

J. A. Wilcox,

Wrench.

N^o 33,223.

Patented Sep. 3, 1861.

Fig. 1.

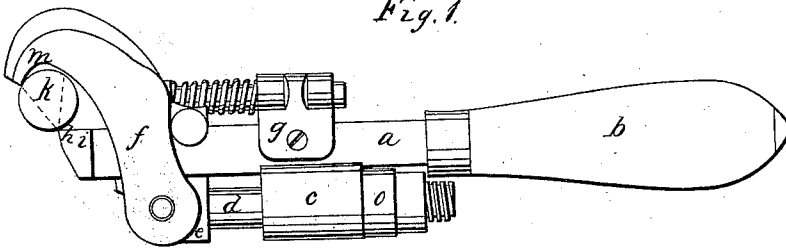
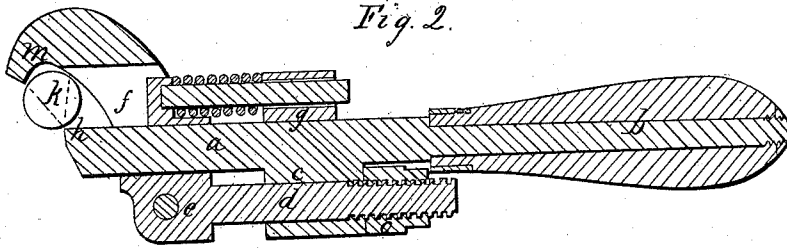


Fig. 2.



Witnesses;

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JAMES A. WILCOX, OF ROCKY HILL, CONNECTICUT.

PIPE-WRENCH.

Specification forming part of Letters Patent No. **33,223**, dated September 3, 1861.

To all whom it may concern:

Be it known that I, JAMES A. WILCOX, of Rocky Hill, in the State of Connecticut, have invented a new and useful Instrument for turning pipe or other round rods, whether hollow or solid, to screw or unscrew them, and for other purposes, which I denominate a "Pipe-Wrench;" and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying sheet of drawings, making part of this specification, and to the letters of reference marked thereon.

The instruments heretofore in use for turning pipes or round rods or bars to screw or unscrew them are tongs or plyers which grasp the pipe or rod and hold on to it by means of the pressure of the hand upon the handles, a link or ring being sometimes substituted on the handles to hold them in place. These tongs are not adjustable to different sizes of pipes, and their use is attended with considerable labor, and a large number of them is required where many different-sized pipe are to be operated upon.

The nature of my invention is the production of an instrument or wrench capable of being set or adjusted to different sizes of pipe, and which, when so adjusted, will seize the pipe at every forward action of the hand and will slip or turn upon the pipe when bringing it back to take a new hold.

In the sheet of drawings, Figure 1 is a side view, and Fig. 2 is a longitudinal sectional view on a vertical plane through the center of a pipe-wrench made in accordance with my invention.

In both figures and in this specification like letters of reference refer to like parts.

a is a bar with a handle *b* and an attachment or ear *c*, through which the rod *d* works. This rod *d* has a square head *e*, and is attached to the jaw *f*, and has a nut *o* upon its screw end, by which it may be moved longitudinally. The jaw *f* is slotted, so as to span the bar *a* and slide longitudinally upon it. The upper end of the bar *a* is provided with a shoulder or other stop *i*, against which the jaw *f* may rest. There is also an attachment *g* upon the bar *a* to support a spring, the opposite end of which spring is to act upon the jaw *f* to keep it against the shoulder or stop upon the bar

a—a spiral spring is a good form—and to connect it with the jaw *f* I put a rod through the spring, which rod for support may work through the attachment *g*, with a head for the spring to act against, and an arm or projection on each side to act against the jaw *f*.

The end *h* of the bar *a* forms the acting part of one of the jaws of the wrench, and the curved or bill-formed part *m* of the jaw *f* constitutes the acting part of the other jaw, between which two parts *h* and *m* the pipe is grasped.

It will be observed that by turning the nut *o* in one direction, the end of the jaw which is attached to the square head *e* of the rod will be carried toward one end of the bar *a*. By reversing the motion of the nut it will be carried toward the other end and when carried toward the end *h* of the bar the part *m* will be removed from the part *h*, thus enlarging the capacity of the wrench, and when carried in the opposite direction the part *m* will approach nearly to the part *h*, thus adjusting the wrench to act upon smaller pipe, and that in both cases the jaw *f* is held against the shoulder or stop *i* near the end of the bar *a* by the action of the spring. By this means of adjustment the capacity of the wrench may be enlarged or diminished so as to adapt it to act upon pipe of various sizes.

This wrench is used by first adjusting it to the size of the pipe to be operated upon, then pushing back the jaw *f*, which the yielding of the spring permits to be done, and putting the wrench over the pipe, so that the pipe comes between *h* and *m*. The circles *k* represent sections of pipe in a right position to be acted upon. When thus arranged, if the handle of the wrench be brought down, the pipe will be held between the parts *h* and *m* and turned, and when the handle is carried up those jaws will slip around upon the pipe so that repeating this movement will turn the pipe as may be desired, the spring holding the jaw *f* upon the pipe, and at the same time permitting it by yielding, if required by any unevenness of surface, to slide easily around the pipe.

This wrench will be found useful in turning the chuck of ratchet-drills, in which case it will be better to have the curve of the movable jaw in the form of a part of a circle.

What I claim as my invention is—

1. The combination of a hooked or bill-shaped jaw and an adjustable fulcrum to which the jaw is pivoted and on which it turns, and the combination with said jaw and fulcrum of the stop or shoulder *i*, substantially as described.

2. A wrench for turning pipes or round bars

or rods, constructed and operated substantially as above described.

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Witnesses:

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