No. 664,425. Patented Dec. 25, 1900.

N. NILSON.

PIPE WRENCH.

(Application filed Mar. 31, 1900.)

(No Model.)

Fig. 1.

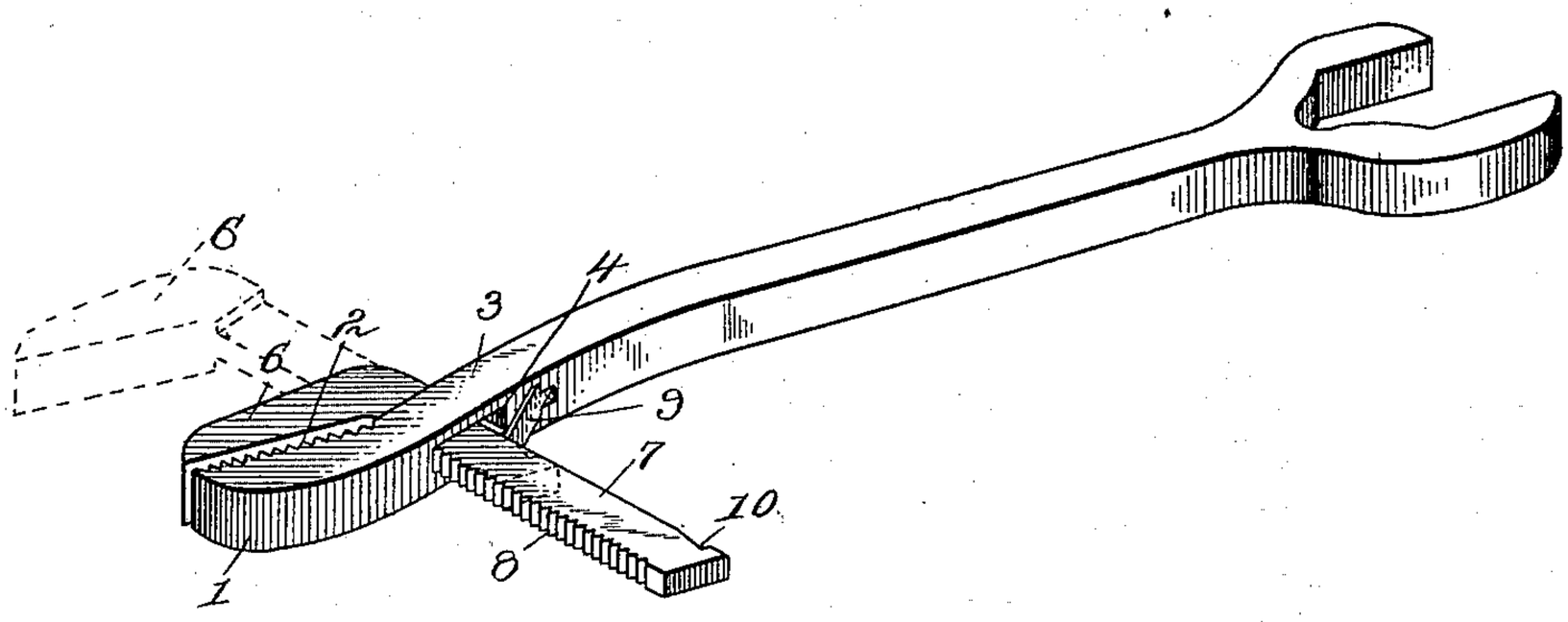
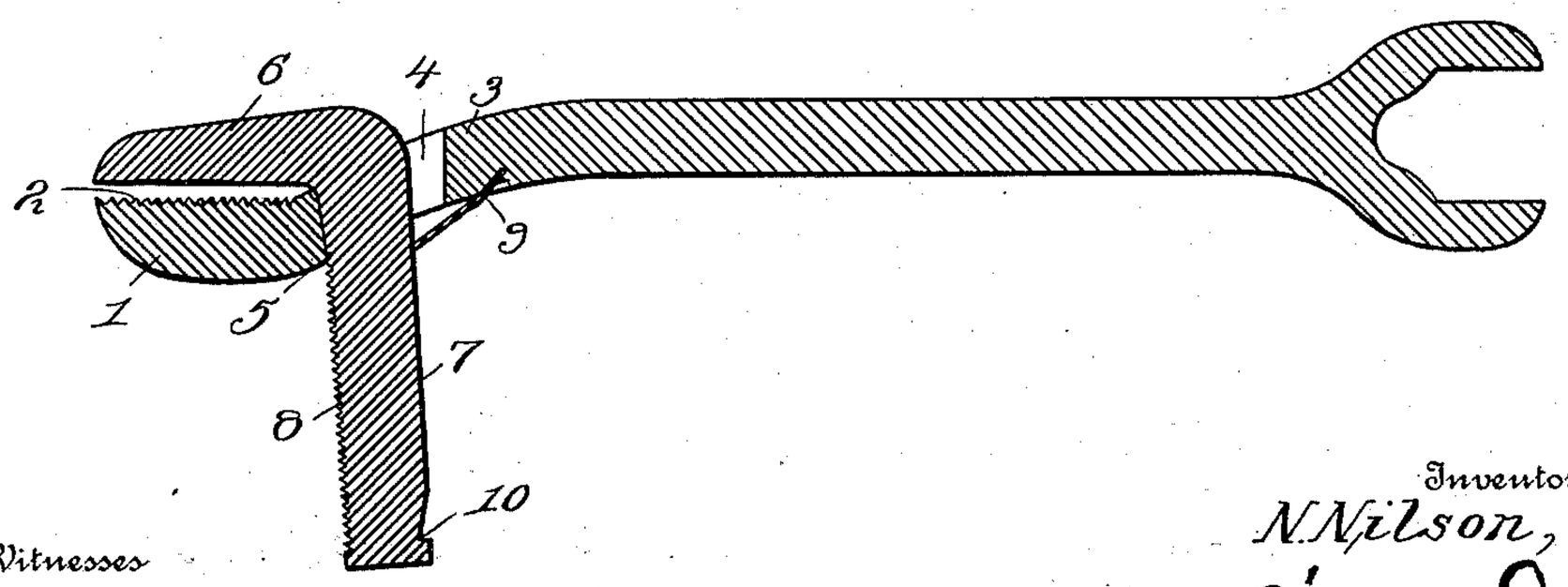


