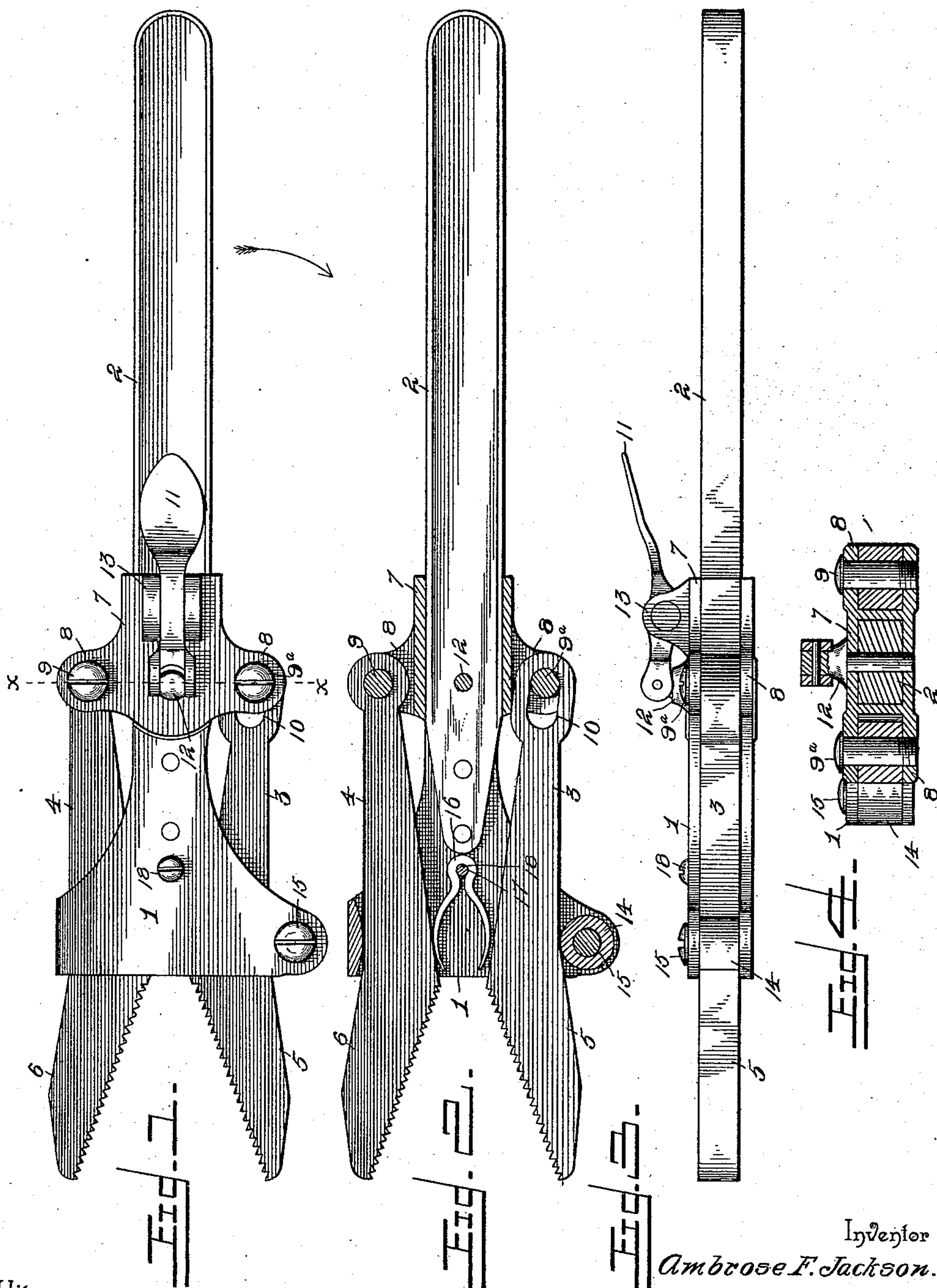


(No Model.)

A. F. JACKSON.
PIPE WRENCH.

No. 572,757.

Patented Dec. 8, 1896.



Witnesses

A. F. Jackson
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By his Attorneys,

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UNITED STATES PATENT OFFICE.

AMBROSE F. JACKSON, OF OKLAHOMA, OKLAHOMA TERRITORY.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 572,757, dated December 8, 1896.

Application filed June 29, 1896. Serial No. 597,390. (No model.)

To all whom it may concern:

Be it known that I, AMBROSE F. JACKSON, a citizen of the United States, residing at Oklahoma, in the county of Oklahoma and Territory of Oklahoma, have invented a new and useful Pipe-Wrench, of which the following is a specification.

The invention relates to improvements in pipe-wrenches.

