April 8, 1930. C. DE W. WAGNER 1,753,224

WRENCH

Filed May 31, 1929

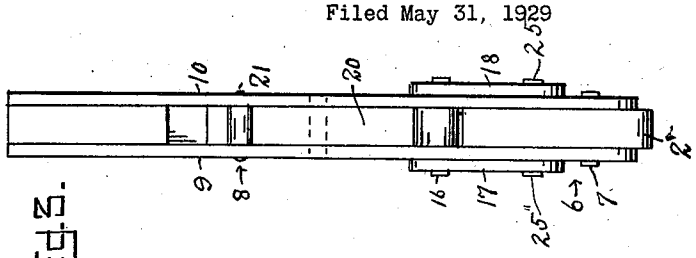


Fig. 3.

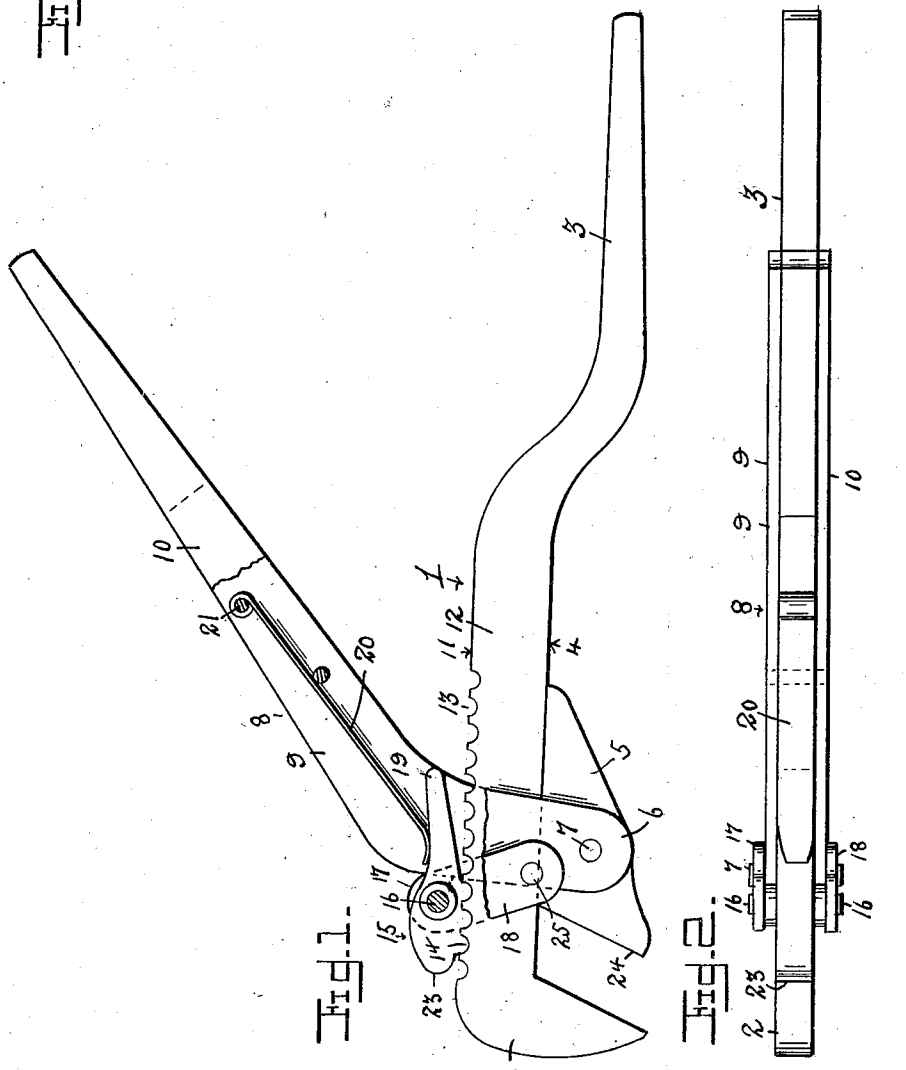


Fig. 1.

Fig. 2.

Inventor

Clinton DeWitt Wagner

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UNITED STATES PATENT OFFICE

CLINTON DE WITT WAGNER, OF CEDAR RAPIDS, IOWA

WRENCH

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This invention relates to improvements in wrenches and has for its object to provide a self-setting wrench.

Another object of the invention is to provide a wrench having a lever control for a slide jaw.

