

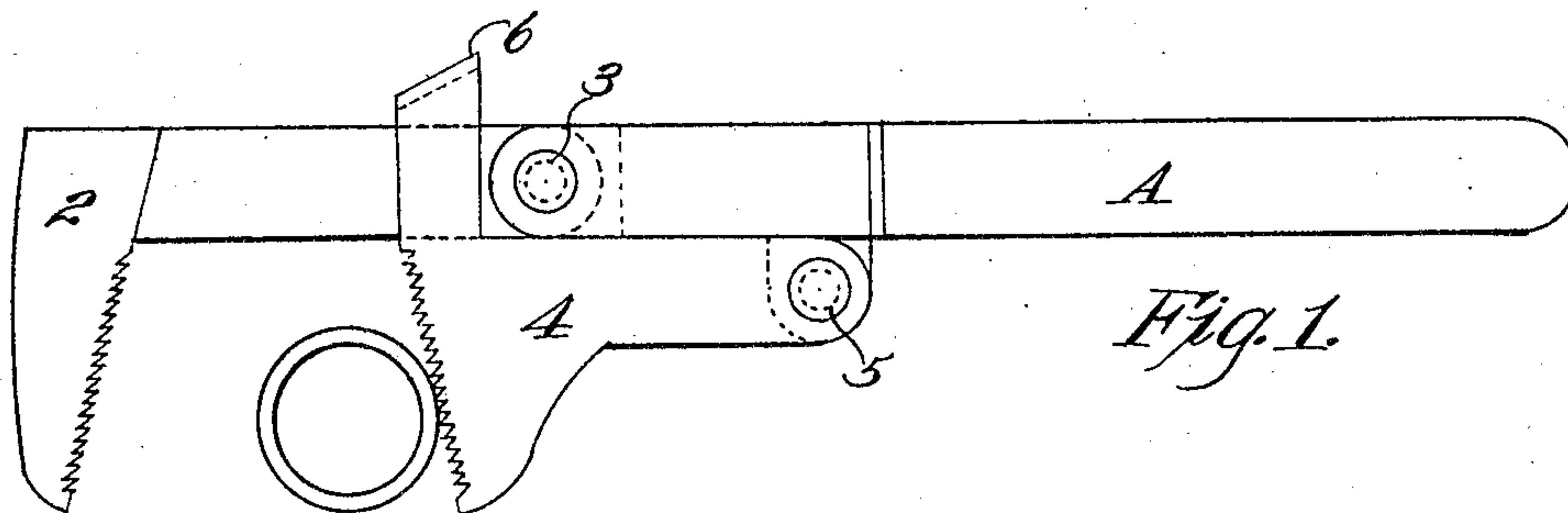
No. 844,852.

PATENTED FEB. 19, 1907.

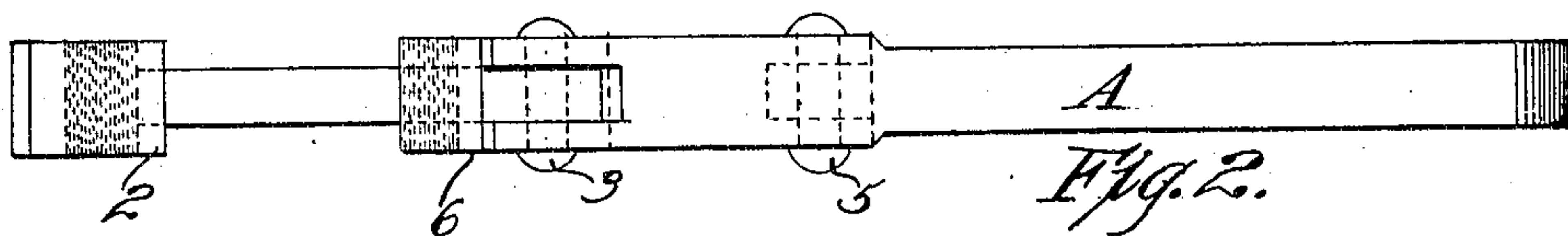
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PIPE WRENCH.

