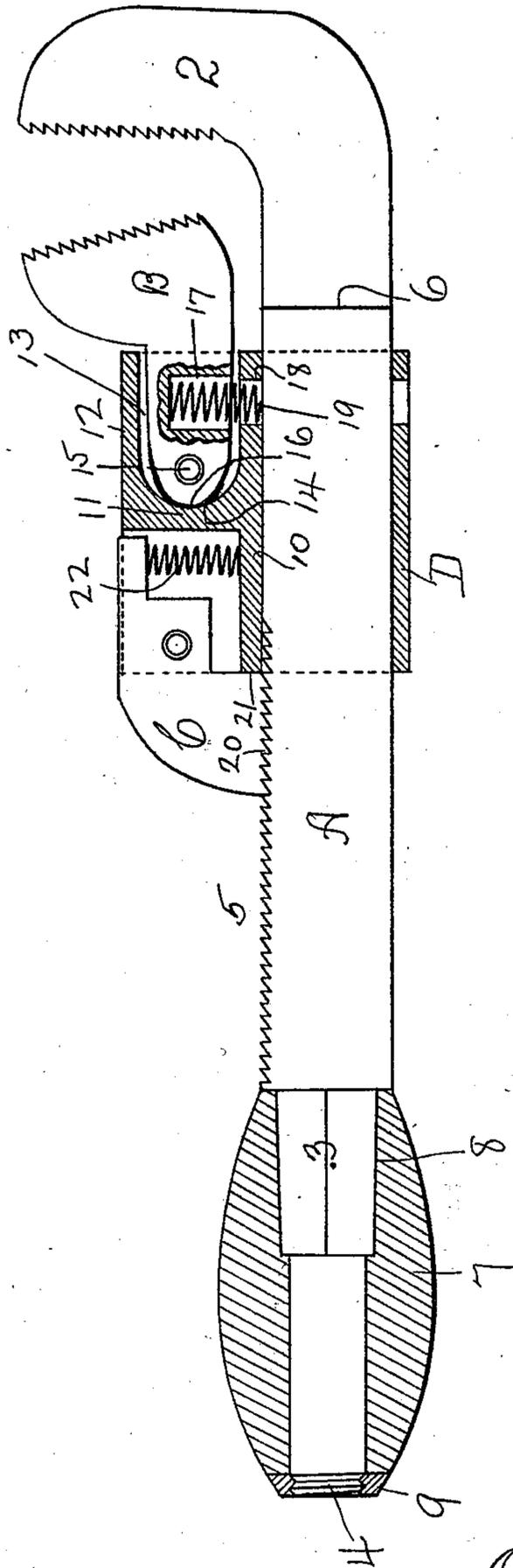


(No Model.)

O. C. STANLEY.  
PIPE WRENCH.

No. 516,661.

Patented Mar. 20, 1894.



Witnesses:-  
A. L. Hall  
K. C. Crosby

Orauel C. Stanley,  
Inventor,  
by Wilson & Barker,  
his attorneys

# UNITED STATES PATENT OFFICE.

ORAMEL C. STANLEY, OF NEW YORK, N. Y., ASSIGNOR TO JOHN GOBBER, OF SAME PLACE.

## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 516,661, dated March 20, 1894.

Application filed November 23, 1892. Serial No. 452,963. (No model.)

*To all whom it may concern:*

Be it known that I, ORAMEL C. STANLEY, a citizen of the United States, and a resident of the city, county, and State of New York, have  
5 invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification.

My invention relates to pipe wrenches having a fixed and a movable jaw, and consists of  
10 combinations of devices hereinafter described and is more particularly pointed out in the claims concluding this specification.

The objects of my present invention are to avoid crushing pipes, to obtain a firm hold  
15 thereon and yet one that can be instantly and easily released, and to remove all strain from the pin or rivet of the pivoted parts, and other objects as will hereinafter appear.

The preferred form of my invention is shown  
20 in the accompanying drawing, forming part of this specification, in which—

The letter A indicates the main bar of a wrench, said bar having the head jaw 2 integral therewith, and having a polygonal (squared  
25 in this case) part 3, a screw-threaded end 4, and ratchet teeth 5 on one side intermediate the part 3 and jaw 2. It also has two shoulders 6 near the jaw 2, all for purposes hereinafter stated. A hollow handle 7, of metal, has  
30 a square opening 8 to fit squared part 3 to prevent it from turning independently of the main bar A. A screw nut 9 engages the screw thread 4 and holds the handle 7 in place.

