(No Model.)

J. G. NEWELL.

PIPE WRENCH.

No. 605,901. Patented June 21, 1898.

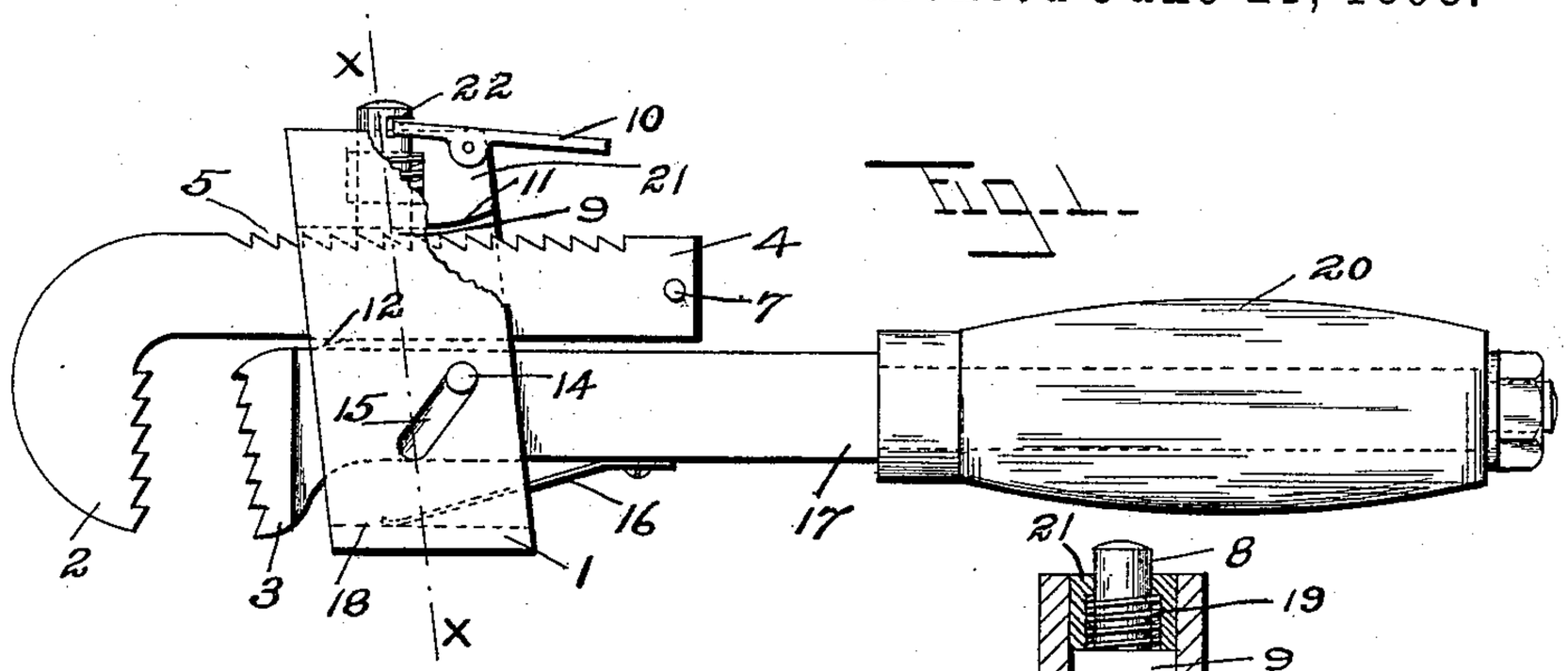

Fig. 1.

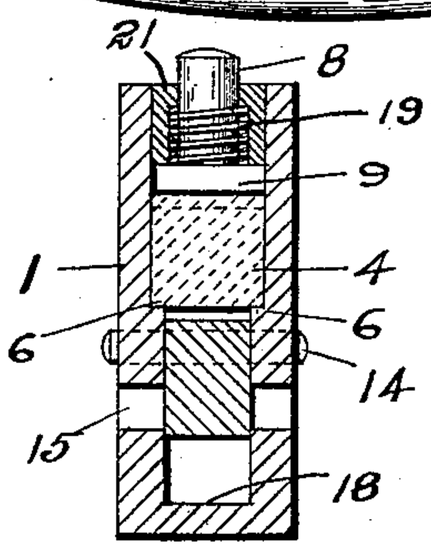

Fig. 3.