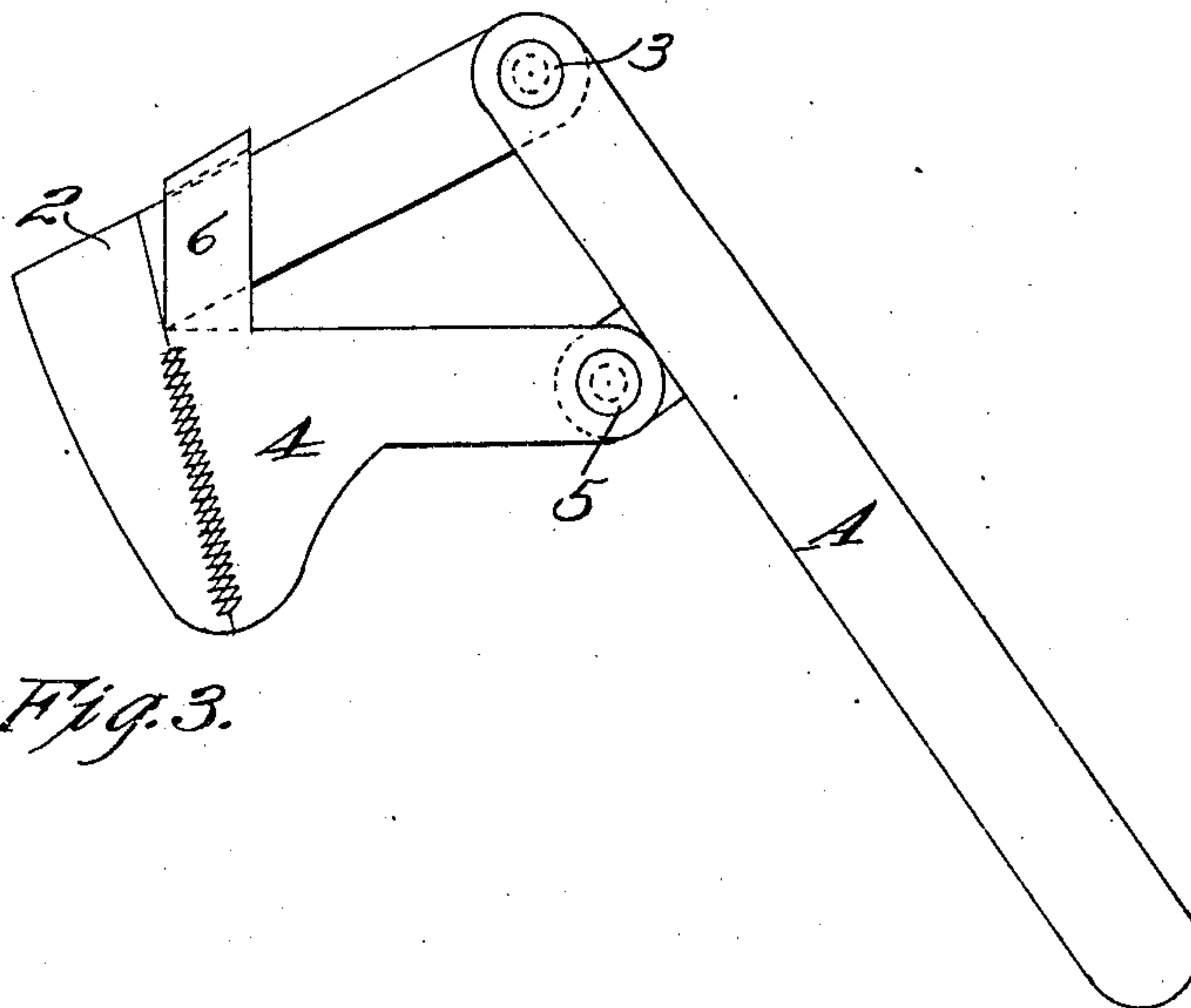
APPLICATION FILED MAY 19, 1906.



