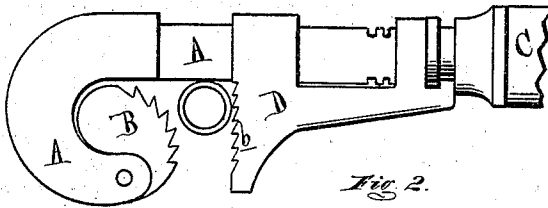
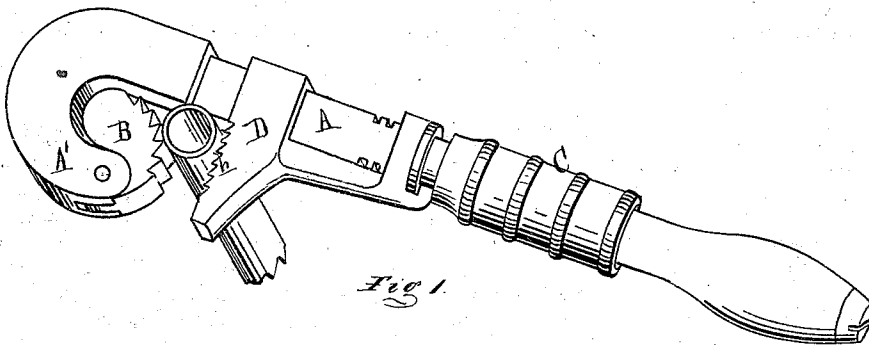


D. D. INGRAM.
Pipe-Wrenches.

No. 143,908.

Patented Oct. 21, 1873.



ATTEST:

H. Sprague
Chas. E. Liestio

INVENTOR:

D. D. Ingram
By Attorney—
Thos. S. Sprague

UNITED STATES PATENT OFFICE.

DAVID D. INGRAM, OF MANISTEE, MICHIGAN.

IMPROVEMENT IN PIPE-WRENCHES.

Specification forming part of Letters Patent No. **143,908**, dated October 21, 1873; application filed July 8, 1873.

To all whom it may concern:

Be it known that I, DAVID D. INGRAM, of Manistee, in the county of Manistee and State of Michigan, have invented an Improved Pipe-Wrench, of which the following is a specification:

The nature of this invention relates to an improvement in that class of wrenches which are designed to grasp and turn pipes and other cylindrical objects, and has for its object to furnish a tool which will enable the operator to grasp objects having a wider range of diameter than others of its class; and it consists in the peculiar construction of a hooked monkey-wrench with a serrated eccentric pivoted in the point of the hook, as more fully hereinafter set forth.

Figure 1 is a perspective view of my improved wrench in the act of turning a cylindrical object. Fig. 2 is a side elevation of the same turning away from the object to get a fresh gripe thereon.

Like letters refer to like parts in both figures.

In the drawing, A represents the shank of my wrench, terminating in a hook, A', in which is pivoted a chuck, in the form of a serrated eccentric, B. The lower part of the shank is screw-threaded, and on it moves a nut, C, with which engages a jaw, D, sleeved and sliding on the upper part of the shank. The face of the jaw is serrated, as at b. The

form of the eccentric is such that it fits the inner part of the hook A' when closed into it.

When a pipe or rod is grasped between the eccentric and the jaw D, which latter is moved up by the nut for that purpose, and the wrench is turned in the direction of the arrow in Fig. 1, the eccentric swings out of the hook a little, compressing the object against the jaw with a force proportionate to the power applied to the handle of the wrench-shank. When turned in the opposite direction, the eccentric falls back into the hook, and releases the jaw.

The jaw may be retracted to grasp large objects until the eccentric describes a quarter-revolution to grasp them, (beyond which it has no hold upon the object,) thus giving the tool a large range of capacity.

If desired, a stationary jaw may be forged or cast on the opposite edge of the shank, and another on the opposite face of the sleeve, thus making a combined monkey and pipe wrench.

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

The tool described, having the shank A', with the pivoted eccentric B, and serrated jaw D, combined and arranged as described, for the purpose set forth.

DAVID D. INGRAM.

Witnesses:

H. F. EBERTS,
CHAS. E. HUESTIS.