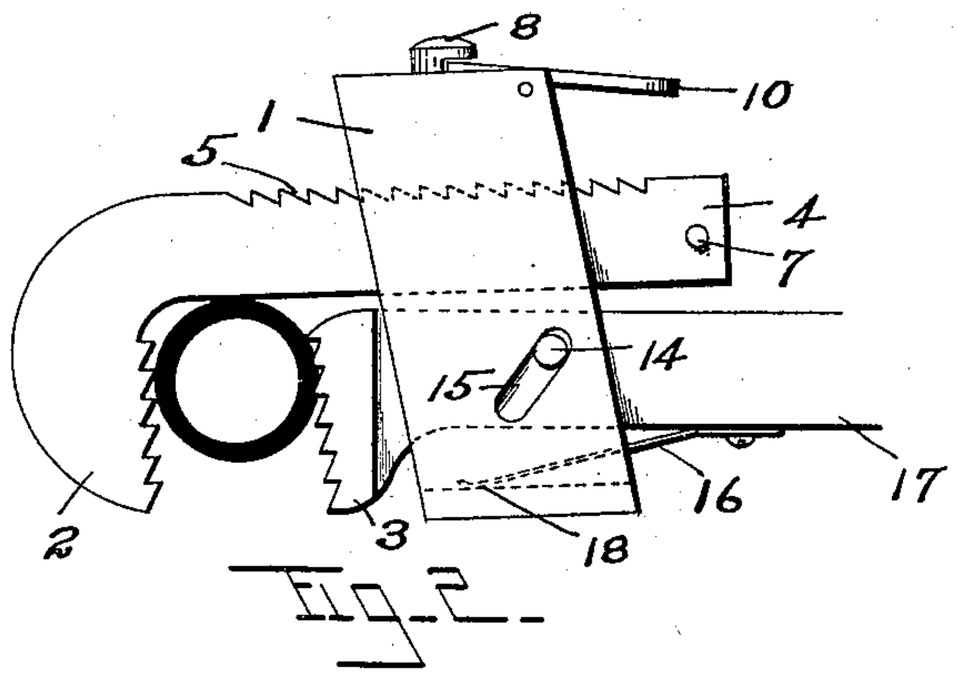

Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN G. NEWELL, OF NEW HAVEN, CONNECTICUT, ASSIGNOR OF ONE-HALF TO FREDERICK B. STREET AND CHARLES S. SCOVILLE, OF SAME PLACE.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 605,901, dated June 21, 1898.

Application filed April 5, 1897. Serial No. 630,756. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. NEWELL, a citizen of the United States, and a resident of New Haven, in the county of New Haven and State of Connecticut, have invented a certain new and useful Improvement in Pipe-Wrenches, of which the following is a specification.

The object of my invention is to produce a wrench which can be readily adjusted approximately by hand and more closely adjusted automatically when the gripping-teeth engage with the pipe or cylindrical rod.

In the drawings, Figure 1 is a side elevation of my improved wrench with a portion of the frame broken away. Fig. 2 is a side elevation of a part of the wrench when in operative position. Fig. 3 is a transverse section upon the line X X of Fig. 1.

The numeral 17 represents the handle member of the wrench, to which is secured by suitable means the wooden handle 20 and which terminates at its outer end in a toothed jaw 3.

Opposite to the jaw 3 is an adjustable jaw 2, also provided with suitable teeth and depending from the integral arm 4, provided with teeth 5 upon its outer side, which arm 4 is parallel with the handle member 17 and adjustably secured thereto by means of the frame or box 1.

The frame or box 1 surrounds the handle member 17 and the arm 4, the upper end being closed by the block 21, which is rigidly united to the sides thereof.

A pawl 8, whose stem passes through the block 21, is provided with two teeth 9 in its lower face to engage with the teeth 5 upon the arm 4. The coil-spring 19, which encircles the stem of said pawl 8, operates within a counterbore in the block 21 and retains the pawl 8 in constant normal engagement with the teeth 5.

A finger-lever 10 is pivotally secured to the frame or box 1, and one end of said lever operates in the slot 22 in the stem of the pawl 8, while the other end, which projects from the frame 1, is adapted to be operated by the thumb.

The arm 4 is independent of the handle member 17 within the box or frame 1, the said arm resting upon suitable seats 6 6 upon either side of the box or frame 1, and the said seats at 12 and the block 21 at 11 are cut away or rounded, so as to allow the arm 4 to tilt somewhat within the frame.

The pin 7, driven through the arm 4, prevents it from being pulled out of the frame 1.

The pin 14 is rigidly secured to the handle member 17 and extends laterally from each side thereof through the slot 15 in each side of the frame or box 1, and the spring 16, secured to said handle member 17 and resting against the bottom 18 of said box or frame 1, holds said pin 14 when at rest in its normal position firmly pressed against the opposite end of said slot 15.

The jaws 2 and 3 are so shaped that the space between the outer ends of the jaws is wider than the back or closed ends, enabling the wrench to be more accurately adjusted to the pipe.

The wrench is operated as follows: The outer end of the lever 10 is depressed by the thumb, raising the pawl 8 from engagement with the teeth upon the arm of the adjustable jaw 2. The jaw being now free is adjusted longitudinally to the diameter of the pipe. The lever is now released and the pawl engages with the teeth again and holds the jaw in a locked position, when the operator by grasping the handle 20 is enabled to secure a grip upon the pipe. If the adjustment is not sufficiently close, the arm 4 of the jaw 2 will tilt somewhat within the frame 1 and thus bring the two jaws more evenly against the pipe, and as the pressure is increased the pin 14 will move forward in the slot 15, thus allowing the jaw 2 to move forward and grip the pipe more tightly, and as said pin 14 is free to move in said slot the tightness of the grip upon the pipe will increase with the pressure exerted upon the handle of the wrench. Said slot 15 should be cut in the sides of the frame in a diagonal direction and so that the pin 14, with the jaw 2, may move downward and forward as pressure is exerted on the handle.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a pipe-wrench, the combination of a handle member having an integral toothed jaw upon its outer end, an adjustable jaw provided with an integral arm, a frame or

box surrounding the handle member and said arm, a filling-block rigidly secured to the sides of the said frame or box, a pawl having a vertical motion within said block, a lever pivotally secured to said block, one end of which engages with said pawl, a pin rigidly secured to said handle member and operating in a slot within the sides of said box or frame, a spring secured to said handle member and bearing on said frame or box so as to keep it in an upright position, substantially as described.

2. In a pipe-wrench, the combination of the handle member 17, having the toothed jaw 3 upon its outer end, the jaw 2 and integral arm 4, having teeth upon its outer side, the frame or box 1 surrounding said handle member and said arm, and having a slot in either side in which the pin 14 is movable, a filling-block 21, pawl 8 operating in said block, a lever 10 secured to said block and engaging with said pawl, the spring 16 secured to said handle member and pressing against the bottom of said frame or box to keep the same in an upright position, substantially as described.

Signed at New Haven, in the county of New Haven and State of Connecticut, this 3d day of April, A. D. 1897.

JOHN G. NEWELL.

Witnesses:
S. E. MERRIAM,
WARD CHURCH.