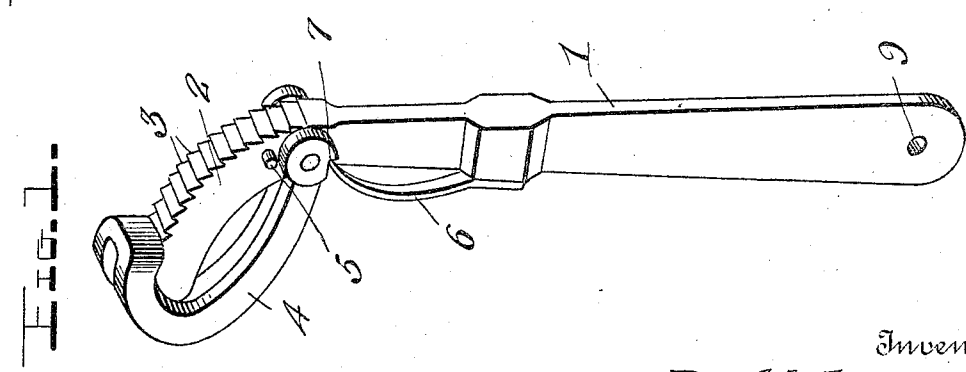
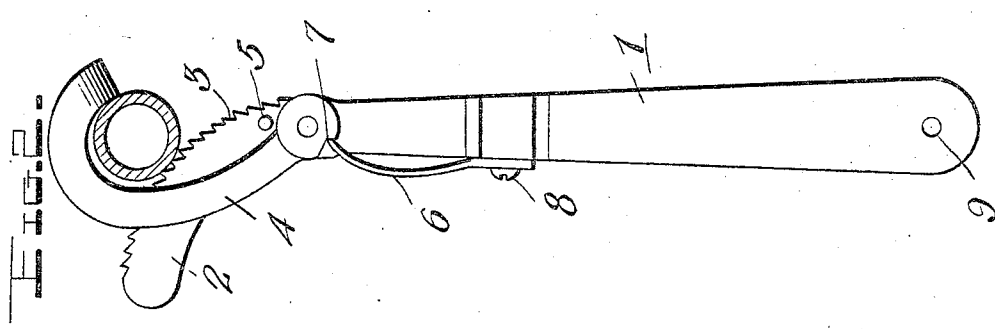
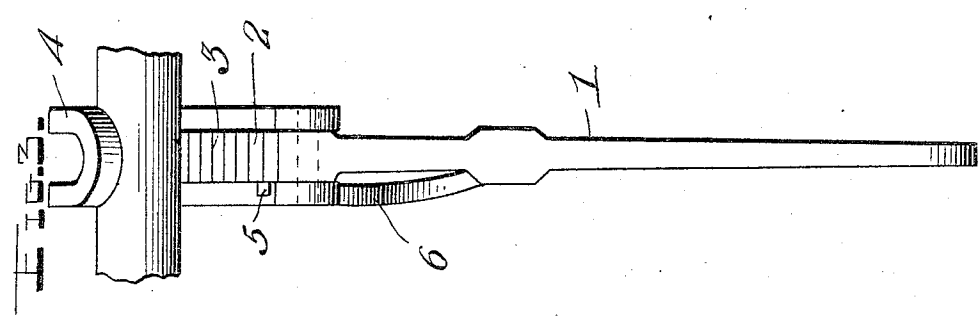
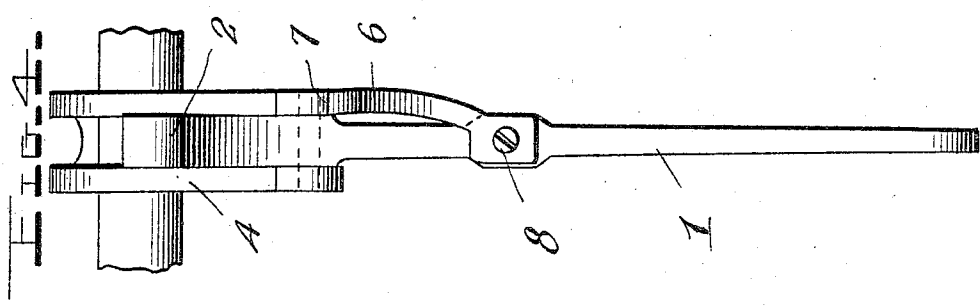


R. H. ANDERSON.
 SELF ADJUSTING WRENCH.
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942,992.

Patented Dec. 14, 1909.



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UNITED STATES PATENT OFFICE.

ROY H. ANDERSON, OF WATERTOWN, SOUTH DAKOTA.

