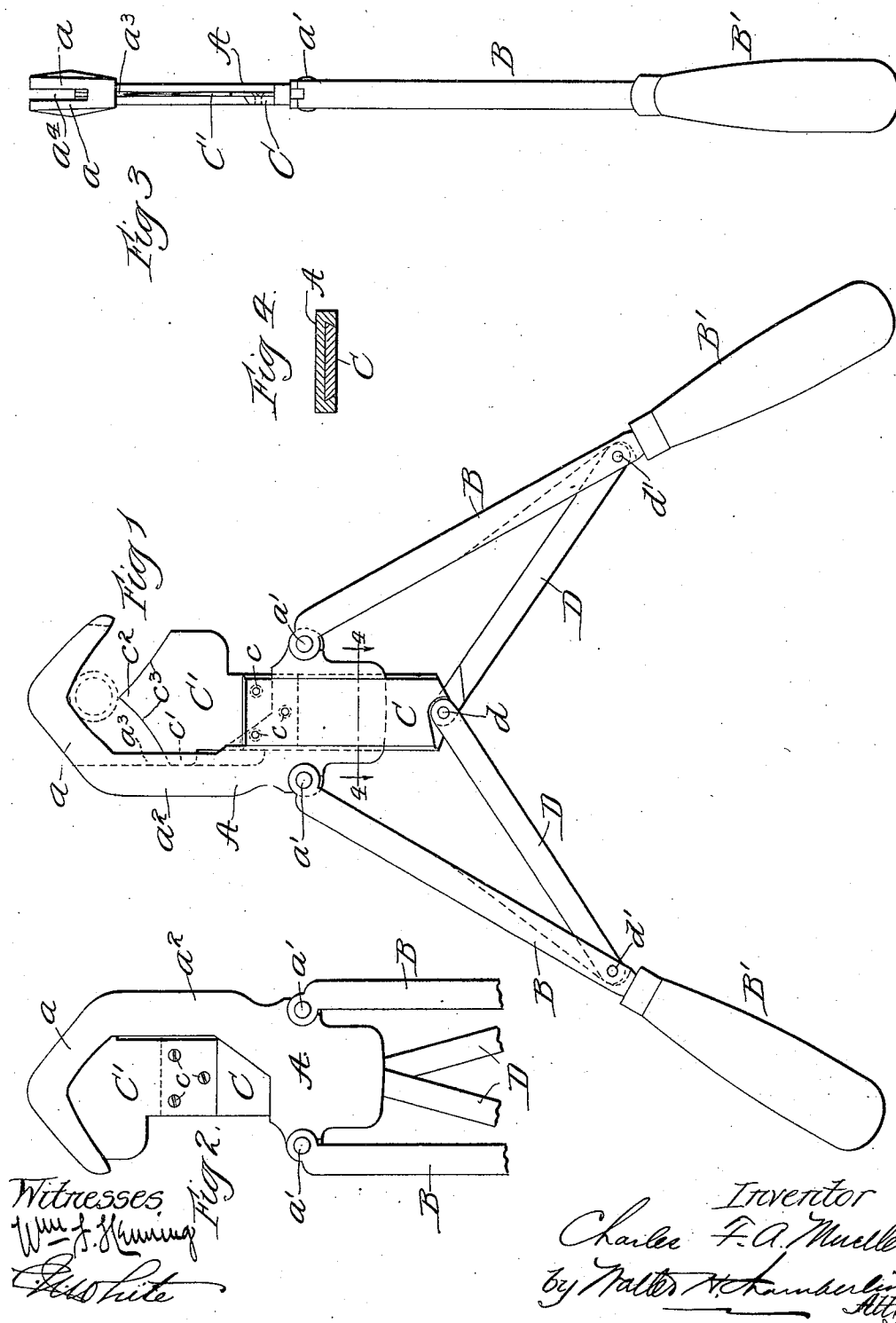


(No Model.)

C. F. A. MUELLER.  
PIPE CUTTER.

No. 551,041.

Patented Dec. 10, 1895.



# UNITED STATES PATENT OFFICE.

CHARLES F. A. MUELLER, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF  
TO ROBERT D. WARDWELL, OF SAME PLACE.

## PIPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 551,041, dated December 10, 1895.

Application filed August 16, 1894. Serial No. 520,460. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES F. A. MUELLER, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Pipe-Cutters; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object the production of a pipe-cutter adapted more particularly for cutting lead or other soft-metal pipe.

The particular object of the invention is to produce a cutter which, while cutting the pipe quickly, will not flatten it or disturb to any great extent the contour thereof.

The invention consists in a combination of devices and appliances hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation with the cutting-knife open. Fig. 2 shows the knife closed. Fig. 3 is an edge elevation, and Fig. 4 a section on the line 4 4 of Fig. 1.

In carrying out the invention, A represents the main portion or head of the device, having a single arm  $a$ , which acts as an abutment to receive the thrust or pressure when the knife is cutting, or in other words it is the stationary jaw of the cutter. This arm is of a V or curved shape, so that when placed on the pipe it will embrace it and hold it firmly in place. Pivoted to the head A at  $a'$  are arms B, provided on their ends with handles B'.

C is the movable jaw or cutter provided with the removable knife portion C'. While I have herein shown the knife C' engaged to the portion C by screws  $c$ , and consequently removable therefrom, yet it is obvious that the portions C C' might be a single piece. By reference to Fig. 4 it will be observed that the movable jaw is engaged to the head A by a dovetailed joint; but it is obvious that other forms of engagement, such as an ordinary tongue and groove, might be employed without departing from the spirit of the inven-

tion. The portion  $a^2$  of the head is provided with a groove  $a^3$ , (shown by dotted lines, Fig. 1,) in which the projection  $c'$  on the knife travels.

D are toggle-arms, pivoted at  $d$  to the movable jaws C, and each having its outer end pivoted, as at  $d'$ , to an arm B. The motion is obvious. As the handles B' are thrown apart the toggle-arms withdraw the knife C, as in Fig. 1, while the motion of the handles D' toward each other reverses the motion of the knife C'.

It will be observed that the knife C' is of a peculiar shape, having the point  $c^2$  and diverging cutting-edges  $c^3$ . It will also be observed that these cutting-edges are knife-edges—that is, sharpened by beveling, so as to easily and cleanly cut the pipe. By virtue of this shape, when the knife strikes the pipe to be cut it first punctures it with the point, and then instead of cutting from the outside of the pipe toward the interior it cuts from the inside toward the exterior and on two sides and with a shearing or knife cut. Thus the only pressure on the pipe that tends to flatten it or destroy its contour is that when the point is puncturing it, which is of course very small. As soon as the point enters the pipe the pressure is lateral and outward, the pipe being firmly held by the V shape of the single stationary arm. The latter is provided with a slot  $a^4$ , which the knife enters, thus insuring the complete cutting of the pipe.

It is obvious that any desired mechanism may be employed to move the knife to perform the work, and although I prefer the form shown, yet I do not care to be so limited so long as the knife has a direct thrust.

What I claim is—

1. In a portable or hand pipe cutter the combination with a head having one or more arms for carrying it and carrying a single stationary arm shaped to engage the pipe, and a movable cutter engaged to the head and adapted to move toward and from the stationary arm, said cutter formed with a point and beveled cutting edges diverging therefrom, and a slot in the head into which the cutting edges move after the pipe has been cut, said knife provided with a lateral

projection adapted to travel in a slot in the stationary arm and thus steady the knife, substantially as described.

2. In a hand pipe cutter the combination  
5 of a head carrying a single stationary arm shaped to embrace the pipe, a movable cutter engaged to the head and adapted to move toward and from the stationary arm, said  
10 cutter provided with a point and cutting edges diverging therefrom toggle arms pivoted to the cutter, and handle arms pivoted to the head and to which the toggle arms are pivoted,

whereby the handles form a means for carrying and supporting the head and also means for operating the cutter, said stationary arm 15 provided with a slot into which the cutting edges of the knife pass after having cut the pipe, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

CHARS. F. A. MUELLER.

Witnesses:

W. H. CHAMBERLIN,  
CLIFFORD N. WHITE.