No. 714,364. Patented Nov. 25, 1902.

J. R. COGAN.

AUTOMATIC GRIP WRENCH.

(Application filed Mar. 5, 1902.)

(No Model.)

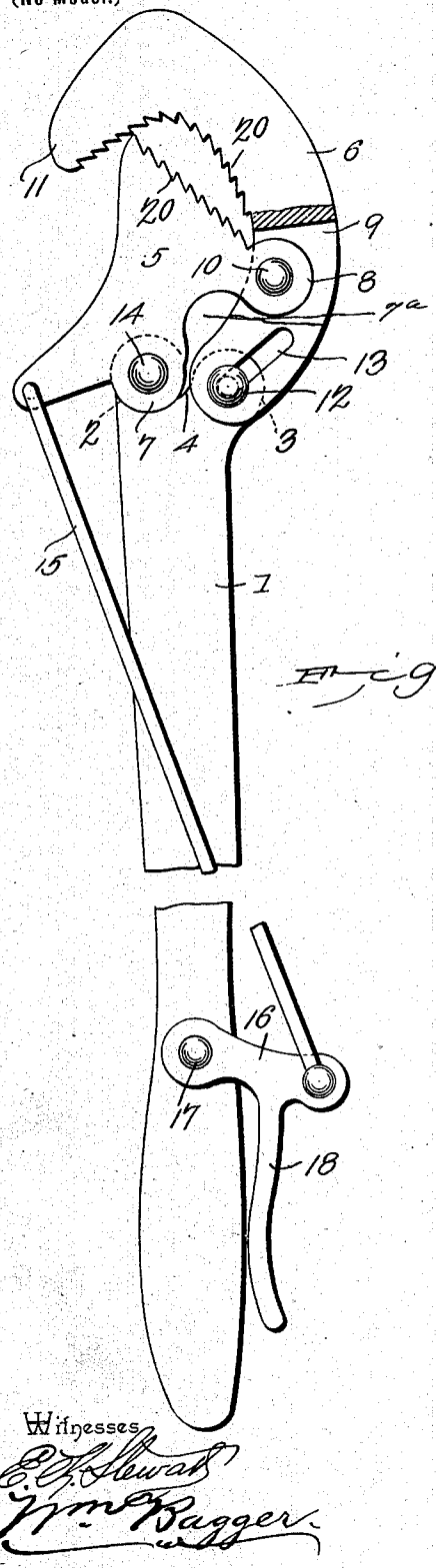

Fig. 1.

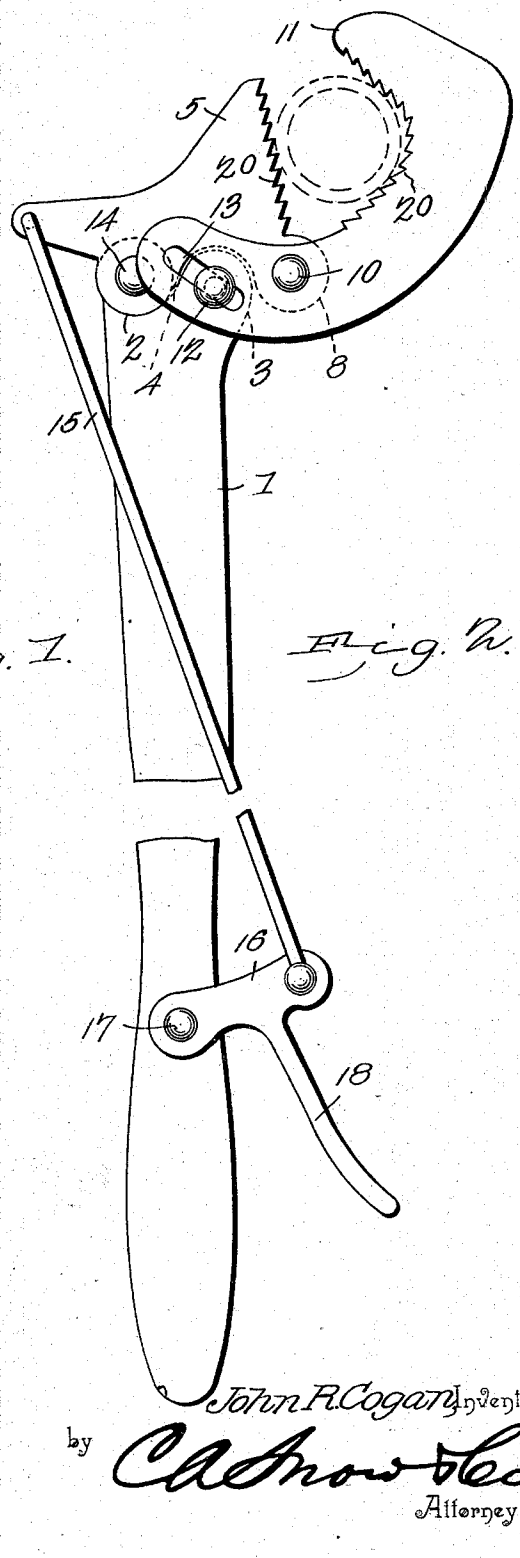

Fig. 2.

