W. L. BESSOLO.

PIPE WRENCH.

APPLICATION FILED NOV. 17, 1910. RENEWED SEPT. 7, 1911.

1,008,939. Patented Nov. 14, 1911.

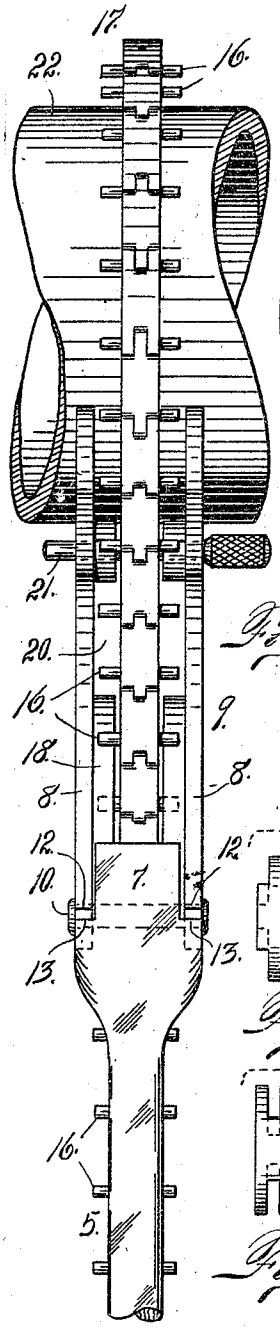

Fig. 2.

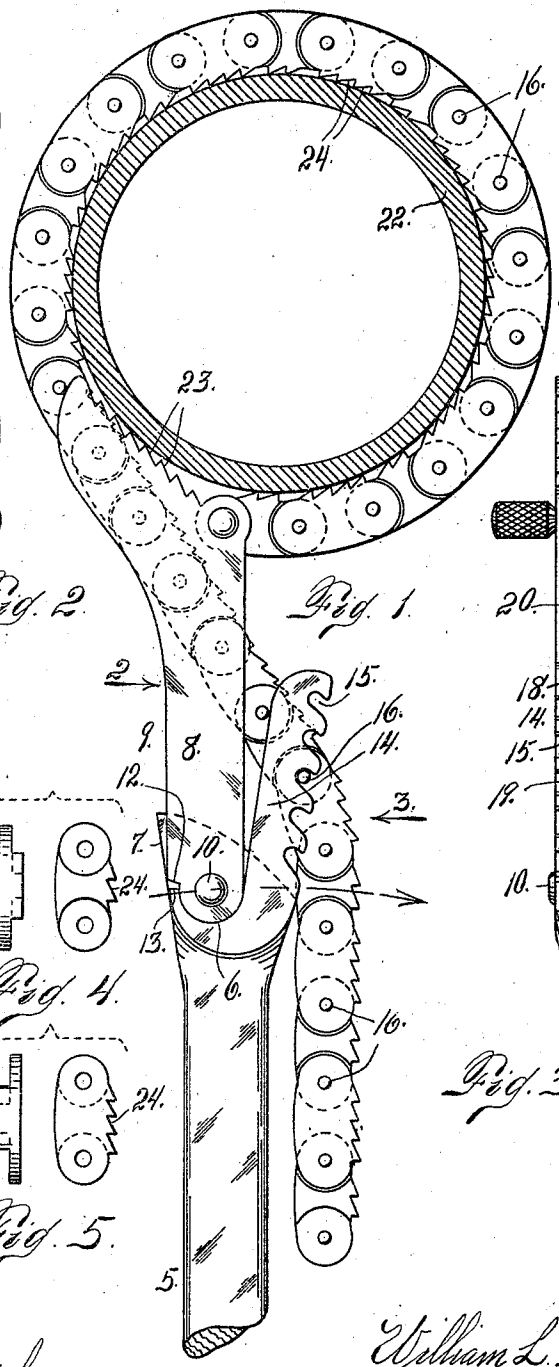

Fig. 1.

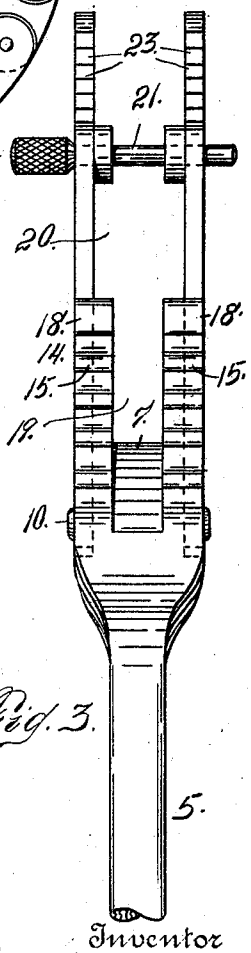

Fig. 3.

Fig. 4.

Fig. 5.

Witnesses

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PIPE-WRENCH.

