

Patented Oct. 20, 1896.



Witnesses.

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CAN-OPENER.

SPECIFICATION forming part of Letters Patent No. 569,609, dated October 20, 1896.

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To all whom it may concern:

Be it known that I, OLIVER A. BURNES, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, 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 has for its object to provide an improved can-opener adapted to cut through the side walls of the can and thereby to remove the entire head or end of said can.

To this end my invention comprises the novel devices and combinations of devices hereinafter described, and defined in the claims.

The preferred form of my invention is illustrated in the accompanying drawings, wherein, like letters referring to like parts throughout the several views—

Figure 1 is a side elevation showing my improved can-opener in operative position on a can, the said can being indicated by dotted lines. Fig. 2 is a plan view of the can-opener shown in Fig. 1. Fig. 3 is also a side elevation of the can-opener shown in Fig. 1 in operative position on a can, the parts of said can-opener being rearranged with respect to each other and the said can being indicated by dotted lines; and Fig. 4 is a horizontal section taken on the line X⁴ X⁴ of Fig. 3.

a indicates a lever provided at one end with a handpiece *a'* and at its other end with a fulcrum portion *a²*, formed by curving or bending the end of said lever to one side, as shown in Figs. 1 and 3. Preferably this fulcrum end *a²* is provided on its convex surface with a roughened or serrated surface *a³*, and is cut away at its extreme end to form a sharp biting or fulcrum edge *a⁴* and guide-lug *a⁵*. At a point just inward of the serrated surface *a³* the lever *a* is provided with a square hole or shank-seat *a⁶*.

b indicates the knife or cutter, which has its cutting edge *b'* arranged for coöperation with the fulcrum end *a²* of the lever *a*. As shown, the knife *b* is adapted to be secured in either one of two positions, that is, arranged to face either the convex or the concave side of the fulcrum end *a²*. This is accomplished by means of a clamp-stud *b²*, secured at one end to said knife *b*, having a square shank portion *b³* fitting in the square passage or seat *a⁶* of said lever *a* and having its screw-threaded end *b⁴* engaged by a thumb-nut *b⁵*. As shown, the thumb-nut *b⁵*, instead of acting directly on the face of the lever *a*, acts on a loose washer *b⁶*, which is clamped thereby against said lever *a*.

c indicates a can by dotted lines.

The operation of my can-opener is as follows: For ordinary use the parts of the can-opener will be arranged as shown in Figs. 1 and 2, in which case the action will be substantially as follows: The point of the knife *b* is forced through the side of the can, as shown in Fig. 1. The cutting action is produced by the outward movement of the cutter, caused by turning the handle portion *a'* in the direction of the arrow marked thereon. Under this outward stroke of the cutter the roughened or serrated surface *a³* on the fulcrum end *a²* is pressed tightly against the side of the can and serves as a fulcrum or rocking base of resistance to the lever *a'*.

The above arrangement of the cutter with respect to the lever *a* is the one which will ordinarily be used, as it cuts the most rapidly of the two positions which said cutter may take and adapts the tool for opening all such cans as fruit, vegetable, sardine-cans, &c. The tool may, however, be better adapted for heavy work, such as opening large paint-cans, for example, by reversing the lever *a* with respect to the knife *b* and securing the parts together, as shown in Figs. 3 and 4. This may of course be readily done simply by removing the thumb-nut *b⁵* and washer *b⁶* and replacing the parts, as shown in Fig. 3.

The operation of the tool when thus arranged is very similar to that described in connection with Figs. 1 and 2, except that in this case the fulcrum or biting edge *a⁴* bears against the side of the can and serves as a base of resistance for the lever *a* in the cutting action, and the lug *a⁵* rests upon the top of the can and holds the knife to a true-line movement. In this position of the parts, however, it will be noted that the distance between the fulcrum edge *a⁴* and the cutting edge *b'* of the knife *b* is much less than the distance between the serrated surface *a³* and

the cutting edge of the knife in the arrangement shown in Fig. 1. From this it follows that the amount of bite or hold which the device in the arrangement shown in Fig. 3 may take on the side of the can is much less than the bite which the cutter may take in the arrangement shown in Figs. 1 and 2. Hence the device when arranged as shown in Fig. 3 will be much slower and stronger in its action than it will when arranged as shown in Figs. 1 and 2.

From the above it must be evident that my improved can-opener is an extremely useful and efficient device, and is adapted equally well to cut off the tops from cans which are either round, square, or of any other form. In fact, the tool is adapted to cut the sharp corners of square and oblong cans with practically as much ease as it can cut on plain surfaces.

Inasmuch as the cutting stroke is always outward the upper rim of the can which remains will be turned or flared outward, so as to leave the interior of the can perfectly smooth.

It will be understood, of course, that the purpose of the roughened or serrated surface a^3 on the fulcrum end a^2 of the lever a is to prevent slipping of the lever a in the cutting action.

It will be also understood that various alterations in the details of construction of the above-described can-opener may be made without departing from the spirit of my invention. For instance, if desired, the knife b might be provided with cutting edges on both of its margins, and the knife itself might be fixed with respect to the lever a and adapted for coöperation with the same from one side only.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. A can-opener, comprising a lever having its fulcrum end curved or bent to one side, and a cutter adapted to be secured to either side of said curved end, for coöperation therewith in the cutting action, substantially as and for the purpose set forth.

2. A can-opener, comprising the lever a with curved fulcrum end a^2 formed at its extreme end with the sharp biting or fulcrum edge a^4 , and the knife b securable to either side of said lever, for coöperation with either the convex surface of said fulcrum end a^2 , or with said biting edge a^4 , substantially as and for the purposes set forth.

3. A can-opener, comprising the lever a with curved fulcrum end a^2 formed at its extreme end with the sharp biting or fulcrum edge a^4 and guide-lug a^5 , and the knife b securable to either side of said lever a , for coöperation either with the convex surface of said fulcrum end or with said biting edge a^4 , substantially as and for the purposes set forth.

4. In a can-opener, the combination with the lever a a' provided at its intermediate portion with the shank-seat a^6 and at its end with the curved and serrated fulcrum end a^2 a^3 formed at its extreme end with the biting edge a^4 and guide-lug a^5 , of the knife b , the clamp-stud b^2 secured to said knife b and having the shank portion b^3 working through said shank-seat a^6 , and the thumb-nut b^5 working on the screw-threaded end of said stud b^2 , substantially as and for the purposes set forth.

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

OLIVER A. BURNES.

Witnesses:

JAS. F. WILLIAMSON,
F. D. MERCHANT.