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

NILS NILSON, OF ABSARAKA, NORTH DAKOTA.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 664,425, dated December 25, 1900.

Application filed March 31, 1900. Serial No. 11,001. (No model.)

To all whom it may concern:

Be it known that I, NILS NILSON, a citizen of the United States, residing at Absaraka, in the county of Cass and State of North Dakota, have invented a new and useful Pipe-Wrench, of which the following is a specification.

My invention relates to wrenches, and more especially to that class in which the movable jaw slides transversely relatively to the fixed jaw; and it has for its object to produce a wrench of this kind which can be made very light and simple and yet possess sufficient strength and capacity for all the purposes or uses to which it may be applied.

With these objects in view my invention consists in the improved construction and novel arrangement of parts of a wrench, as will be hereinafter more fully set forth.

In the accompanying drawings, in which the same reference-numerals indicate corresponding parts in each of the views in which they occur, Figure 1 is a perspective view of my improved wrench, and Fig. 2 is a longitudinal sectional view of the same.

Referring more particularly to the drawings, 1 indicates the fixed jaw, which may be of any suitable size and proportion and has its inner surface at one end provided with gripping-teeth 2. The opposite end may be provided with an ordinary spanner-wrench, and the intermediate portion, near the gripping end, is preferably slightly curved, as shown at 3. Adjacent to the teeth 2 the jaw is slotted transversely, as shown at 4, the outer end of the front wall of which is preferably made angular, so as to form a tooth 5.

The movable jaw 6 is formed L-shaped, with its shank 7 of a reduced thickness to fit within the slot 4, and has its forward edge provided with teeth 8 to engage with the tooth 5. The rear edge of the shank is perfectly smooth, except at its outer end, and is adapted to bear against the rear wall of the slot 4 when the wrench is being used.

A spring 9 is secured to the rigid jaw immediately to the rear of the slot 4, with its free end in engagement with the rear edge of the shank of the movable jaw, so that the teeth 8 are in engagement with the tooth 5. When the jaw is moved to its extreme limit, the end of the spring 9 will enter the recess 10 formed in the rear of the shank 7 and prevent the passage of the shank entirely through the slot 4, thus preventing the accidental separation of the two jaws of the wrench.

In operation the movable jaw can be opened the desired distance by forcing its stem back against the spring until its teeth will slip past the tooth formed at the forward end of the slot of the rigid jaw. The pressure of the spring upon the stem of the movable jaw is preferably exerted at a point above the tooth at the opposite side of the slot, so that the jaw of the wrench is always retained in a position with the smooth edge of its shank in engagement with the rear wall of the slot, thereby causing the wrench to always stand open to its fullest extent, whereby the article to be rotated—as, for instance, a pipe or nut—is more easily entered between the jaws. If desired, the jaw can be opened to a greater extent than desired by the insertion of the object to be manipulated, and the movable jaw can then be adjusted by pressing upon the same at the lower end of the stem, the teeth upon the stem being raked or inclined downward, which will permit of their being readily slipped over the tooth in the slot, but which will prevent their movement in the opposite direction until after the spring has been forced backward. As soon as the wrench has been adjusted and pressure applied to the handle the opposite edges of the stem of the movable jaw will be forced into such positive engagement with the corresponding walls of the rigid jaw that it will be impossible for the jaws to become separated or to change their relative positions while the wrench is being used. In this manner a wrench constructed as above described can be quickly adjusted and made very cheaply, although I reserve to myself the right to make such changes and alterations in the exact construction of the same as will come within the scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a wrench, the combination, with a transversely-slotted rigid jaw, the outer end of the front wall of said slot being formed into a tooth, of an L-shaped movable jaw, the stem

of which fits within said slot and has its forward edge provided with teeth for engaging with the tooth of the rigid jaw and the rear edge is smooth throughout its extent except a shoulder at its outer end, and a spring secured in the rigid jaw to the rear of said slot, the free end of which is adapted to bear against the smooth surface of said stem and to engage with said shoulder, substantially as described.

NILS NILSON.

Witnesses:
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