No. 706,208. Patented Aug. 5, 1902.

A. L. SLATER.

WRENCH.

(Application filed May 9, 1902.)

(No Model.)

Fig. 1.

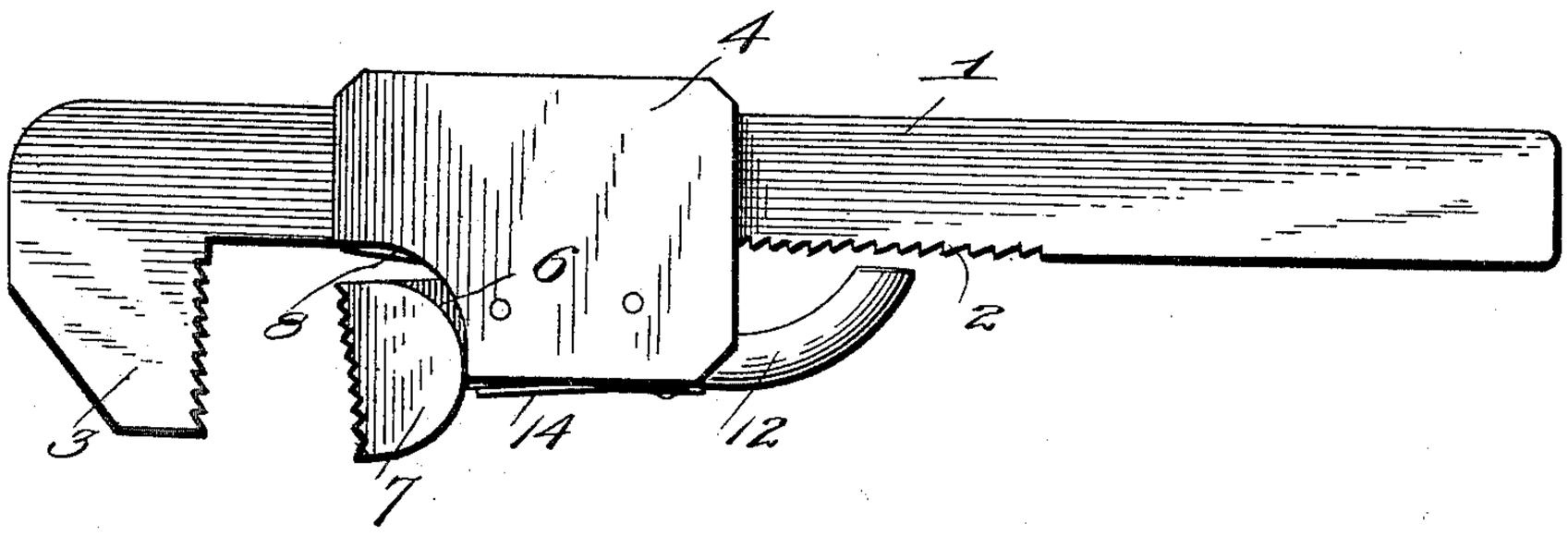
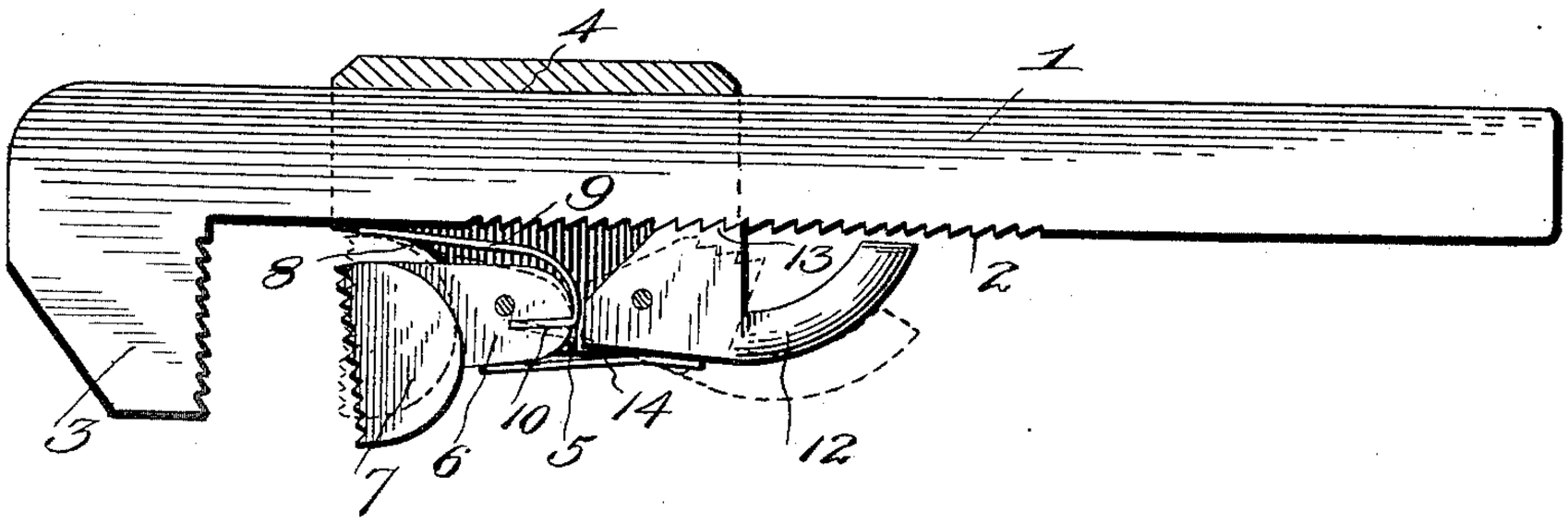


