

(No Model.)

A. E. BROCKETT.
PIPE CUTTER.

No. 575,688.

Patented Jan. 26, 1897.

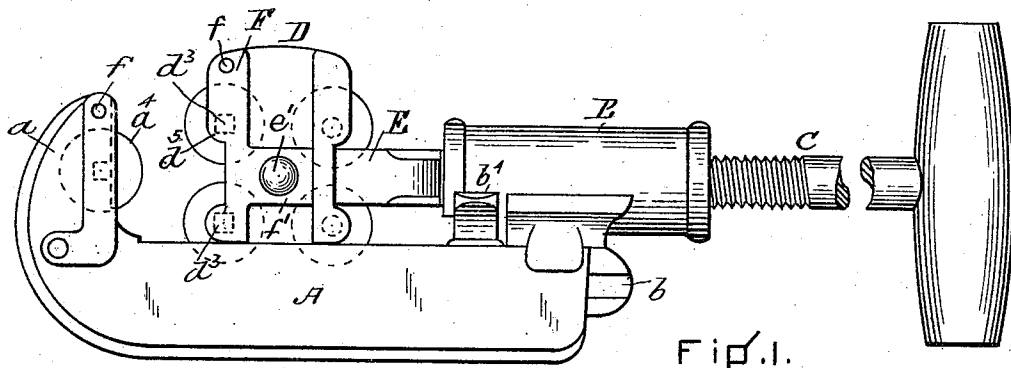


Fig. 1.

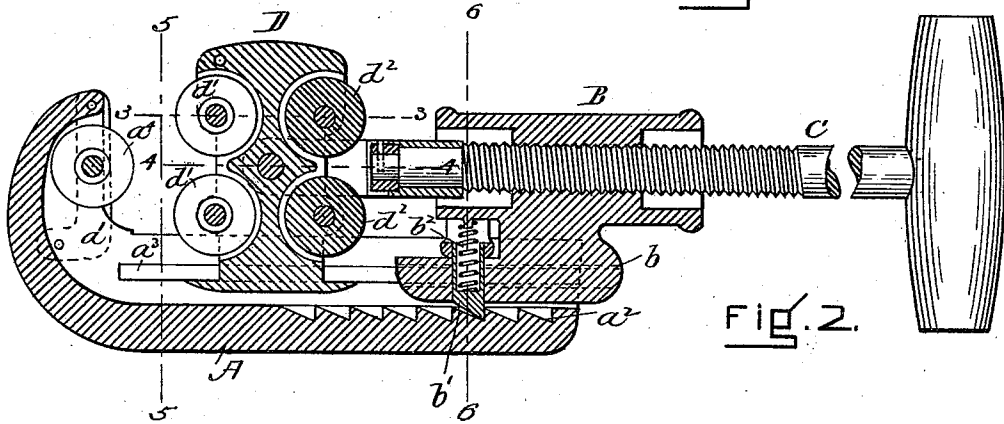


Fig. 2.

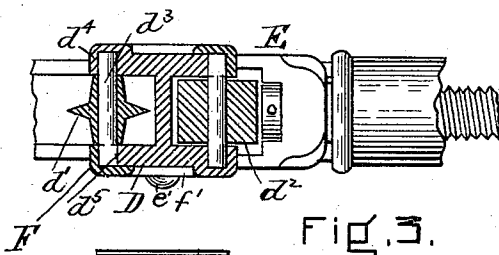


Fig. 3.

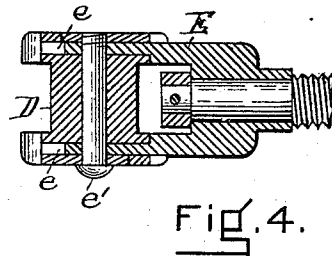


Fig. 4.

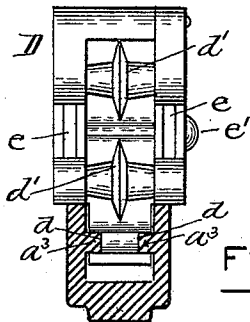


Fig. 5.

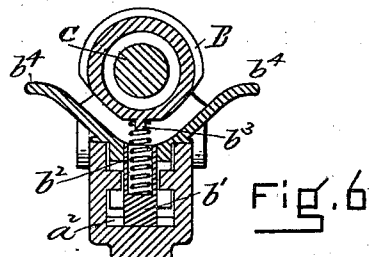


Fig. 6.

WITNESSES

Frank G. Parker,
Eva A. Guild

INVENTOR

Arthur E. Brockett
by Chas. O. G. Bond
his attorney

UNITED STATES PATENT OFFICE.

ATWATER E. BROCKETT, OF EVERETT, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO WILLIAM G. NIXON, OF BRAINTREE, MASSACHUSETTS.

PIPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 575,688, dated January 26, 1897.

Application filed April 6, 1896. Serial No. 586,333. (No model.)

To all whom it may concern:

Be it known that I, ATWATER E. BROCKETT, of Everett, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Pipe-Cutters, of which the following is a specification.

My invention relates to that class of tools in which there is a bed-piece provided with a suitable back-rest carrying a cutter-tool and having a screw-handle or other means of adjusting the cutting-tools or rolls toward and from said back-rest. As a rule one cutter and two rolls are used in pipe-cutters, but it is often necessary to substitute for the two rolls two cutters, and it has been found extremely inconvenient to make this change in all the pipe-cutters of this description in regard to which I have knowledge.

My invention consists, primarily, in a double-faced tool-holder adapted to be used with such a pipe-cutter, one face of said tool-holder carrying suitable rolls and the other suitable cutters, the tool-holder being so constructed as to be easily removed from the bed-piece in which it sits and reversed, as will be clearly understood from the description below.

