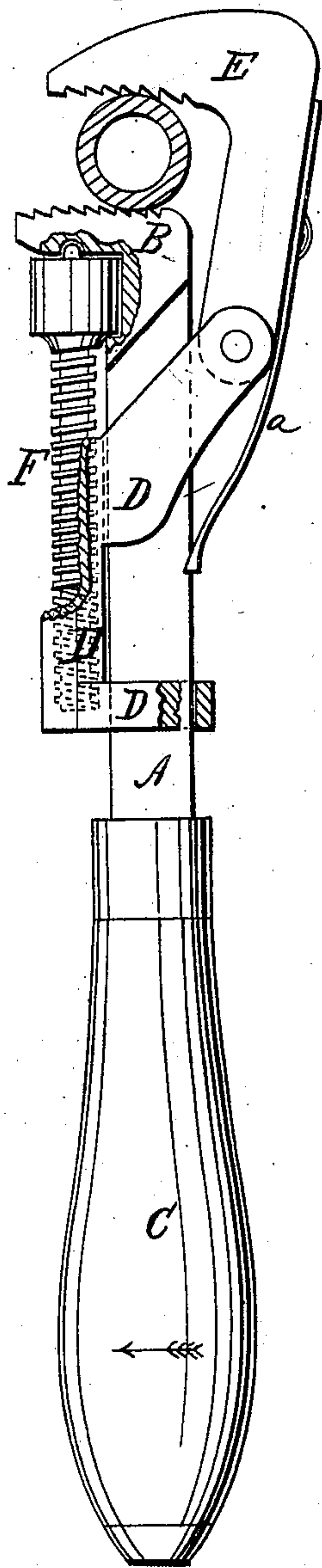


W. W. Mills,

Pipe Wrench.

N^o 55,190.

Patented May 29, 1866.



Witnesses;

J. M. Lyon
Wm. Brewin

Inventor;

W. W. Mills
per Wm. & L.
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM W. WILLS, OF JANESVILLE, WISCONSIN.

IMPROVEMENT IN PIPE-WRENCHES.

Specification forming part of Letters Patent No. 55,190, dated May 29, 1866.

To all whom it may concern:

Be it known that I, WILLIAM W. WILLS, of Janesville, in the county of Rock and State of Wisconsin, have invented a new and useful Improvement in Pipe-Wrenches; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

The drawing represents a side elevation of my invention with certain portions broken away.

My invention consists in pivoting the outer jaw in such manner to a sleeve which slides upon the bar, at the end of which latter is one of the jaws, that a better and firmer gripe upon the pipe or other article can be obtained.

To enable others to understand my invention, I will proceed to describe it.

A designates the bar of the wrench, at one end of which is the inner or stationary jaw, B, and at the other the handle C.

D is a sleeve, which is fitted to slide upon the bar A, and to this, in any suitable manner, is pivoted the outer or movable jaw, E, the inner face of whose shank slides along the back of the bar A.

The slide-jaw E opens outward, and it has a spring, *a*, applied in a suitable manner for causing it to close or regain its natural position when not thrown back for any special purpose.

F is the screw-rod, which has its bearings at one end in the inner end of the stationary jaw, the other end entering a socket in the sleeve D, so that by turning the nut *b* the sleeve will slide along on the bar, and thus throw outward the jaw E.

Instead of having the screw-rod F arranged as above, it can be passed entirely through the screw-threaded socket in the sleeve and have its bearings at its lower end in the handle C, and the nut may be located at either end of the screw-rod, as may be desired. This arrangement produces a very easily-operating wrench.

It will be readily perceived that if a pipe or the like be placed between the jaws and the same tightened upon it, any strain upon the end of the handle in a direction in front of the jaws, the hold of the movable jaw will grow tighter or firmer in proportion to the said strain upon the handle, and that to release the wrench or loosen its hold a reverse strain upon the handle will have the effect to relieve the grip of the jaws.

What I claim as new, and desire to secure by Letters Patent, is—

The combination and arrangement of the toothed jaw E, sleeve D, spring *a*, jaw B, and screw-rod F, all constructed and operating in the manner and for the purpose herein specified.

WM. W. WILLS.

Witnesses:

E. S. HAYWARD,
C. H. WALLACE.