

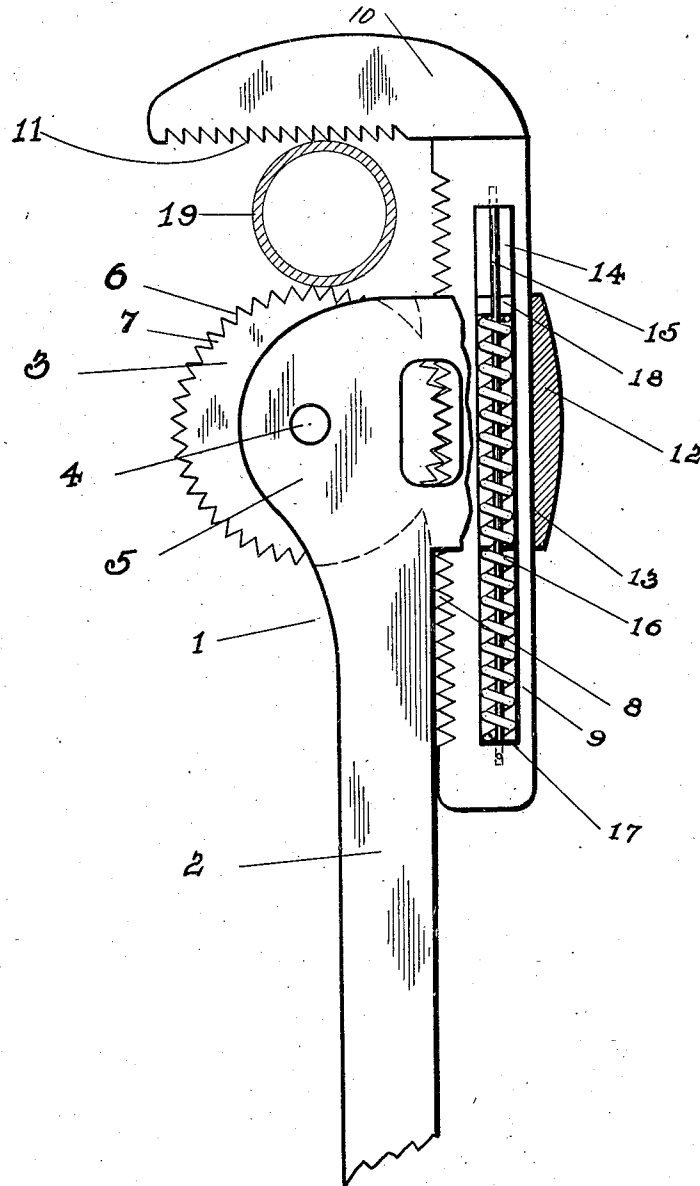
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J. E. CONWAY

PIPE WRENCH

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By

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UNITED STATES PATENT OFFICE.

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PIPE WRENCH.

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

Another object of the invention is to provide a pipe wrench having a spring controlled jaw member.

A still further object of the invention is to provide a pipe wrench having a pivoted wheel jaw.

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

The figure is a sectional elevational view of my improved wrench.

Like reference characters indicate like parts throughout the following specification and in the several views in the drawings in which 1 indicates a wrench having an operating shank 2 with a movable wheel jaw 3 pivoted at 4 to the body portion or cross head 5 of said shank. The jaw 3 has a toothed or cogged periphery 6 the teeth 7 of which are geared with the teeth 8 of the short shank 9 of the jaw 10 integral therewith, which jaw is provided with a toothed surface 11. The body portion 5 has an extension 12 with a passage 13 through which the shank 9 operates. The shank 9 has a longitudinal slot 14 therein in which is mounted a rod 15 around which is coiled a spring 16 one end of which abuts the end 17 of said slot 14 and the other end of which engages the wall 18 of the extension 9, said spring normally forcing the jaws 3 and 10 toward one another.

In operating the wrench the shank 9 is shoved outwardly by the operator so that the pipe or other article 19 may be engaged between said jaws 3 and 10 after which said shank is released and the shank handle 2 pressed downwardly which operation causes the teeth 11 to grip the member 19 and force said member against the teeth 7 of the jaw 3, which action causes the rotation of the jaw 3 the teeth of which in turn operate the teeth 8 of the shank 9 drawing the jaws together to tightly bind the member 19. The greater the pressure upon the wrench, the tighter the jaws grip the member 19 through said operation.

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 consisting of a fixed jaw and a movable jaw, an operating shank upon which said last jaw

is rotatably mounted, a short shank upon which the first jaw is fixed, said last shank having a rack, said movable jaw having a toothed periphery for cooperation with the rack, said short shank having a slot and means therein for urging the jaws together.

2. A wrench of the character described consisting of a fixed jaw and a movable jaw, an operating shank upon which said last jaw is rotatably mounted, a short shank upon which the first jaw is fixed, said last shank having a rack, said movable jaw having a toothed periphery for cooperation with the rack, and means for normally forcing the jaws together, said means consisting of a spiral spring, said operating shank having a cross head at its inner end, said head having a passage in one side paralleling the first shank through which the second shank operates, the last shank having a longitudinal slot, and a rod around which said spring is coiled extending longitudinally of said slot.

3. As claim 2, and—said cross head having bearings in its other side, and a pin supported therein and forming an axis upon which the rotatable jaw is mounted.

4. A wrench of the character described consisting of a fixed jaw and a movable jaw, an operating shank upon which said last jaw is rotatably mounted, a short shank upon which the first jaw is fixed, said last shank having a rack, said movable jaw having a toothed periphery for cooperation with the rack, and means for normally forcing the jaws together, said means consisting of a spiral spring, said operating shank having a cross head at its inner end, said head having a passage in one side paralleling the first shank through which the second shank operates, the last shank having a longitudinal slot, and a rod around which said spring is coiled, extending longitudinally of said slot, said cross head having bearings in its other side, and a pin supported therein and forming an axis upon which the rotatable jaw is mounted, said last jaw being so formed that relative movement in one direction of a member between said jaws against said rotatable jaw, will cause the last jaw to operate upon said rack to force said jaws toward one another.

5. A wrench of the character described consisting of a fixed jaw and a movable jaw, an operating shank upon which said last jaw is rotatably mounted, a short shank upon which the first jaw is fixed, said last shank

having a rack, said movable jaw having a toothed periphery for cooperation with the rack, and means for normally forcing the jaws together, said means consisting of a spiral spring, said operating shank having a cross head at its inner end, said head having a passage in one side paralleling the first shank through which the second shank operates, the last shank having a longitudinal slot, and a rod around which said spring is coiled, extending longitudinally of said slot, said cross head having bearings in its other side, and a pin supported therein and forming an axis upon which the rotatable jaw is mounted, said last jaw being so formed that relative movement in one direction of a member between said jaws against said rotatable jaw will cause the last jaw to operate upon said rack to force said jaws toward one an-

other and similar movement in another will cause the jaws to separate. 20

6. A wrench of the character described consisting of a fixed jaw and a movable jaw, an operating shank upon which said last jaw is rotatably mounted, a short shank upon which the first jaw is fixed, said last shank having a rack, said movable jaw having a toothed periphery for cooperation with the rack, and means for normally forcing the jaws together, said short shank having a free end slidable against said operating shank by means of which thumb pressure of the hand holding the last shank will force the jaws apart. 25 30

In testimony whereof I affix my signature. 35

JOSEPH E. CONWAY.