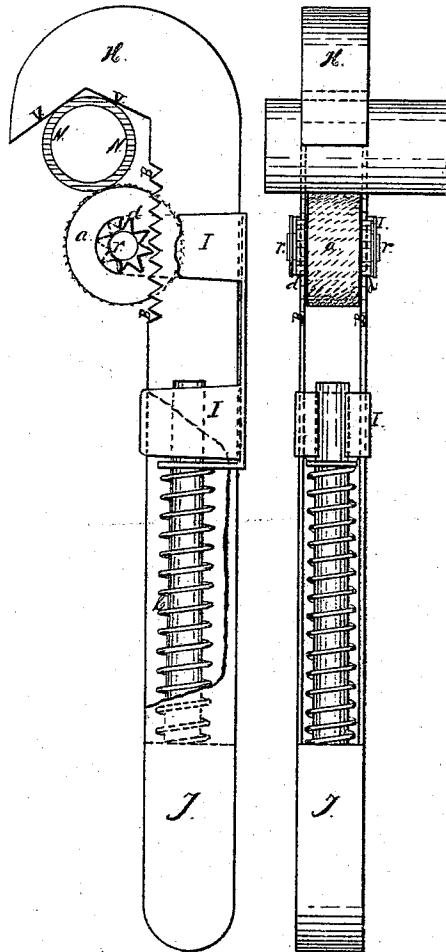


J. BROWNING.
PIPE-WRENCH.

No. 171,982.

Patented Jan. 11, 1876.



WITNESSES
H. M. Fuller.
A. J. Fuller.

INVENTOR.
Joseph Browning
H. M. Fuller,
attorney.

UNITED STATES PATENT OFFICE.

JOSEPH BROWNING, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY
MESNE ASSIGNMENTS, OF ONE-HALF HIS RIGHT TO SAMUEL CROSSLEY,
OF SAME PLACE.

IMPROVEMENT IN PIPE-WRENCHES.

Specification forming part of Letters Patent No. **171,982**, dated January 11, 1876; application filed
September 27, 1875.

To all whom it may concern:

Be it known that I, JOSEPH BROWNING, of Philadelphia, Pennsylvania, have invented an Improvement in Pipe Tongs or Wrenches.

My invention consists in an improvement in pipe tongs or wrenches, of which the following is a description, reference being had to the drawing accompanying this specification, of which it forms part.

It is a recessed handle, and H the hook or nose of the wrench. A is a rough-faced wheel, having on each side a small pinion-wheel, *d d*, and axle *r r*, whose bearings are movable with the carriage I I. C is a spiral spring pressing against the carriage I I, forcing the wheel A in contact with the pipe N N, and by this means making the wrench self-adjusting for the largest pipe that can be entered between the hook H and wheel A to the smallest. B B are the teeth corresponding with the cogs of the pinion-wheel *d d*, and forming the base of resistance of the wheel A. It will be seen that by drawing the carriage I I back the pipe can be entered between the wheel A and hook H, and then, by pressing on the handle of the wrench, that the friction of the wheel A on the pipe N N tends to revolve the wheel A on its axle in the same direction that the handle of the wrench is moved, and as the cogs of

the pinion-wheel *d d* are interlocked with the teeth B B the wheel A moves forward, thereby gripping the pipe in proportion to the pressure on the handle of the wrench. By reversing the motion the gripe is released, allowing a quarter or half turn to be made easily and quickly—an essential feature in a tool of this kind.

It will be evident that in place of the spring C a screw or equivalent may be used, and that the carriage I I be made to travel within the handle of the wrench, as well as on the outside.

I do not confine my invention to the form or general configuration as shown. The angles V V may be made round, or any shape suitable for various or special kinds of work, and the handle T curved or straight.

I claim—

1. The combination of the wheel A and pinions *d d*, arranged on a movable carriage, and the toothed bar, for the purpose set forth.

2. The hooked bar B, with recessed handle T, in combination with the movable carriage and spring C, substantially as described.

JOSEPH BROWNING.

Witnesses:

CHARLES E. PANCOST,
EDW. MONTGOMERY.