*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

Witnesses:

*G. E. Maynard*  
*J. H. Source*

Inventors:  
*Franklin J. Dearborn,*  
*Francesco Cavallaro,*  
*Andrew S. MacKenzie;*  
By *Geo. H. Strong* Att'y.

# UNITED STATES PATENT OFFICE.

FRANKLIN J. DEARBORN, FRANCESCO CAVALLARO, AND ANDREW S. MACKENZIE, OF SAN JOSE, CALIFORNIA.

## PIPE-WRENCH.

No. 844,852.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed May 19, 1906. Serial No. 317,698.

*To all whom it may concern:*

Be it known that we, FRANKLIN J. DEARBORN, FRANCESCO CAVALLARO, and ANDREW S. MACKENZIE, citizens of United States, residing at San Jose, in the county of Santa Clara and State of California, have invented new and useful Improvements in Pipe-Wrenches, of which the following is a specification.

Our invention relates to pipe-wrenches. Its object is to provide a simple practical durable self-adjusting wrench for gripping pipe or nuts of different sizes.

It consists of the parts and construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a side elevation of the wrench opened out. Fig. 2 is a plan view of the same. Fig. 3 is a side elevation of the wrench in closed position.

A represents a handle of suitable construction having a jaw member 2, pivoted to it at one end, as at 3, and a second jaw member 4, pivoted to its under side between its ends, as at 5.

The jaw member 2 is made angular, with a portion adapted to extend in line with the handle A, as shown in Fig. 1. The member 4 has a guide-strap 6 to slide on the horizontal part of member 2, and this strap or guide is suitably shaped to accommodate the jaw 2 to the various pivotal movements of the handle about the pivot 5.

The biting-surfaces of the jaws 2 4 may be of any suitable shape or contour and are preferably corrugated, as shown. Preferably these surfaces will stand in outwardly-divergent planes when the wrench is in the position indicated in Fig. 1, so as to permit as large a pipe as possible to be accommodated and to allow these biting-surfaces to approach each other in as nearly parallel planes as possible, as indicated in Fig. 3.

In using the wrench the inner jaw is placed against the pipe and the jaw is adjusted by breaking the handle over the pivot-pin 3, connecting the outer jaw with the handle.

In so doing the pivot of the inner jaw is made a fulcrum and the handle a lever, the handle working over the pivot of the inner jaw and drawing the outer jaw through the guide 6 the necessary distance for the outer jaw to come in contact with the pipe. As the outer jaw comes in contact with the pipe the increased pressure upon the handle in turning the pipe clamps the jaws upon the pipe and holds the pipe fast.

To release the wrench, the handle is straightened, which spreads the jaws.

Thus it is seen that by simply laying the wrench over the pipe so that the jaws straddle the pipe and bending the handle the wrench adjusts itself automatically to pipes of a great variety of sizes and that the pipe is released by merely straightening the handle again.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

An improved pipe-wrench consisting of a bar having a transverse jaw at one end, a handle pivoted and turnable upon the opposite end of said bar, a second jaw member having one end pivoted to the handle and having its body portion straight and parallel with the first bar and handle when said bar and handle are normally longitudinally in line, said second jaw member having a guide-strap for the reception of the first-named bar and said jaw member and the bar having their gripping-surfaces normally arranged in outwardly-divergent planes, but which gradually approach into parallelism when the handle is turned about its pivotal center to disturb the normal parallelism of the bar and handle and the body portion of the second jaw member.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

FRANKLIN J. DEARBORN.  
FRANCESCO CAVALLARO.  
ANDREW S. MACKENZIE.

Witnesses:

WALTER L. RAVEN,  
OSCAR D. RICHARDSON.