With the above and such other objects in view as may hereinafter more fully appear, I have invented the device shown in the accompanying drawings in which:

Figure 1 is a side elevational view of my improved wrench partly in section.

Figure 2 is a top plan view thereof.

Figure 3 is an end elevation.

Like reference characters indicate like parts throughout the following specification, and in the several views in the drawings in which 1 indicates a shank terminating at one end in a fixed jaw 2, and terminating at the other end in a downwardly offset handle 3. The shank 1, has a flat surface 4, upon which a slidable jaw 5 is movable by means of the offset lever end 6, (pivoted at 7 to the jaw 5), of the lever handle 8, said handle being formed of opposing members 9 and 10 which straddle the member 1 whereby the member 8 is slidable upon said shank 1. The upper surface 11 of the body portion 12 of the member 1, is provided with a rack 13 the teeth of which are adapted to engage with the teeth 14 of the sinuously formed lock member 15 pivoted at 16 between the links 17 and 18, said member 15 having a terminal 19 upon which a leaf spring 20, secured to the pin 21 seats, said spring held normally down against the end 16 by means of a pin.

Following is a description of how the wrench is operated: Refer to Figure 1. When the handle or lever 8 is in position, as shown, the pivoted bearings 7, 25 and 16 are in line or nearly so. Now lower member 8 until 7, 25 and 16 are at right angles to the shank 1. The members 7, 25 and 16 must still be in a straight line or nearly so. Member 5 must be against member 4 always. In this position the spring holds the tail 19 down so that only the rear tooth of member 15 engages the teeth 13. The teeth of the front end of member 15 stand away from the teeth 13. Now, if you put finger at 23, and press down and back to keep members 7, 25 and 16 in line and press down far enough so that the rear teeth are disengaged but the front teeth are not engaged or, in other words, so that the teeth 13 and 14 are parallel; member 5, still being against member 4. It will be seen that there is a little space between the teeth of 15, and the teeth 13. The distance between the members 7 and 16 should be such that when the members 7, 25 and 16 are in line and at right angle to shank 1, and member 5 is against the member 4, and teeth 14 are parallel with teeth 13, there will be a little open space between the teeth 13 and 14, which allows the slidable jaw to be moved back and forth. When the lever 8 is lowered it has a tendency to get members 7, 25 and 16 out of line. In order to expedite matters after lever 8 is raised, as shown in Figure 1, put finger on 23, and lower lever and at the same time press down at 23, and back at the same time. This will keep the three bearings in line and at the same time will disengage the teeth when the three bearings are at right angles to the shank 1.

Upon removing the hand from said head 23 the said teeth 13 and 14 interlock whereby the jaws are brought into adjusted relative position, then, by pressing down upon the member 8 the head 24 of the jaw 5 will be moved toward the jaw 2, and against the intervening nut or pipe. The greater the pressure upon the handle 8 the tighter the jaws will lock upon the member being engaged.

Having described my invention that which I claim to be new and desire to procure by Letters Patent is:

1. A wrench of the character described comprising a shank having a fixed jaw, a lever handle having an angular bifurcated portion straddling the first shank, a slidable jaw pivoted between the bifurcated portion of said lever and a fulcrum in line of said shank to which said lever is pivoted, links connected to said fulcrum, and carrying adjusting means for said slidable jaw.

2. A wrench of the character described comprising a shank having a fixed jaw, a lever handle having an angular bifurcated portion straddling the first shank, a slidable

jaw pivoted between the bifurcated portion of said lever and a fulcrum in line of said shank to which said lever is pivoted, links connected to said fulcrum, and carrying adjusting means for said slidable jaw, said means comprising a toothed dog, said shank having teeth upon one edge engageable by the teeth of said dog.

3. The combination as set forth in claim 2, said dog being pivoted to said links.

4. The combination as set forth in claim 2, said dog being pivoted to said links, said fulcrum and dog pivots being in substantial alinement.

5. The combination as set forth in claim 2, said dog being pivoted to said links, said fulcrum and dog pivots being in substantial alinement, said dog having a spring pressed lever.

6. The combination as set forth in claim 2, said dog being pivoted to said links, said fulcrum and dog pivots being in substantial alinement, said pivots and fulcrum adapted to be brought to a right angular alinement relative to said shank.

In testimony whereof I affix my signature.

CLINTON DE WITT WAGNER.