No. 649,092. Patented May 8, 1900.

J. WILLMANN.

WRENCH.

(Application filed Dec. 27, 1899.)

(No Model.)

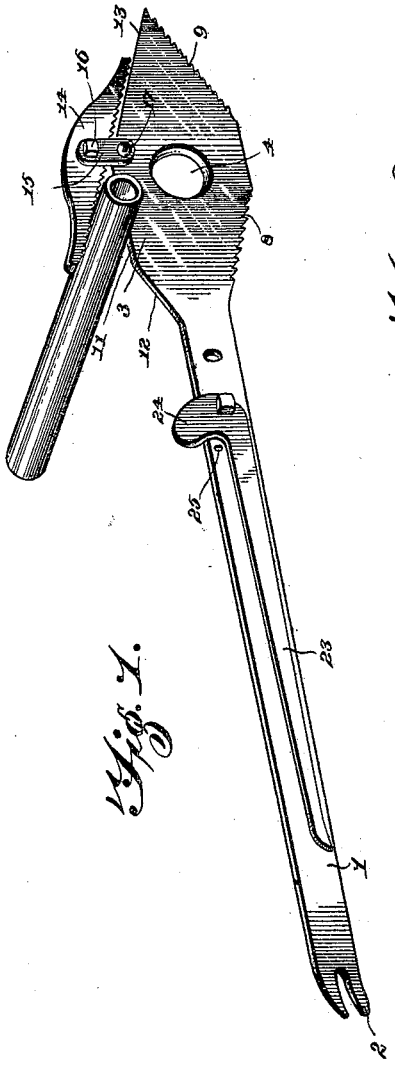

Fig. 1.

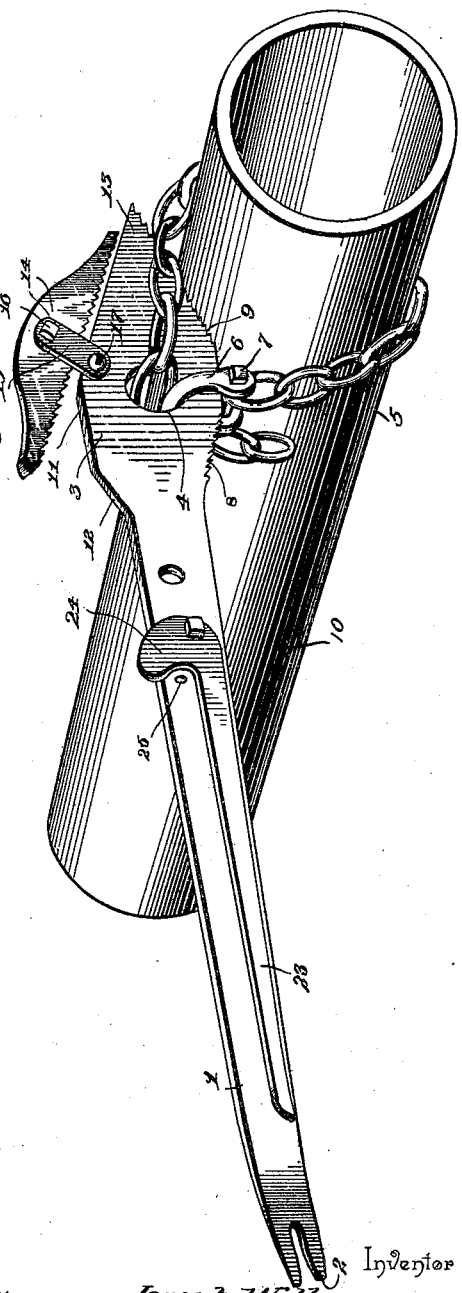

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH WILLMANN, OF SOLMS, TEXAS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 649,092, dated May 8, 1900.

Application filed December 27, 1899. Serial No. 741,760. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WILLMANN, a citizen of the United States, residing at Solms, in the county of Comal and State of Texas, have invented a new and useful Wrench, of which the following is a specification.

