W. H. GALLAGHER & L. E. GRIMES.

PIPE CUTTING APPLIANCE.

APPLICATION FILED APR. 17, 1914.

1,107,511. **Patented Aug. 18, 1914.**

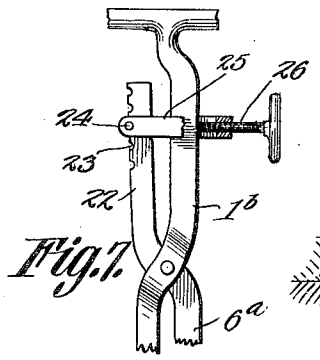


Fig. 7.

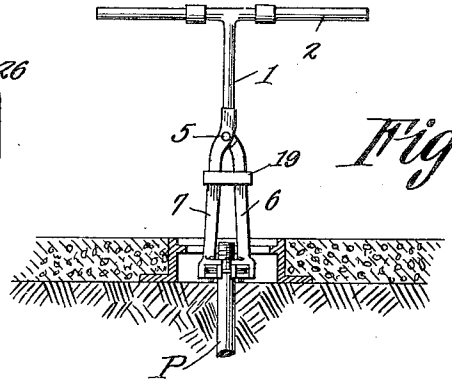


Fig. 1.

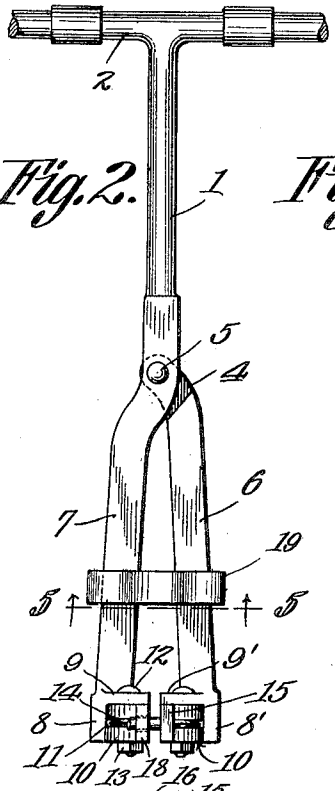


Fig. 2.

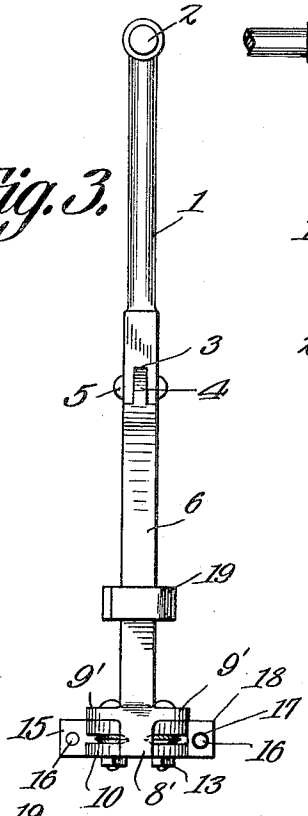


Fig. 3.

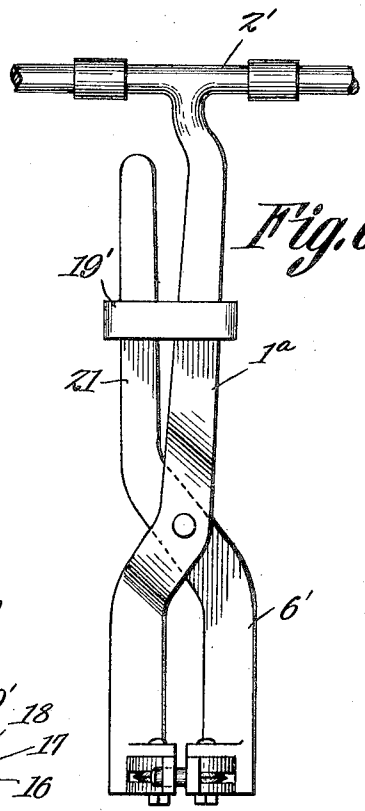


Fig. 6.

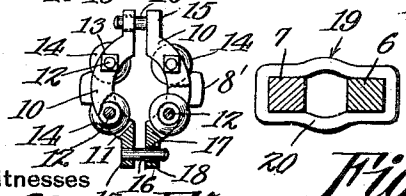


Fig. 4.

Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

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PIPE-CUTTING APPLIANCE.

1,107,511. Specification of Letters Patent. **Patented Aug. 18, 1914.**

Application filed April 17, 1914. Serial No. 832,642.

To all whom it may concern:

Be it known that we, WILLIAM H. GALLAGHER and LEWIS E. GRIMES, citizens of the United States, residing, respectively, at Baltimore, State of Maryland, and Boring, in the county of Baltimore, State of Maryland, have invented a new and useful Pipe-Cutting Appliance, of which the following is a specification.