Witnesses
E. P. Stewart
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UNITED STATES PATENT OFFICE.

JOHN R. COGAN, OF NEW HAGERSTOWN, OHIO, ASSIGNOR OF ONE-HALF TO WILLIAM E. McCARTY, OF CARNEGIE, PENNSYLVANIA.

AUTOMATIC GRIP-WRENCH.

SPECIFICATION forming part of Letters Patent No. 714,364, dated November 25, 1902.

Application filed March 5, 1902. Serial No. 96,805. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. COGAN, a citizen of the United States, residing at New Hagerstown, in the county of Carroll and State of Ohio, have invented a new and useful Automatic Grip-Wrench, of which the following is a specification.

This invention relates to wrenches, and more especially to that class of wrenches which are used more particularly to operate upon pipes; and it has for its object to provide a device of this class which shall be simple in construction, easily operated, and which may be caused automatically to exert an intense grip upon the pipe which is being operated upon.

With these and other ends in view the invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view showing my improved wrench closed. Fig. 2 is a side view of the wrench, showing the jaws open and adjusted upon a section of pipe.

Corresponding parts in both figures are indicated by similar numerals of reference.

1 designates the handle of my improved wrench, which is composed, mainly, of a straight bar slightly bifurcated at its outer end, so as to form a pair of rounded lugs 2 3, divided by the indentation 4.

5 and 6 designate the jaws of the wrench. The jaw 5 consists of a plate, approximately triangular in shape, and having lugs 7 and 8, between which is a rounded indentation 7^a, corresponding with the lug 3 of the handle. The lug 7, which is disposed intermediate the corners at one side of the approximately triangular plate, is connected pivotally with the lug 2 of the handle-bar. The lug 8 engages the recess 9 in the inner edge of the jaw 6 and is pivotally secured in said recess by means of a pin 10. The jaw 6 is curved through the greater portion of its length and is provided at its outer end with a hook-shaped extension 11. The inner end of said jaw having the aforesaid recess 9 engages the lug 3 of the handle-bar and is connected with said lug by means of a headed pin 12, loosely engaging a slot 13 in the jaw member 6. It will thus be seen that the jaw members 5 and 6 are connected pivotally with each other by means of the pin 10. A pin 14 connects the jaw member 5 pivotally with the handle-bar, and the jaw member 6 has an independent sliding connection with the handle-bar by means of the pin 12 engaging the slot 13, which latter, as will be well understood, extends through the parts of the jaw member disposed on both sides of the recess 9.

The extended end of the approximately triangular plate 5 may be connected, by means of a rod 15, with one end of a lever 16, having pivotal connection at 17 with the handle-bar. The lever 16 has a handle 18, whereby it may be conveniently manipulated to separate the jaws 5 and 6 from each other. The adjacent faces of said jaws are preferably roughened or serrated, as will be seen at 20.

In operation the jaw members of my improved wrench are spread apart to receive the pipe that is to be operated upon. This spreading apart may be accomplished by manipulating the lever 16, so as to exert force in an outward direction upon the projecting end of the wrench member 5, which will be thus moved to a position approximating that shown in Fig. 2 of the drawings, the wrench member 6 being operated thereby through the pivotal connection 10, the inner end of said wrench member 6, having sliding connection with the handle-bar, being thus permitted to assume the open position with relation to the jaw 5. In this position the jaw or wrench member 5 is supported by the lug 3 of the handle engaging the rounded indentation 7^a in the said jaw member, as will be understood by reference to Fig. 2 of the drawings, the jaws or members of the wrench being thus supported stationary with relation to each other, and thus facilitating the adjustment and use of the wrench upon the pipe that is to be operated upon. The headed pin 12 may be said to act as a friction-roller to facilitate this adjustment of the wrench. When pressure is exerted in the proper direction upon the wrench-handle, the jaw members will grip and tighten upon the pipe-section inclosed be-

tween them, and it will be readily seen that the stronger the pressure that is brought to bear the tighter the grip will be upon the pipe.

The operating-rod 15 and related parts may be omitted when desired, inasmuch as the weight of the jaws will usually be sufficient to adjust them to the desired position by a simple "swing" or "throw" of the wrench-handle.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. A wrench comprising a handle member having a pair of lugs at its outer end, a jaw member approximately triangular in shape and having a pair of lugs separated by a recess conforming to one of the lugs of the handle member, a curved and hooked jaw member having a recessed and slotted end and connected pivotally and slidingly with the lug of the handle member conforming to the indentation of the triangular jaw member, a pivotal connection between the other lug of the handle member and one of the lugs of the triangular jaw member and a like pivotal connection between the other lug of said triangular jaw member and the curved and hooked jaw member.

2. In a wrench, the combination with a handle member having a pair of lugs at its outer end, of jaw members pivotally connected with said lugs, one of said jaw members being provided with a slot to admit of an auxiliary sliding movement, a pivotal connection between the two jaw members, and an indentation in the pivoted jaw member conforming to the lug with which the other jaw member is pivotally and slidingly connected.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN R. COGAN.

Witnesses:
J. R. SHISSLER,
F. B. SHISSLER.