The invention relates to improvements in wrenches.

The object of the present invention is to improve the construction of wrenches and to provide a simple, efficient, and inexpensive one adapted for operating on nuts, pipes, rods, and other objects.

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 perspective view of a wrench constructed in accordance with this invention. Fig. 2 is a similar view of the wrench and certain adjunctive devices for enabling it to operate on large pipes.

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

1 designates a bar provided at one end with a claw 2 and having its other end enlarged and oppositely tapered to form a head 3, which is provided at its top with smooth upper edges and which has a central longitudinal portion 11, located between oppositely-inclined or angularly-disposed portions 12 and 13. The central longitudinal portion 11, which forms a seat, is adapted to receive a pipe or rod or a nut which is gripped by a pivoted jaw 14, connected with the upper portion of the head by a pair of links 15. The pivoted jaw 14, which is preferably tapered, as shown, has a straight toothed inner engaging edge, and the links 15, which are located at opposite sides of the head and the pivoted jaw 14, are arranged at the center of the latter, being secured to the said parts by bolts 16 and 17 or other suitable fastening devices. The inner and outer portions of the pivoted jaw 14 are adapted to coöperate with the adjacent edges of the head to clamp pipes, nuts, and other objects, and the construction provides an efficient wrench for operating on the smaller class of objects. The links 15, which connect the jaw 14 with the head, are of a less length than the distance between their inner pivots and the outer end of the head.

The head 3 is provided with an opening 4, which is approximately centrally arranged and which is adapted to receive a chain 5. The chain 5 is provided at one end with a substantially U-shaped link or clip 6, linked into the opening at the lower edge or portion of the head and connected with the adjacent link of the chain by a transverse bolt 7, as clearly illustrated in Fig. 2 of the accompanying drawings. The inner and outer edges 8 and 9 at the bottom of the head are arranged at an angle to each other and provided with suitable teeth adapted to engage a pipe or rod, as illustrated in Fig. 2, and when the device is used in this manner the chain has its free end arranged in the opening to loop it for the reception of the pipe 10. The chain passes sufficiently loosely around the pipes 10 to enable the bar to be moved rearward to obtain a fresh hold when pressure is removed from its outer end; but when pressure is applied to the end 2 the head of the device firmly engages the pipe 10 and securely grips the same. The free end of the chain is simply passed through the opening, and the short links will interlock with the head of the bar and obviate the necessity of employing a locking device for effecting this result. The chain is also adapted to be passed around a post or other object to enable the point at the outer end of the head of the bar 1 to engage the head of a bolt and hold the latter while its nut is being unscrewed. This arrangement enables sufficient pressure to be brought against the head of the bolt to prevent the latter from rotating during the operation of removing a nut or screwing the same on the said bolt.

A lever 23 is pivoted to the bar 1, and its inner end 24 is curved or hook-shaped and is located adjacent to the perforation 25 of the bar to provide a wire-cutter. The wire is passed through the perforation, and the lever is swung outward to carry its end 24 into engagement with the wire, which is readily severed by such movement of the lever.

What is claimed is—

1. A wrench comprising a bar having a head, a link pivoted at its inner end to the head at a point between the ends thereof,

said link being of a length less than the distance between its inner end and the outer end of the head, and a movable jaw pivoted between its ends to the outer end of the link and coöperating with the adjacent edges of the head, substantially as described.

2. A wrench comprising a bar having a tapered head provided with an inclined portion 13 and having a longitudinal portion 11, the inclined portion 13 being adapted to engage a pipe or rod and the longitudinal portion being arranged to receive a nut or similar object, a link pivoted at its inner end to the head of the bar at the angle formed by the portions 11 and 13, said link being of a length less than the distance between its inner end and the outer end of the head, and a movable jaw pivoted at its center to the outer end of the link and having a straight inner continuous edge coöperating with the portions 11 and 13, substantially as and for the purpose described.

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

JOSEPH WILLMANN.

Witnesses:
PETER NOWOTNY,
JOHN SCHAEFER.