Fig. 2.



Witnesses

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ANDREW L. SLATER, OF BUTTE, MONTANA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 706,208, dated August 5, 1902.

Application filed May 9, 1902. Serial No. 106,505. (No model.)

To all whom it may concern:

Be it known that I, ANDREW L. SLATER, a citizen of the United States, residing at Butte, in the county of Silverbow and State of Montana, have invented certain new and useful Improvements in Wrenches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to wrenches of the rapid-transit type.

The object of the invention is to provide a wrench which shall be simple of construction, durable in use, comparatively inexpensive of production, and which is particularly adapted for use upon pipes and which may be expeditiously set or applied to pipes of different diameters.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more particularly described, and pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a side elevation of my improved wrench, and Fig. 2 is a longitudinal vertical sectional view showing in full lines the parts in normal position and in dotted lines the position the movable jaw assumes when the lever is depressed for the purpose of disengaging its head from the ratchet-teeth of the handle-bar and permitting of said jaw being adjusted with respect to the fixed jaw.

In the drawings, 1 denotes the handle-bar of the wrench, the under side of which is provided with ratchet-teeth 2.

3 denotes the fixed jaw, secured to the outer end of the handle-bar.

4 denotes a sliding frame, which embraces the handle-bar and slides thereon and is provided with a slot 5 in its lower edge, in which is pivoted a shank 6 of the movable jaw 7. The rear face of this jaw is curved or rounded and fits slots or recesses 8, formed in the sliding frame.

9 denotes a bowed spring, one end of which is secured in a recess 10 in the movable-jaw shank and the other end of which is adapted to have a sliding contact with the ratchet-teeth and normally hold the movable jaw in the position shown in full lines in Fig. 2.

12 denotes a lever pivoted in the recess or slot of the sliding frame and having teeth 13 to engage the ratchet-teeth of the handle-bar. A flat spring 14 is secured to the lever and projects under the shank of the movable jaw.

The operation of the device is as follows: Assuming the parts to be in the position shown in full lines in Fig. 2 and it be desired to adjust the jaws to a pipe to be turned, assuming the pipe to be of a greater diameter than the distance between the two jaws, the free end of the lever is depressed, and this movement unlocks its teeth from the teeth of the handle-bar and forces the forward end of its spring into engagement with the sliding jaw, and thus rocks the sliding jaw to parallel its gripping-face with that of the fixed jaw, so that in adjusting the sliding frame the pivoted jaw may be engaged with the greatest diameter of the pipe to be turned, and thus a true adjustment of the jaws with said pipe be effected. Upon releasing the free end of the lever the bow-spring will exert its energy to rock the sliding jaw to the position shown in full lines in Fig. 2. This is essential in order that the operator may get a fresh hold upon the pipe in the act of turning it. A wrench thus constructed may be used not only in connection with a pipe, but also with a nut, owing to the fact that when the sliding frame, with its sliding jaw, is moved up into engagement with the nut and the nut is clamped between the same the faces of the jaws will be parallel and will be held in that position when the nut is clamped.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of the invention will be readily understood without requiring an extended explanation.

Various changes in the form, proportion, and details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

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

In a wrench, the combination with a handle-bar having ratchet-teeth and provided with a fixed jaw, of a sliding frame mounted to slide upon said handle, a jaw having a shank pivoted in said sliding frame, a spring exerting pressure upon said jaw to throw its face at an angle to the face of the fixed jaw, a lever pivoted to the sliding frame and provided with a straight spring which engages the rear side of the jaw, said spring serving the double function of paralleling the operative face of the movable jaw with the operative face of the fixed jaw when said lever is depressed, and when said lever is released, said spring acting to lock said lever in engagement with the ratchet-teeth and hold the sliding frame in locked adjustment thereto, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ANDREW L. SLATER.

Witnesses:
C. H. SMITH,
JOHN COLLINS.