The object of the present invention is to improve the construction of pipe-wrenches and to provide a simple, strong, and durable one adapted to be readily adjusted to suit the diameters of pipes and rods to be operated on and capable of effectually gripping a pipe or rod.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a plan view of a pipe-wrench constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view, the jaws being shown in plan view. Fig. 3 is a side elevation. Fig. 4 is a transverse sectional view on line *x x* of Fig. 1.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a casing, rectangular in cross-section, provided with inwardly-tapering sides, which are riveted or otherwise secured to a handle 2. Within the casing 1 are arranged the shanks 3 and 4 of a pair of jaws 5 and 6, which are located beyond the casing and which have inner upwardly-diverging engaging faces provided with teeth. The inner edges of the shanks 3 and 4 converge outwardly and are arranged at an angle to the engaging faces or edges of the jaws, which when moved inward are drawn closer together and when moved outward are separated. The outer edges of the jaws diverge outwardly, and the inner ends of the shanks are connected with a slide 7, arranged on the handle 2 and provided with a locking device for securing the jaws at the desired adjustment. The slide, which is provided with a rectangular opening to receive the handle 2, has outwardly-extending ears 8, provided with perforations for the reception of screws 9 and 9^a

or other suitable fastening devices for connecting the inner terminals of the shanks to the slide.

The shank 4 is provided at its inner end with a circular perforation for the reception of the pivot-screw 9, and the other shank is provided at its inner end with a longitudinal slot or opening 10, receiving the adjacent fastening device 9^a and permitting the jaw to have a limited longitudinal movement, whereby when the handle 2 is moved in the direction of the arrow shown in Fig. 1 the jaw 5 will move inward slightly and effectually clamp a pipe or rod, and the greater the force employed in forcing the handle in the direction of the arrow the more firmly will the pipe or rod operated on be gripped.

The locking device for securing the slide at the desired adjustment comprises a lever 11, disposed longitudinally of the handle 2 and provided at its inner end with a handle portion, and a pin 12, pivoted to the outer end of the lever 11, arranged in perforations of the slide 7, and adapted to engage the perforation of the handle 2. The lever 11 is fulcrumed intermediate of its ends between ears 13 of the slide, and it is adapted to withdraw the pin 12 from engagement with the handle 2 and move the pin forward into engagement with the same. The handle 2 may be provided with any number of perforations for the reception of the pin 12, to enable the jaws 5 and 6 to be adjusted to the desired degree.

The jaw 6 has its outer edge arranged against one end of the casing 1, and the inner face of this end of the casing is convex, as clearly shown in Fig. 2 of the accompanying drawings. The other end of the casing is provided with an antifriction-roller 14, consisting of a sleeve mounted on a screw 15 or other suitable fastening device which passes through perforations of the sides of the casing. The antifriction-roller 14 facilitates the longitudinal movement of the jaw 5 when the wrench is applied.

The jaws are held in contact with the convex face of one end of the casing and the antifriction-roller at the other end of the casing by a substantially U-shaped spring 16, interposed between the shanks of the jaws, composed of two curved sides and constructed

of a single piece of metal, which is bent at the inner terminals of the sides to form an eye 17 for the reception of the fastening device 18. The fastening device 18, which consists of a screw, passes through central perforations of the sides of the casing 1 and through the eye 17 of the spring 16.

It will be seen that the wrench is simple and comparatively inexpensive in construction, that it is strong and durable, and that it is capable of effectually gripping a pipe or rod. It will also be apparent that the greater the force employed in operating the wrench the more securely will its jaws clamp the pipe or rod operated upon.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. In a pipe-wrench, the combination of a handle provided at its outer end with a casing, a pair of jaws having shanks arranged within the casing, said jaws being provided beyond the same with inner engaging faces, and a slide mounted on the handle and connected with the inner ends of the shanks, substantially as described.

2. In a pipe-wrench, the combination of a handle, a casing arranged at the outer end of the handle, a slide mounted on the handle, and a pair of jaws arranged within the casing, projecting outward therefrom and having their inner ends pivotally connected with the slide, one of the jaws being capable of a limited longitudinal movement independent of the slide, substantially as and for the purpose described.

3. In a pipe-wrench, the combination of a handle provided at its outer end with a casing, a slide mounted on the handle, a pair of jaws extending outward from the casing and

provided with shanks arranged within the same and pivotally connected with the slide, one of the shanks being provided with a longitudinal slot receiving its pivot, and a locking device for securing the slide to the shank, substantially as described.

4. In a pipe-wrench, the combination of a handle, a casing arranged at the outer end of the handle and provided at one side of the wrench with an antifriction-roller, a slide mounted on the handle and provided at opposite sides with ears, outwardly-diverging jaws provided with shanks arranged within the casing, one of the shanks being provided at its inner end with a perforation, and the other shank having a longitudinal slot, pivots arranged in the perforation of the slot and connecting the shanks to the slide, and a spring arranged within the casing and interposed between the shanks, substantially as described.

5. In a pipe-wrench, the combination of a handle, a casing arranged at the outer end of the handle, a slide mounted on the handle, a locking device for securing the slide at the desired adjustment, a pair of jaws extending outward from the casing and provided with shanks arranged within the same and pivoted to the slide, a spring interposed between the shanks of the jaws, composed of two curved sides and constructed of a single piece of metal bent to form an eye at the inner terminals of the sides, a fastening device passing through the eye of the spring and securing the same to the casing, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

AMBROSE F. JACKSON.

Witnesses:

WILL. H. CLARK,
T. A. NEAL.