(No Model.)

O. B. HALL.

PIPE CUTTER.

No. 538,072. Patented Apr. 23, 1895.

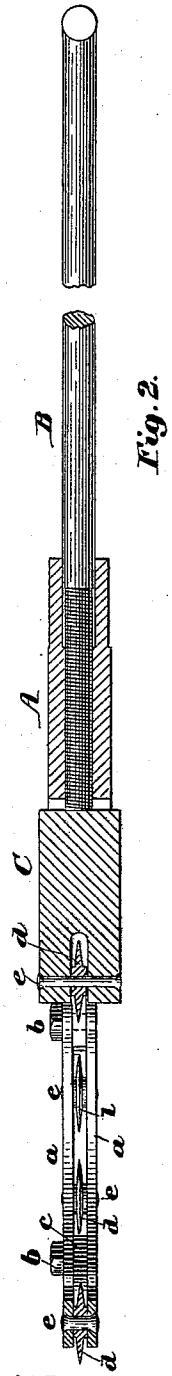

Fig. 2.

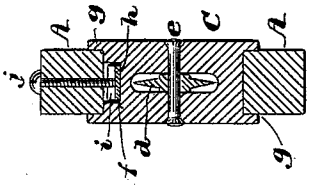

Fig. 3.

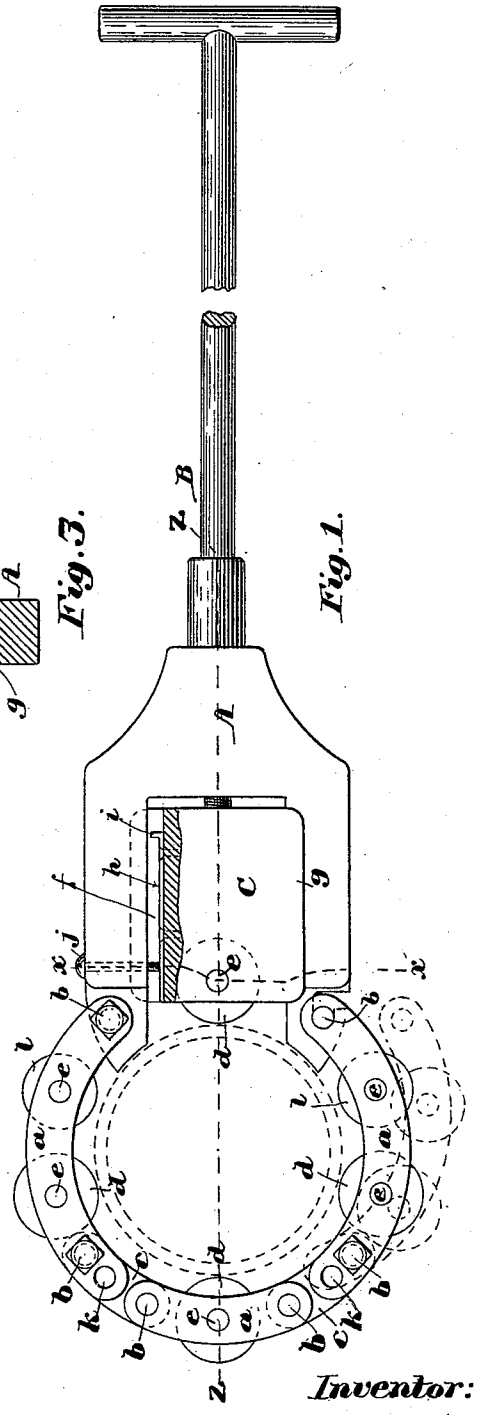

Fig. 1.

Witnesses:

Walter E. Lombard

M. E. Bonditch

Inventor:

Oshorn B. Hall

Jer. W. Porter Atty.

UNITED STATES PATENT OFFICE.

OSBORN B. HALL, OF MALDEN, MASSACHUSETTS.

PIPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 538,072, dated April 23, 1895.

Application filed January 23, 1895. Serial No. 535,862. (No model.)

To all whom it may concern:

Be it known that I, OSBORN B. HALL, of Malden, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Pipe-Cutters, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claims.