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To all whom it may concern:

Be it known that I, WILLIAM LOUIS BESSOLO, a citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Pipe-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, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in pipe wrenches, my object being to provide a device of this class which shall be simple in construction, economical in cost, reliable, durable and efficient in use, and to this end the invention consists of the features hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawing, in which is illustrated an embodiment thereof.

In this drawing: Figure 1 is a side elevation of my improved wrench applied to a pipe, which is shown in cross section. Fig. 2 is a view taken at right angles to Fig. 1, in the direction of arrow 2 in said figure. Fig. 3 is a view looking in the direction of arrow 3, Fig. 1, with the chain or flexible gripping member removed. Fig. 4 shows two views of one of the links of the flexible member. Fig. 5 is a similar view of a companion link.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the handle of the wrench which is provided with a socket 6 having a centrally located projection 7 on opposite sides of which are pivotally secured members 8 forming a rocking or oscillating jaw 9. These members 8 are connected with the handle by means of a rivet pin 10. Each member 8 of this oscillating jaw is provided with a shoulder 12 adapted to engage a shoulder 13 formed on the handle and constituting a stop to the swinging or oscillating movement of the jaw 9 in one direction; while the movement of the said jaw in the opposite direction is limited by a forwardly projecting part 14 formed integral with the body of the handle, but projecting beyond the socket 6 and provided with recesses 15 formed on its outer edge and adapted to receive pins 16 constituting the pivots which connect the links composing the flexible member 17 of the wrench. These pivot pins project beyond the links in both directions. The projection 14 of the handle is bifurcated to allow the flexible gripping member to pass between its parts 18, the space 19 between the parts 18 being of sufficient width to allow the links to enter, the parts 18 being formed relatively thick in order to give the device the necessary strength for a tool of this character. The members 8 of the oscillating jaw 9 are separated by a space 20 of sufficient width to allow the links and their protruding pivot pin 16 to pass freely therethrough.

The gripping chain or flexible member 17 of the wrench has one extremity thereof connected with the jaw 9 by a removable pivot pin 21, and when the device is in use the chain is passed around the pipe 22 and passed thence between the members 8 of the jaw 9, the pivot pin of one of its links being finally inserted in one of the notches 15 of the handle projection 14, the chain being so adjusted that when the handle is moved upon its pivot pin 10 in one direction the flexible gripping member is tightened upon the pipe for the purpose of either turning the same or holding it against turning as may be desired, while when the handle is moved in the opposite direction the flexible member will be loosened upon the pipe and moved thereon if desired, for the purpose of getting a new hold for the advantageous manipulation of the wrench. The forward face of the jaw 9 is toothed as shown at 23 and projects forwardly beyond the pivot 21. This toothed face of the jaw 9 coöperates with the flexible gripping member, whose links are also toothed on their inner edges as shown at 24.

When the wrench is in use, if it is assumed that its jaw members are applied to a pipe 22 as illustrated in the drawing, these gripping members are tightened upon the pipe by a movement of the handle toward the right on the pivot pin 10, this movement being in the direction of the arrow in Fig. 1. Now in order to loosen the tool upon the pipe for the purpose of moving the gripping members thereon, to get a new hold, so to speak, the handle is moved on the pivot pin 10 in the direction opposite the arrow in Fig. 1, in which event it is evident the flexible member will be loosened sufficiently

for the purpose. The pivot pin 21 connecting the flexible member with the oscillating jaw 9, is made removable for the purpose of readily attaching and detaching the flexible member. Or after one of the pins 14 has been inserted in a notch or recess 15 of the handle part 14, if we assume that the connection between the pin 21 and the chain is not made, the end of the chain to be connected with the jaw 9 by the pin 21, may be thrown over the pipe and connected with the jaw 9 by inserting the pin. This method of applying the wrench to the pipe may be employed if desired, instead of disengaging the flexible member from its recess 15 of the handle extension.

Attention is called to the fact that the links of the flexible member 17 are toothed on their inner edges as shown at 24, to facilitate their holding or gripping action.

Having thus described my invention, what I claim is:

1. A pipe wrench comprising a handle, a jaw pivotally connected therewith to permit a limited oscillating movement of either member, the handle member having a shoulder to limit its movement in relation to the jaw in one direction, and a forward projection protruding above the pivot of the jaw to limit its movement in the opposite direction, and a flexible member connected with the jaw member and coöperating therewith, the flexible member having pins adapted to enter recesses formed in the forward projection of the handle member, substantially as described.

2. A wrench comprising a handle, a jaw pivotally connected therewith to permit a limited oscillating movement of either the handle or the jaw in relation to the other part, and a flexible member composed of a chain whose links are toothed on their inner surfaces to engage the pipe acted upon, the jaw member being bifurcated to allow the chain to pass between its parts, and the handle member having a forward bifurcated projection extending above the pivot of the jaw to limit its movement in that direction and spaced to receive the links of the flexible member, the latter being equipped with protruding pins adapted to engage recesses formed in the handle extension, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM LOUIS BESSOLO.

Witnesses:
T. E. Bowen,
A. Ebert O'Brien.