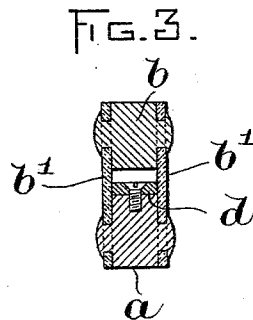
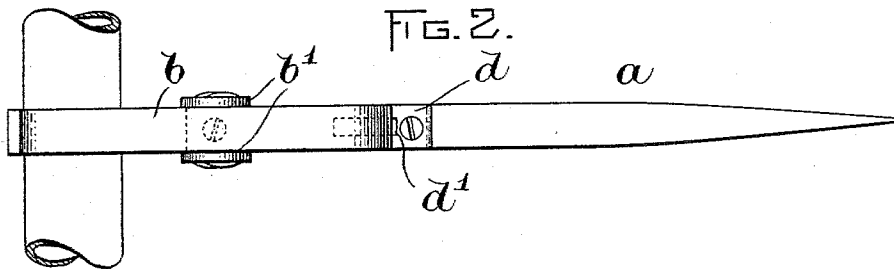
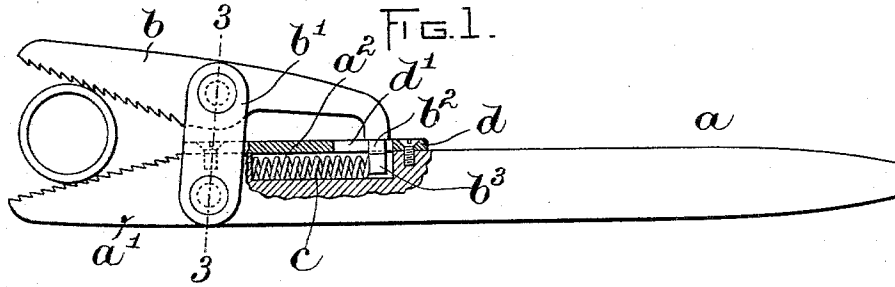


(No Model.)

D. R. PORTER.
PIPE WRENCH.

No. 556,834.

Patented Mar. 24, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DANIEL R. PORTER, OF CHELSEA, ASSIGNOR TO SAMUEL MAY, JR., OF BOSTON, MASSACHUSETTS.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 556,834, dated March 24, 1896.

Application filed August 26, 1895. Serial No. 560,548. (No model.)

To all whom it may concern:

Be it known that I, DANIEL R. PORTER, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification.

This invention relates to that class of pipe-wrenches one of whose jaws is formed integral with the handle and the other is connected with the rigid jaw by links, so that when the wrench is applied to the pipe and turned in one direction the movable jaw will be caused to bind upon the pipe by reason of its link connection with the rigid jaw.

The present invention has for its object to provide means for better controlling the movable jaw than in the wrenches of this character heretofore devised.

To this end the invention consists in the novel features of construction and combinations of parts hereinafter described and claimed.

The invention is illustrated in the accompanying drawings, which form part of the specification.

Figure 1 shows a side elevation of the wrench, represented as partly broken away. Fig. 2 shows a top view of the same. Fig. 3 shows a section on line 3 3 of Fig. 1.

In the drawings, the letter *a* designates the handle, which is formed at one end with a rigid jaw *a'* and may be tapered at the opposite end, so as to be capable of serving as a screw-driver. Said handle is formed in the top side with a longitudinally-extending recess *a²* back of the jaw *a'*.

b designates the movable jaw, which is connected with the handle by links *b'* pivoted on pins formed integral with the movable jaw and handle, respectively. The jaw *b* extends rearwardly beyond the links, and is formed at its rear end with a heel-piece *b²* extending at an angle and entering the recess *a²*, where

it is provided with an enlargement *b³*. A spiral spring *c* is inclosed within the recess *a²* and bears at one end against one end of said recess and at the opposite end against the enlargement *b³* of the heel-piece *b²*. It will be observed that said spring tends to move the jaw *b* rearwardly, and therefore toward the rigid jaw *a'*, by reason of the link connection between the jaws, and hence the spring insures proper engagement of the jaws with the pipe.

A plate *d* is fastened over the recess *a²* and is formed with a slot *d'* to accommodate the heel-piece *b²*. Said slot is narrower than the enlargement *b³*, and therefore confines the same in the recess. By this arrangement the movable jaw *d* is limited in its movements on the pivot which connects it with the links *b'* and cannot swing freely, as heretofore.

What I claim as my invention is as follows:

1. A pipe-wrench comprising in its construction a handle having a rigid jaw and a longitudinally-extending recess back of the same, a jaw supported by links pivoted to it and to the handle, said jaw having a heel-piece engaging the longitudinal recess in the handle, a spring in said recess and bearing against the heel-piece of the jaw, and a slotted plate fastened over the recess.

2. A pipe-wrench comprising in its construction a handle having a rigid jaw, a movable jaw, links connecting the jaws and pivoted to each of them, and a spring exerting itself longitudinally of the jaws and thereby tending to close them by moving the links, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 19th day of August, A. D. 1895.

DANIEL R. PORTER.

Witnesses:

E. BATCHELDER,
W. P. ABELL.