SELF-ADJUSTING WRENCH.

942,992.

Specification of Letters Patent.

Patented Dec. 14, 1909.

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To all whom it may concern:

Be it known that I, ROY H. ANDERSON, a citizen of the United States, residing at Watertown, in the county of Codington and State of South Dakota, have invented certain new and useful Improvements in Self-Adjusting 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.

This invention relates to improvements in self adjusting pipe wrenches.

The object of the invention is to provide a pipe wrench which will automatically adjust itself to the size of the pipe or other object to which it is applied and which is so constructed that the greater the force applied for operating the same, the tighter the jaws will grip the object.

A further object is to provide a wrench of this character which will be simple, strong, durable and inexpensive in construction, efficient in operation and which will not crush a pipe when engaged therewith.

With the foregoing and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of a wrench constructed in accordance with the invention; Fig. 2 is a side view of the wrench showing the jaws in operative position in engagement with a pipe; Fig. 3 is a front edge view; and Fig. 4 is a rear edge view of the same.

Referring more particularly to the drawings, 1 denotes the handle of the wrench, the outer end of which is curved rearwardly to form the stationary jaw 2 of the wrench. The upper or forward edge of the jaw 2 is serrated or provided with gripping teeth 3.

Pivotaly secured to the jaw 2 adjacent to its juncture with the handle 1 is a loop-shaped movable jaw 4, the shaft or pivot rod of which preferably passes through the stationary jaw 2. The outer end of the pivoted jaw 4 engages the outer end of the jaw 2 when in an inoperative position. When in an operative position, the stationary jaw works between the side pieces of the movable jaw as the latter is swung forwardly to an operative position for engagement with

the pipe or object to be turned, as is clearly shown in Fig. 2 of the drawings. On one side of the stationary jaw 2, adjacent to the pivotal connection of the jaw 4, is a stop pin or lug 5, which is provided to limit the forward movement of the movable jaw 4, thus avoiding the possibility of the movable jaw, being swung too far for the proper engagement with the object to be turned.

Secured to the rear edge of the handle 1, below the pivotal connection of the jaw 4, is a jaw retracting spring 6, the outer end of which is in engagement with a notch 7 formed in the rear edge of the jaw eccentric to its pivotal connection with the stationary jaw whereby the pressure of the spring is exerted to bring the movable jaw to an inoperative position or to automatically engage the same with objects of different sizes. The spring 6 may be secured to the handle in any suitable manner, but is here shown and is preferably secured by means of a clamping screw 8. In the inner end of the handle is preferably formed a hole 9, by means of which the wrench may be hung up when not in use.

In the operation of the wrench, the movable jaw 4 is swung forwardly so that the loop-shaped curved outer end of the same projects beyond the toothed edge of the stationary jaw, after which said hooked end of the jaw is engaged with the object to be turned and the spring 6 permitted to retract the jaw 4 and thus draw the jaws together into operative engagement with the object. After the wrench has been thus engaged with the object, pressure is applied to the handle in the proper direction to turn the object. It will be noted that when the jaws are thus engaged with the pipe or object that the greater the pressure applied to the handle, the tighter the jaws are gripped or engaged with the object, thus preventing the slipping of the wrench. In forming the stationary jaw 2 with the curved working edge, the pipe or object is gripped tangentially thereby preventing or obviating the danger of crushing the pipe.

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

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the prin-

ciple or sacrificing any of the advantages of the invention, as defined in the appended claims.

Having thus described my invention, what I claim is:

1. In a wrench of the character described, a handle, a curved stationary jaw formed on the outer end of said handle, a movable jaw consisting of a bar bent centrally upon itself to form parallel spaced members curved longitudinally, and a transverse gripping bite, connecting said members, said members straddling the stationary jaw and pivoted thereto with the bite adapted to engage the outer end of the stationary jaw to limit the movement of the movable jaw in one direction.

2. In a wrench of the character described, a handle, a curved stationary jaw formed on the outer end of said handle, a movable jaw consisting of a bar bent centrally upon itself to form parallel spaced members

curved longitudinally, a transverse gripping bite, connecting said members, said members straddling the stationary jaw and pivoted thereto with the bite adapted to engage the outer end of the stationary jaw to limit the movement of the movable jaw in one direction, the pivotal end of one of said members having a shoulder forming notch, a spring carried by the handle and bent laterally to engage the shoulder formed by said notch, whereby the movable jaw is normally retracted, and a pinion on the stationary jaw to limit the movable jaw in the opposite direction.

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

ROY H. ANDERSON.

Witnesses:

C. K. SNYDER,
E. H. DUCKER.