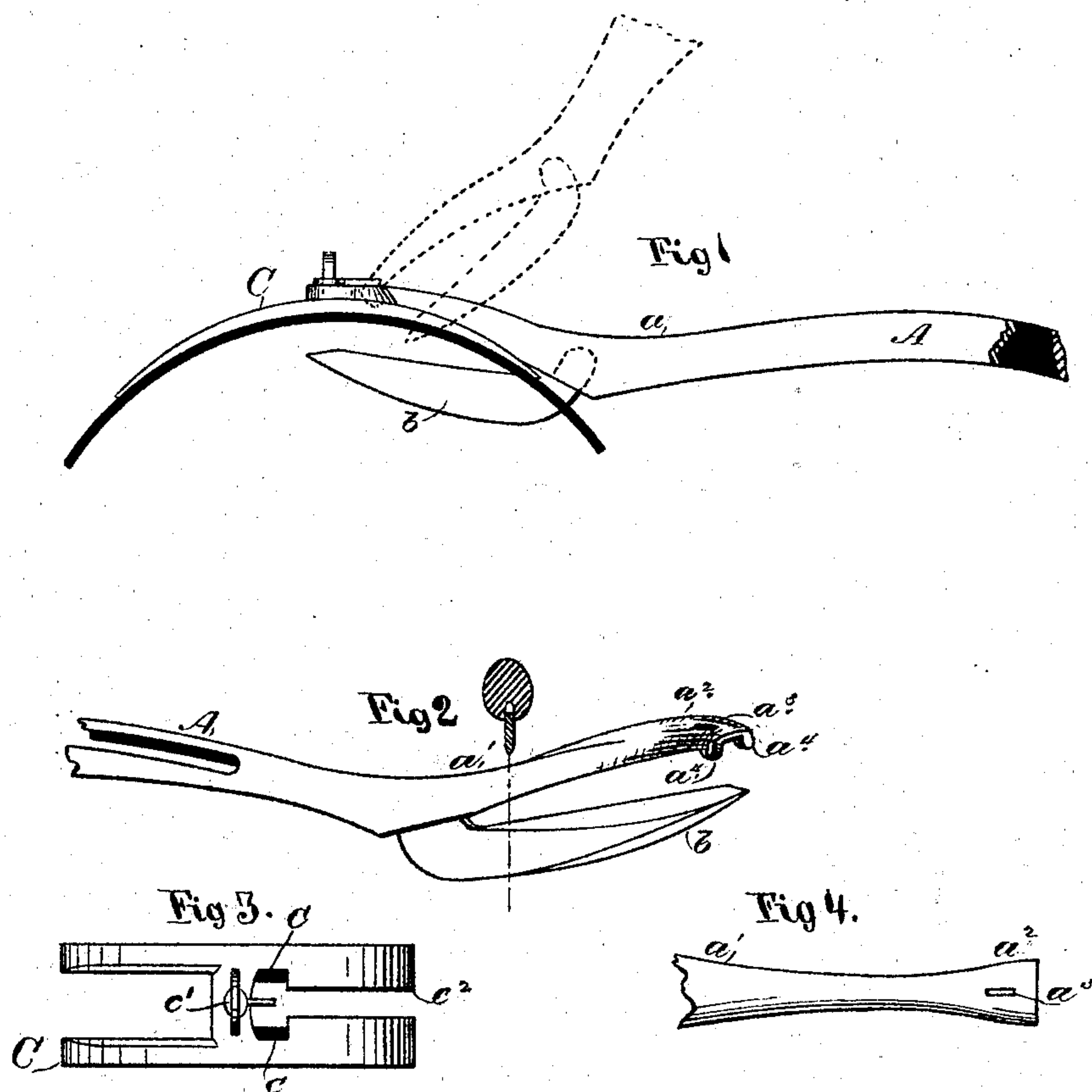


D. A. BARNES.

Can-Openers and Pipe-Cutters.

No. 144,051.

Patented Oct. 28, 1873.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

DANIEL A. BARNES, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN CAN-OPENERS AND PIPE-CUTTERS.