The present invention relates to improvements in pipe cutting appliances. In cities and other localities where pipes or other connections are led from water and gas mains through the pavement, it often develops that the settlement of the pavement causes the protrusion or projection of the upper end of the pipe above the same, while when such ends which are generally screw threaded, and have been in the ground a number of years, the screw threads become worn and in both instances, it becomes necessary to remove such pipes. Heretofore, it has been necessary to excavate down and far enough around to permit of the use or manipulation of the ordinary pipe cutter and threading die. With the present invention, we can cut off the said pipe without disturbing the bed or the street or removing the cast iron frame in which such pipe is located, and thus operate upon the pipe to cut the same at the proper distance below the surface. In practice, it has been impossible to use the various forms of pipe cutters in which the shank is disposed in a plane parallel to the cutters, it having been demonstrated that the shank must be at right angles thereto and that the cutters should be carried by two jaws, which will properly embrace the end of the pipe operated upon. Many forms of clamping means for causing the jaws to properly embrace the pipe during the cutting operation may be employed, but in practice, it has been found that a frame slidably mounted upon the shank of the respective jaws to be driven by any implement, such as a hammer or rod downwardly so as to cause the gripping of the cutters with the pipe gives the best result.

The main object of the present invention is the provision of such a tool or appliance, which can be readily placed in position, to grip the upper end of the pipe at the proper distance below the pavement or below the old threads, so that the cut end may be rethreaded and thus render it unnecessary to excavate to the gas or water main for the introduction of a new or shortened pipe.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 is a view in elevation demonstrating the use of the present invention. Fig. 2 is a similar view of the present invention on an enlarged scale. Fig. 3 is a side elevation thereof. Fig. 4 is a bottom plan view of the cutter carrying members of the two jaws of the present device. Fig. 5 is a section taken on line 5—5 of Fig. 2. Figs. 6 and 7 are views illustrating modified forms of the present invention, showing two different methods of causing the actuation of the jaws into pipe gripping relation.

Referring to the drawings, and more particularly to Figs. 1 through 5, the numeral 1 designates the shank which is provided with the hand gripping portion 2 which constitutes with the shank a T-shaped member. The shank is offset at the apertured portion 3 for the reception of the reduced end 4 of the pivoted jaw 6, a pin or rivet 5 constituting the pivoting element therefor.

The offset end 7 of the shank 1 constitutes the stationary jaw of the present device, and each jaw is provided with the downwardly projecting terminals 8—8′ and with the right angled oppositely extending apertured lugs 9—9′.

A cutter carrying frame 10 is carried in the lower end of each jaw, the same being open as at 11, there being provided two bolts 12 which constitute the pivoting elements for the rotary cutters 14, the nuts 13 also being provided to hold the frames 10 relatively to the apertured lugs 9—9′ and against the lugs 8—8′ which hold the frames against outward displacement when positioned upon the pipe P, as illustrated in Fig. 1.

Each one of the cutter carrying frames 10, as clearly illustrated in Fig. 4, is pro-

vided with the oppositely extending ends 15 and 18, the end 15 being provided with the guiding pin 16 for sliding within the aperture 17 of the end 18 of the opposite frame 10, these pins and apertures forming a guiding means to assist in the proper parallel movement of the cutters to and from each other when in pipe gripping and cutting relation. In this manner, the cutters are properly positioned upon the pipe and no torsional strain is placed upon the cutting edges as the cutting edges are all positioned in the same horizontal plane during the cutting action. In this form of appliance, a band 19 is adapted to surround the stationary and pivoted jaws for movement to and from the pivoting point 5, said band being provided with the offset portions 20 so that a hammer or other implement may be employed for driving the same downwardly to cause the movement of the pivoted jaw 6 toward the stationary jaw 7 and consequently cause the rotary cutters to be properly positioned upon and about the pipe to be cut. By this means, the band may be properly operated upon above while the shank 1 is in the proper position to permit of the rotation thereof through the double handle 2.

In the form of implement shown in Fig. 6, the pivoted jaw 6′ is provided with the handle 2′, which is disposed adjacent to the shank 1^a to receive a band 19′, which is moved upwardly toward the handle 2′ when properly operating the jaws into pipe gripping relation.

In the form shown in Fig. 7, the pivoted or movable jaw 6^a is provided with the extension 22 which is provided with recesses 23 upon the outer side for the reception of the pin 24 carried by the yoke 25, said yoke 25 being fitted astride the extension 22 and the shank 1^b so that the hand operated screw 26 may be actuated to move the stem 22 toward the shank 1^b and consequently the cutters into pipe gripping relation.

In all of the forms illustrated, the same form of cutter carrying member is provided, the lower ends of the jaws being constructed identical with the structures as shown in Figs. 1, 2, 3 and 4 and both cutter carrying frames being disposed for movement in parallel so as to insure the proper positioning of the cutters upon the pipe, so that the cutting edges will be in the same cutting planes at all times during the rotation of the cutters by the double handled shank.

What is claimed is:

1. A device of the character described, including an operating shank, two jaws carried thereby, an arcuate cutter carrying frame, and coöperable means carried by each of the cutter carrying frames and the jaws, whereby a cutter carrying frame is connected to each jaw.

2. A device of the character described, including an operating shank, two jaws carried thereby, the terminal of each jaw being provided with two apertured arms, and an arcuate cutter carrying frame connected to the apertured arms of each jaw.

3. A device of the character described, including an operating shank, two jaws carried thereby, the terminal of each jaw being provided with two apertured arms, an arcuate cutter carrying frame connected to the apertured arms of each jaw, and means for gripping the jaws and holding them toward each other.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

WILLIAM H. GALLAGHER.
LEWIS E. GRIMES.

Witnesses:
WINFIELD H. BOND,
BARBARA A. BENDERRITTER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."