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C. L. ANTON.

COMBINATION WRENCH AND PIPE CUTTER.

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Fig. 1.

Fig. 2.

Fig. 3.

Inventor

Christopher L. Anton

[Signature]
To all whom it may concern:

Be it known that L. CHRISTOPHER L. ANTON, a citizen of the United States, residing at Monongahela, county of Washington, and State of Pennsylvania, have invented certain new and useful Improvements in a Combination Wrench and Pipe Cutter, of which the following is a specification.

My invention relates to combination tools, and particularly to a combined wrench and pipe cutter.

The object of my invention is to provide a tool of the class mentioned which may be readily changed from a wrench to a pipe cutter, and vice versa, and that without the use of special tools. A further and particular object of my invention is to provide a wrench which may be used to complete the operation of applying or removing nuts, pipes, or pipe fittings without the necessity of removing the tool from the work. A further object of my invention is to provide a wrench as mentioned which does not have to be reversed on the work in order to reverse the operation of the device. A further object of my invention is to provide in a wrench as mentioned, jaws which will readily accommodate themselves to nuts and other work of various shapes and sizes, to the end that the wrench shall not burr, crush or otherwise injure the work. Further objects of my invention are to provide a device as mentioned which shall be of simple construction, easy to operate, and one which shall not readily get out of order. Other objects will appear hereinafter.

With these objects in view my invention consists generally in a wrench comprising a fixed head and a movable head, each provided with one or more adjustable jaws, and a handle provided with a threaded shank adapted for adjusting the jaw carrying heads toward and from each other, to the end, that after the jaws are approximately adjusted to the work, the tool may be tightened or loosened on the work by a slight turn of the handle, so that the complete operation of loosening and tightening work may be accomplished without removing the tool, and also, to the end, that the work may be both loosened and tightened without the necessity of reversing the tool. My invention further consists in providing the heads of the device with jaws which will automatically adjust themselves to the work irrespective of its size or shape. My invention further consists in providing interchangeable jaws and cutter wheels whereby the device may be readily transferred from a wrench to a pipe cutter and vice versa. My invention further consists in various details of construction and arrangements of parts all as will be fully described hereinafter and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings, forming a part of this specification and in which—

Fig. 1 is a side elevation of a combination tool embodying my invention, parts being broken away for the purpose of illustration.

Fig. 2 is an edge view of the device.

Fig. 3 is a fragmentary view of the device as a pipe cutter, and

Fig. 4 is a perspective view of one of the jaws.

Referring now to the drawings, 1 indicates a fixed head of the device which is arcuate in shape and terminates in a straight shank 2. Fixed to the end of the shank 2 is a block 3, the same having a tenon 4 mortised into the shank 2. The head 1 is slotted at 5 to receive the work engaging elements, which may be either the jaws 6, shown in Fig. 1, or the cutter wheel 7, as shown in Fig. 3. The work engaging elements are held in position in the slotted head by tapered pins 8.

Slidably mounted on the shank 2 is a movable head 9 which is recessed as at 10 to receive a work engaging element such as a jaw 11, as illustrated in Fig. 1, or a cutter wheel as shown in Fig. 3. A tapered pin 13 is employed to hold the jaw or wheel in position.

14 indicates a handle of the tool which is provided with an elongated threaded stem 15, which is threaded through the block 3. The end of the stem 15 is reduced in diameter as at 16, and swiveled into a recess 17 in the head 9. The reduced end is provided with a peripheral groove 18 and is engaged by the end of a screw 19 tapped through the head, as clearly illustrated in Fig. 1.

Each of the jaws 6 and 11 comprises a body portion 20, and a shank 21. The body portion is provided with a roughened work engaging face 22 and a curved under-face 23 which rests upon the adjacent face of the respective head of the tool. The shank 21 is perforated as at 24 to receive the pin.
8 or 13. By providing the curved underface on the body portion, the jaw may rock to accommodate itself to the face or surface of the work, and at the same time be supported by the respective heads instead of by the retaining pins.

The end of the handle 14 is provided with a recess 25 to accommodate the work engaging members that are not in use, and a screw cap 26 is provided for closing the recess.

In operating the device as a wrench, the handle 14 is turned until the jaws engage the work. It is obvious that the jaws, by rocking on the heads, will readily accommodate themselves to the work irrespective of its shape or size. A slight turn of the handle clamps the wrench upon the work and pressure is applied to the handle to turn the work. At the end of the stroke, a slight turn of the handle loosens the wrench, and it may be returned to initial position for another stroke without being removed from the work, and a fresh grip had by a slight reverse turn of the handle. It is obvious that the tool need not be removed from the work until the operation is completed, and also that the work may be both loosened and tightened without the necessity of reversing the tool on the work. The proper adjustment of the jaws to the work prevents the burring of the work, particularly on pipes, and also prevents crushing or flattening of the pipe.

The tool may be readily transferred into a pipe cutter by substituting cutting wheels for the jaws, and the proper feed of the cutting wheels may be had by merely turning the handle 14 as desired.

I claim:

1. A wrench comprising a fixed head having an elongated shank, a movable head slidably mounted on said shank, means for adjusting said heads towards and from each other; said heads being provided with slots, jaws on said heads, each of said jaws comprising a body portion, having curved underfaces in rocking engagement with the adjacent face of the respective tool heads and a shank arranged within the respective slot, substantially as described.

2. A device as set forth in claim 1, in which the fixed head is arcuate and provided with two rocking jaws, substantially as described.

3. A device as set forth in claim 1, in combination with a block fixed to the shank of the fixed jaw, a handle having a stem threaded in said block, and a swivel connection between said stem and the movable head, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHRISTOPHER I. ANTON.

Witnesses:

H. H. WILLIAMS,
ELVIRA VOLKER.