Specification forming part of Letters Patent No. **144,051**, dated October 28, 1873; application filed October 22, 1873.

*To all whom it may concern:*

Be it known that I, D. A. BARNES, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Can-Opener and Pipe-Cutter; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

This invention is designed especially for use in opening tin cans or boxes which have been hermetically sealed, but it is also adapted for cutting stove-pipes, &c.; and consists mainly of a shield of peculiar construction, and the combination with it of a cutter of peculiar form.

In the drawings, Figure 1 represents a side elevation of my improved device as used in the operation of cutting; Fig. 2, a perspective view of the front end of the cutter; Fig. 4, a plan view of the same, and Fig. 3 a plan view of the shield.

To enable others skilled in the art to make and use my invention, I will now proceed to describe fully its construction.

A represents the cutter, consisting of the handle  $a$  and blade  $b$ . The blade  $b$  is made of steel of the form shown, it being provided with a suitable shank, by means of which it is attached to the handle, the latter being cast upon it. It is preferably made flat upon one side, Fig. 1, with inclined sides upon the other, beveled from the center to the edge, Fig. 2, the front end of the blade being formed also into a strong bayonet-like point, adapted to penetrate easily the substances which it is designed to cut. The handle  $a$  may be made in its general construction of any suitable and convenient form that can be easily grasped and held. It is preferably cast, however, of the form shown in the drawing. The rear portion of which it is made is quite thin, and also slotted to give it lightness, while its line of curvature is such as to enable it to be easily grasped and strongly held. At the point of union with the blade the handle is preferably made in the form of a cone,  $a^1$ , for the purpose of giving requisite strength to the part exposed to the greatest strain. The point of the cone  $a^1$  expands

into a curved plate,  $a^2$ , extending over the blade  $b$ , which plate is provided with a slot,  $a^3$ , and bearing-points  $a^4$ , provided with curved faces, as shown. C represents a shield or bearing-plate adapted to be used in connection with the cutter A. It may be constructed of any proper material, and have the ends of the bearing-face either curved or flat to adapt it for cutting flat or round surfaces. The essential parts of this plate are its main bearing-surface, sockets or bearings  $c c$  for the bearing-points  $a^4$  of the cutter, a fastener,  $c^1$ , for holding the cutter in place, and a slot,  $c^2$ , to permit the blade to operate upon the metal.

The manner of using my improved cutter is as follows: The cutter is connected to the shield C by turning aside the pivoted button or fastener  $c^1$ , and placing the bearing-points  $a^4$  in the socketed bearings  $c c$ . The button being then turned to place with its arm, is in line with the slot  $a^3$ . The shield is then placed upon the surface of the can or box to be cut, and the point of the cutter is thrust through the surface. The rear end of the handle is then elevated, and, as its front end is in fact pivoted to the shield, the blade is caused to sever the metal with an upward-drawing cut. When the blade has made the cut the shield is advanced the length of the cut, when the blade being thus brought under the uncut portion, it may be operated to cut again, the operation being continued until the desired opening has been made.

The described construction possesses marked advantages, as follows: By means of the bayonet-like point the blade is easily thrust through the metal. The metal is severed by the cutter with an upward-drawing movement, by which means the metal is not only easily cut, but it is also lifted out of contact with the contents of the can or box. The form of the blade with straight side causes it to cut and leave all the burr on one side.

The central arrangement of the blade in the handle is advantageous, because thereby the knife is easily held when it is desired to cut without using the shield C, in which case the bearing-points rest directly upon the face of the metal.



Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The cutter provided with the projecting bearing-points and the centrally-arranged slot, as described.

2. The slotted shield adapted for movement over the can or cylinder, as described, for the purpose set forth.

3. The combination of a cutter having bear-

ing-points and a blade, arranged substantially as described, with a shield having bearing-sockets and a fastener, substantially as described.

This specification signed and witnessed this 7th day of December, 1872.

DANIEL A. BARNES.

Witnesses:

WM. H. LOTZ,

GEO. FERRIS.