A sleeve D of metal fits and slides upon the  
35 main bar A. The said sleeve D has a central partition 10 lying on the main bar A. The sides of the sleeve D extend some distance above the partition 10 and are connected by the walls 11 and 12. The wall 11 runs at right  
40 angles to the bar A, and with wall 12 and partition 10 and the sides of the sleeve D, form a socket 13. The socket 13 has a rounded (or cylindrical) bottom 14. Pivoted loosely on  
45 pin 15 (it is usually a rivet) passing through socket 13 at the center of the rounded bottom is the back jaw B, having a rounded end 16 to fit rounded bottom 14. The jaw B has a socket 17 in the bottom which comes opposite a perforation 18 in the central partition 10.  
50 A spiral spring 19 in the socket and perfora-

tion 18 and pressing against the main bar A, holds the jaw B away from the bar A. The central partition 10 forms a stop against which the jaw B comes, so that there is no danger  
55 of crushing the pipe, for the teeth of jaw B can only bite so deep into the pipe without crushing it. That is, the movement of jaw B is such that the pressure on the pipe is sufficient to embed the teeth of jaw B in the pipe  
60 more or less, but is not sufficient to crush the pipe. At the other end of the sleeve D, I pivot the holding trigger C having ratchet  
65 teeth 20 to engage the ratchet teeth 5 of the main bar A. For some purposes of my invention, other means of holding the sleeve D  
70 against motion away from the head jaw 2 may be used, but I prefer that shown. The trigger C is formed with a bearing 21 which abuts against the end of partition 10. A spiral or  
75 other spring 22 under the thumb-piece 23 of trigger C depresses the ratchet end thereof against the bar A. The trigger C and jaw B  
80 have play on their pins so that there shall be no strain thereon when the wrench is in use.

In assembling the parts, the jaw B is put in  
85 place, also the spring 19 is slipped into place through perforation 18 and the sleeve D is then slipped over the bar A, the handle 7 put on, &c.

In use, the operation of the parts is as follows:—The pipe is taken between the jaws,  
80 the sleeve D slid along toward jaw 2 until the pipe is gripped, the trigger C sliding over and engaging the teeth 5. On moving the end of  
85 the handle as indicated by arrow *f*, the jaws 2, B, grip the pipe, jaw B moving toward bar A, until stopped by partition 10. There is no  
90 pressure on pin 15, since jaw B has play thereon, and the end 16 thereof bears against the bottom 14 of the socket 13. The pressure thus  
95 taken by the sleeve D is transmitted through the trigger C to the teeth 5 of bar A, the trigger bearing at 21 against the end of the sleeve D or its partition 10. The friction caused by  
spring 19 on bar A, and by spring 22 through  
100 trigger C on the teeth 5 serves to hold the sleeve D against accidental displacement.

So far as the functions of the partition 10 as a stop for the jaw B go, it may be replaced  
by a pin or other equivalent.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a pipe-wrench, the combination of a  
5 main bar, a slidable sleeve thereon having a central perforated partition lying on said bar, a back jaw pivoted to said sleeve and having a socket, and a spring in said socket and perforation and bearing against said bar, sub-  
10 stantially as and for the purposes set forth.

2. In a pipe-wrench, the combination of a  
15 toothed main bar, a slidable sleeve thereon having a perforated central partition lying on said bar, a back jaw pivoted to said sleeve and having a socket, a spring in said socket and perforation and bearing on said bar, a  
20 toothed trigger pivoted to said sleeve, and a spring pressing said trigger against said bar, substantially as and for the purposes de-  
scribed.

3. The combination of bar A having the  
fixed jaw; a sleeve comprising a socket 13

having the rounded bottom 14, partition 10  
having a perforation 18; the pin 15; the piv-  
25 oted jaw B provided with round end 16, and  
a perforation or hole loosely receiving pin 15;  
and a spring in perforation 18 bearing against  
bar A and jaw B, substantially as described.

4. The combination of bar A having the  
fixed jaw; a sleeve thereon comprising a socket  
30 13 having a rounded bottom 14, partition 10  
having a hole 18; pin 15; jaw B having round  
end 16, a perforation or hole loosely receiving  
pin 15, and a socket 17; and a spring in hole  
18 and socket 17 bearing against jaw B and  
35 bar A, substantially as described.

In testimony that I claim the foregoing as  
my invention I have signed my name, in pres-  
ence of two witnesses, this 22d day of Novem-  
ber, 1892.

ORAMEL C. STANLEY.

Witnesses:

WASHINGTON E. PAGE,  
RICHARD W. BARKLEY.