In said drawings, Figure 1 is a side elevation of my invention. Fig. 2 is a sectional elevation, the section being taken on line Z, Fig. 1, and the view as from right or left in that figure. Fig. 3 is a section on line X, Fig. 1, and viewed as from below that line.

The object of my invention is to produce a pipe cutter which has the capacity to cut pipes when lying in the ground and but a small portion is exposed, or when so arranged in any position that the cutter can make but a small portion of a revolution around the pipe.

It also consists in means by which the cutter block is held from falling out of the frame when not in use; and the invention will be next herein described and then defined in the appended claims.

Referring again to said drawings, A represents the frame, provided with handle B, threaded in A, so as to force the cutter block C outward as the cutting progresses; said several parts in and of themselves, being old, common, and well known. I also provide the links *a* which are each formed of two bars of metal and are held in position by rivets or bolts *b* that pass through said bars and also through an intermediate uniting bar *c* which latter is of the same thickness as the cutters *d* where mounted on their axes *e*. One of said cutters is mounted in block C, and another in the link *a* directly opposite said block; and there is a link at each end of said lower link that extends up and is pivoted to said frame A, and these two last mentioned links each carry a cutter *d* arranged slightly below the horizontal center of the pipe so that as the chain is tightened they will act with full force upon the pipe. Said last named bars may also be provided with cutters *l*, not for the purpose of penetrating the pipe, but the more readily to enter and track the path cut by the cutter in block C, and to thereby surely guide the cutters *d* in links *a* into said path or groove. There being one of said operative cutters *d* in block C and one in each link *a* thus making four of said cutters, therefore as block C is set down upon pipe E a like strain is imparted to all said cutters simultaneously, and by vibrating handle B through the arc of a circle slightly in excess of ninety degrees, the entire pipe will be acted upon by the cutters.

More than three links, each carrying a cutter, may be employed in cutting large pipe, but I believe three links each having an operative cutter to be sufficient. In the lower part of the two upper links additional holes *k* may be formed so that if the shells or walls of pipes vary in thickness the length of chain can be correspondingly varied by varying the position of the pivots at the ends of the links.

In order to prevent cutter block C from falling out of frame A when not in use, I form the minor groove *f* in said block, which is cut below groove *g*, which latter receives frame A; and I secure in groove *f* a thin piece of steel *h*, which has a head *i* that extends outward close to frame A; and in said frame I insert the screw *j*, which extends into groove *f*, and into the path of head *i* of piece *h*, so that when the block C has descended so that said head *i* encounters screw *j*, the block is arrested and cannot escape from the frame. Instead of piece *h* with its head *i* the groove *f* may be cast in block C and the head *i* can be cast integral with block A.

I am aware, and am in fact the owner, of United States Patent No. 444,995, issued January 20, 1891, to William Vanderman, and I claim nothing that is shown or claimed therein; my invention differing therefrom in the fact that my links are each a rigid lever with the cutter inserted therein between the pivoted ends of the links; while in said patent the cutters are mounted upon pivots at the ends of the links; and as arranged by me, the side cutters, those arranged between the cutter in block C and the one on the opposite side of the pipe, are equally effective and cut the pipe with the same degree of rapidity as do the cutters arranged in said block and on the opposite side of the pipe.

I claim as my invention—

1. A pipe cutter embodying the following instrumentalities; a frame provided with an adjustable handle by which to actuate it; a

movable block mounted in said frame and provided with a rotary cutter and arranged to be actuated by said handle: a chain formed with three links and at its ends pivoted to said frame, at the respective sides thereof; a rotary cutter arranged in the center link, between its two ends, and opposite the cutter in said block: and a rotary cutter arranged in each of the side links between their ends but so as to be slightly farther from the cutter in said block than from the cutter arranged in the center link opposite the one in the cutter block: so that in cutting a pipe said cutters are arranged on four opposite sides of the pipe, substantially as specified.

2. In a pipe cutter and in combination with a frame and cutting block, and the cutters arranged to cut upon the four opposite sides of the pipe: the tracking cutters *l* arranged between the cutter in the block and the two cutters *d*, arranged in the end links, substantially as specified.

OSBORN B. HALL.

Witnesses:
EUGENE HUMPHREY,
T. W. PORTER.