(No Model.)

J. A. SMITH.

PIPE WRENCH.

No. 493,737. Patented Mar. 21, 1893.

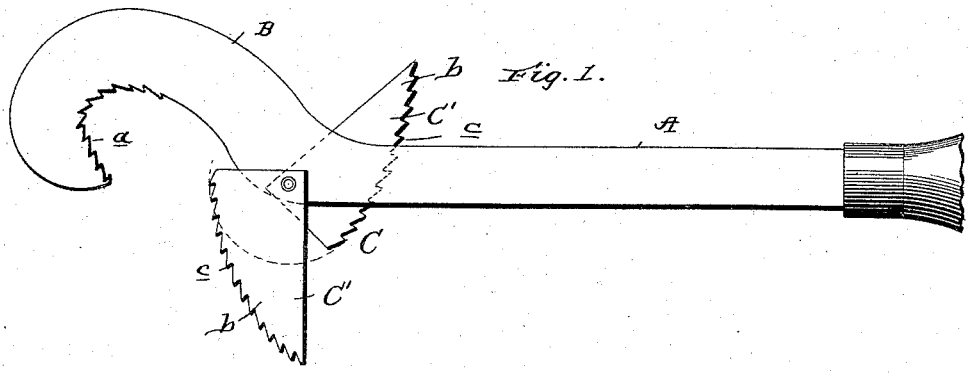


Fig. 1.

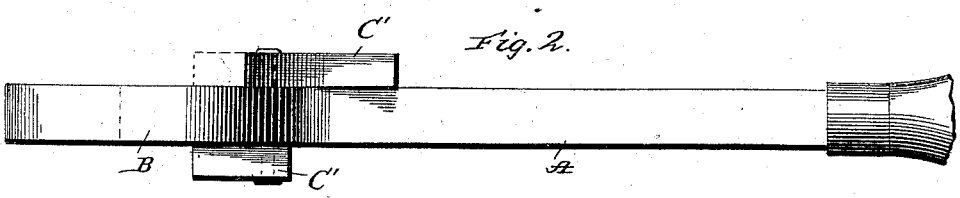
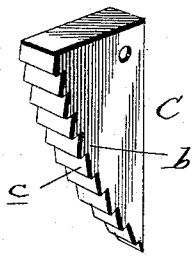


Fig. 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES A. SMITH, OF CLEAVESVILLE, MISSOURI.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 493,737, dated March 21, 1893.

Application filed June 13, 1892. Serial No. 436,638. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. SMITH, a citizen of the United States, residing at Cleavesville, in the county of Gasconade and State of Missouri, have invented certain new and useful Improvements in Pipe-Wrenches; and I do 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 appertains to make and use the same.

My invention has relation to improvements in pipe or rod wrenches, and it consists of a wrench comprising a lever or handle bar having a fixed curvilinear toothed jaw at one end, a loose jaw formed by two movable toothed sections loosely connected to the lever or handle bar adjacent to the fixed jaw; the said movable sections being independently connected to the lever or handle bar, so that they may be employed alternately or together, as desired, and so that when they are employed together, a slipping or casual disengagement of one will not affect the other.

The invention will be fully understood from the following description and claim when taken in connection with the annexed drawings in which:

Figure 1, is a lateral view of a wrench embodying my invention. Fig. 2, is a top plan view of the same, and: Fig. 3, is a perspective view of one section of the movable jaw removed.

Referring by letters to said drawings: A, indicates the lever or handle bar of my improved wrench, and B, indicates the curvilinear fixed jaw which is preferably formed integral with one end of the lever or handle bar, and is provided upon its inner side with the teeth *a*, designed to bite into a pipe when the wrench is applied thereto. Loosely mounted upon a transverse bolt or rivet, or to lateral studs carried by the lever and situated at the point where the lever or handle bar merges into the fixed jaw B, are the sections C, of the loose or movable jaw C′, which sections C, are of a general acute angle shape and are provided with convex engaging edges or faces *b*, as shown.

The bolt or rivet connecting the sections C, to the lever or handle bar, takes through the said sections at a point adjacent to the apex of the angle formed by the straight edges of the sections, whereby it will be seen that when it is desired to use but one section, the other section will rest in a position so as not to engage the pipe or otherwise interfere with the manipulation of the wrench.

As better illustrated in Fig. 1, of the drawings, the teeth *c*, with which the sections C, are preferably provided, are oppositely disposed to the teeth *a*, of the fixed jaw B, whereby a more firm grasp on the pipe or rod to be manipulated may be obtained.

To use my improved wrench, the fixed jaw B, is hooked over the pipe or rod to be manipulated, and one or both of the sections C, is swung into engagement with said pipe or rod after which pressure is applied to the lever or handle bar when the wrench will be fixed with respect to the pipe or rod, and as the pressure is increased on the lever or handle bar, the jaws will be caused to more firmly engage the pipe on the principle of forced clamp or wedge forced inward.

It will be understood from the foregoing description that the sections C, are connected to the lever or handle bar A, in such a manner as to be independent of each other, whereby one of the sections may be employed alone or the two might be employed in conjunction, as is most desirable. By this construction it will be seen that if one of the sections C, is broken, it may be removed and replaced by a new section, and it will be further perceived that when the sections C, are employed together or in conjunction, a slipping or casual movement of one will not tend to move or otherwise affect the other section which will hold the wrench in firm engagement with the pipe or rod upon which it is placed.

A wrench of the construction shown and described, may be manufactured very cheaply; and when one of the sections C, is broken or otherwise impaired, the wrench is not rendered worthless as the broken section may be removed and replaced by a new jaw without in any manner affecting the lever or handle bar or the unbroken section.

Having described my invention, what I claim is—

A pipe wrench, substantially as described, consisting essentially of the lever or handle bar, the fixed curvilinear jaw B, formed at one end of the lever or handle bar and hav-

ing its inner side toothed, and the loose or movable jaw C′, comprising the independent, acute angle shaped, movable sections C, having convex toothed engaging faces; the said sections C, being independently connected to the lever or handle bar by a bolt or rivet which takes through the sections at a point adjacent to the apex of the angle formed by the straight edges thereof, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES A. SMITH.

Witnesses:
WILLIAM KLOSSNER,
MOLLIE BURNS.