My invention also consists in certain details of construction embodied also in this tool-cutter, which will be more fully described below.

In the drawings, Figure 1 is a side elevation of a cutter embodying my invention, Fig. 2 being a longitudinal section; Fig. 3, a section on line 3 3 of Fig. 2; Fig. 4, a section on line 4 4 of Fig. 2; Fig. 5, a section on line 5 5 of Fig. 2, and Fig. 6 a section on line 6 6 of Fig. 2.

A is a bed-piece, at one end of which is a back-rest a . This bed-piece is chambered, as shown at a' , and is provided on its floor with a rack a^2 , as shown in Fig. 2. Each side of the chamber is provided with ways a^3 .

B is a sliding post which carries a screw-handle C, at the front end of which is the tool-holder D.

The post B is provided with grooves b , adapted to fit on the ways a^3 , so that it may slide toward and from the back-rest a and serve for purposes of rough adjustment of the tools. The post is locked by means of

the rack a^2 and the chambered pawl b' , which has a vertical movement in the post and is held down against the rack by means of a spring b^2 , which sits in its chamber, (see Fig. 2,) the upper end of the spring bearing against the under side of an extension of the post and being held in place by a stud b^3 .

b^4 are finger-pieces forming part of the pawl, by means of which it may be lifted out of engagement with the rack against the force of the spring b^2 , which tends to keep it locked.

The screw-handle C has at its front end a forked piece E, the ends of which project into suitable grooves e in the sides of the tool-holder D, to which it is attached by means of a pin e' , which passes through each arm of the fork and through the tool-support D.

The tool-support D is adapted to rest upon the upper surface of the bed A and extends below this surface to engage with the ways a^3 within the chambered portion of the bed, for which purpose it is provided with grooves d .

In the back-rest a is a rotary cutter a^4 or other tool, and, as shown, the tool-holder D is provided with two pairs of tools, one pair of tools being located in each face of the tool-holder, the tools d' in the drawings being rotary cutters and the tools d^2 being rolls.

To use my tool, the work is placed in position against the tool a^4 , and the post B is pushed forward until the tools in the face of the tool-support D engage with the work, the pawl b' riding over the teeth of the rack a^2 and engaging with one of the teeth. Further adjustment of the tool is caused by turning the screw-handle C until sufficient pressure clamps the work in place, after which the tool is oscillated in the usual manner. When it is desired to withdraw the tool, the pawl b' is raised and the post B, with the tool-support D, is withdrawn.

If it is desired to use the tools d^2 instead of the tools d' , the pawl b' is lifted and the post B and tool-support D are withdrawn entirely from the bed A. The pin e' is then removed and the tool-support D slid off from the forked piece E. The tool is then reversed, so that the forked piece E will enter the other ends of the grooves e , and when in position again, so that the central hole registers with the holes

in the forked piece E, the pin e' is replaced and the tool-support D and post B are again slid into the bed-piece A.

I prefer to hold the tool-spindles in place in the following manner: One end of each spindle d^3 fits into a hole or socket d^1 in one wall of the tool-support D. The front edge of the other wall of the tool-support is provided with an angular opening d^2 , into which the angular end of the spindle d^3 fits. I prefer to make one end of the spindle angular to fit an angular opening d^2 , in order that the spindle may be prevented from turning. An angle-piece F is pinned at f to the upper part of the tool-support. It is formed with a flange properly shaped to close the open side of the angular opening d^2 , and also cut away to allow the forked piece E to have free access to grooves e . An ear f' projects back from the front of the piece F and is provided with a hole adapted to register with the holes through the tool-support, so that the pin e' will hold the forked piece and tool-support together and at the same time keep the tool-spindles in place. The rotation of the tool-spindle is very apt to take place after the tools have been used for a little while, and as the tool-support is but made of malleable iron each spindle will soon wear a large hole for itself and cease to run true unless some means is provided to prevent this rotation.

I consider the manner above described of keeping the tool-spindles from rotating of great importance, as it is simple and saves the expense and trouble of using screws for this purpose. I prefer to hold the cutter a^1 in place in a similar manner. This construction is exceedingly simple and convenient. Its value will be at once appreciated by all who use pipe-cutters, as it has always taken considerable time to change the tools in all forms of pipe-cutter of which I have knowledge. It is evident that with one bed-piece

A tools of various sizes and shapes may be utilized by having a number of tool-supports D, each adapted to fit the ways a^3 and yoke-piece E and each provided with different sets of tools. It is also evident that other means may be provided for attaching the screw-handle and the tool-support such that a reversible tool-holder may be used, but the construction which I have shown and described now seems to me the simplest.

What I claim as my invention is—

1. In a pipe-cutter provided with a chambered bed-piece having a back-rest and a suitable post carrying a tool-handle, a double-sided reversible tool-carriage carrying two sets of tools, said carriage being detachably attached to said tool-handle and adapted to be moved thereby toward and from said back-rest, and to have its position on said handle reversed whereby either set of tools in said carriage may be used at will, all as set forth.

2. In a pipe-cutter having a tool-carrying back-rest and a post, a screw-handle lying in said post and provided at the front end with a forked piece, in combination with a double-faced tool-support carrying two sets of tools and adapted to be detachably held between the prongs of said forked piece, whichever set of tools is in action, all as set forth.

3. A tool-holder carrying a rotary tool and having sockets for the spindle of said tool, one of which is angular, and a tool-spindle, one end of which is angular and adapted to fit said socket, in combination with a flange-piece mounted on said tool-support and adapted to close one side of one of said sockets, all as set forth.

In testimony whereof I have hereunto set my hand this 24th day of February, 1896.

ATWATER E. BROCKETT.

Witnesses:

GEORGE O. G. COALE,
EVA A. GUILD.