

No. 661,374.

Patented Nov. 6, 1900.

J. P. LAVIGNE.

PIPE WRENCH.

(Application filed July 19, 1900.)

(No Model.)

Fig. 1

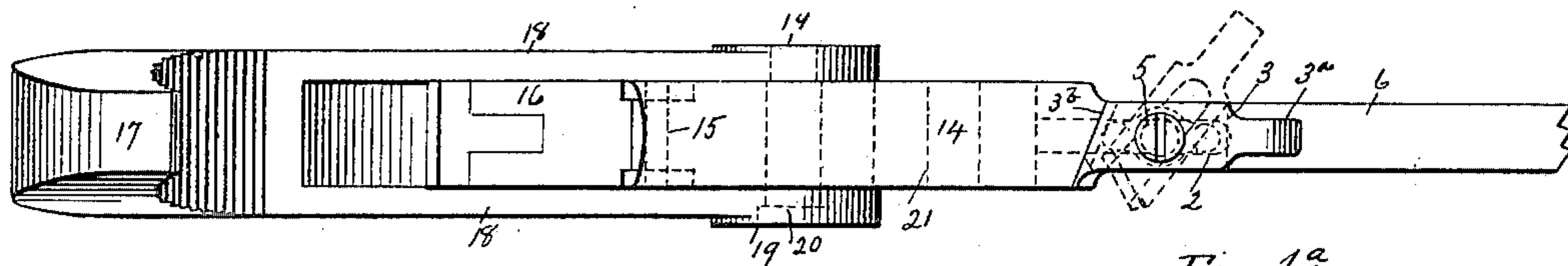


Fig. 1^a

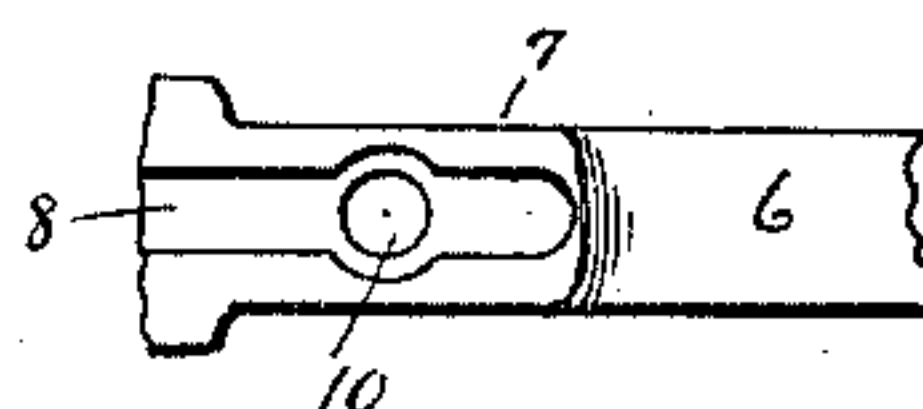


Fig. 2.

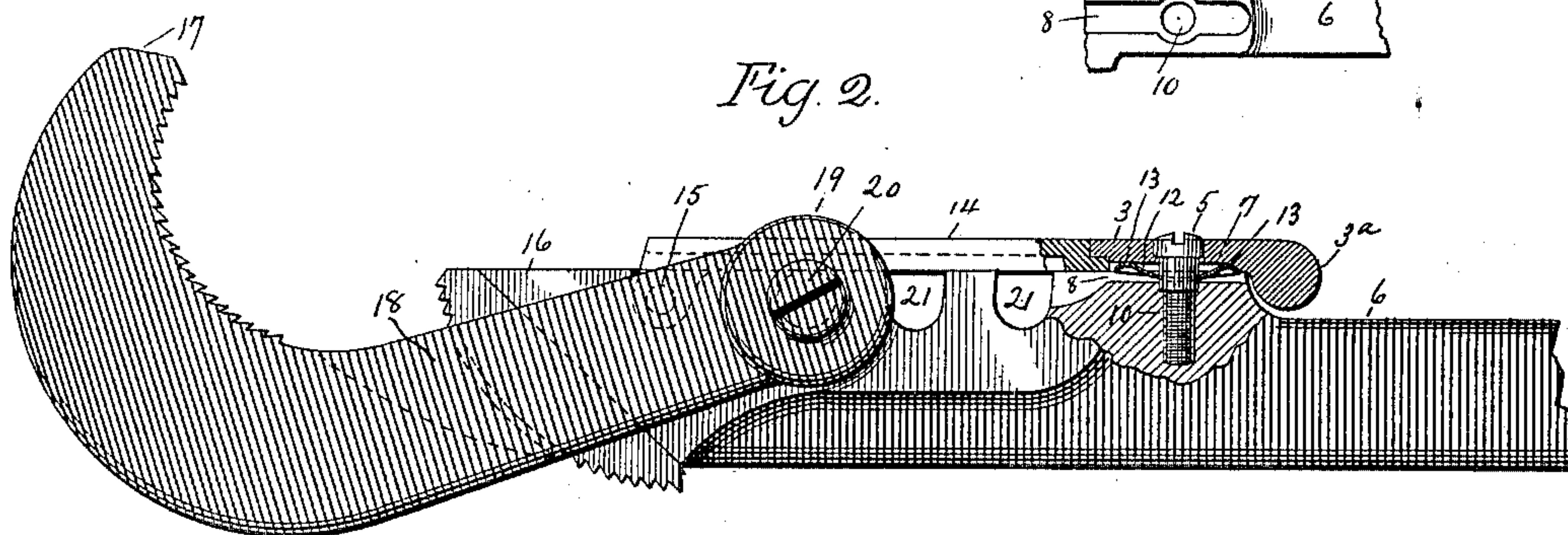


Fig. 3.

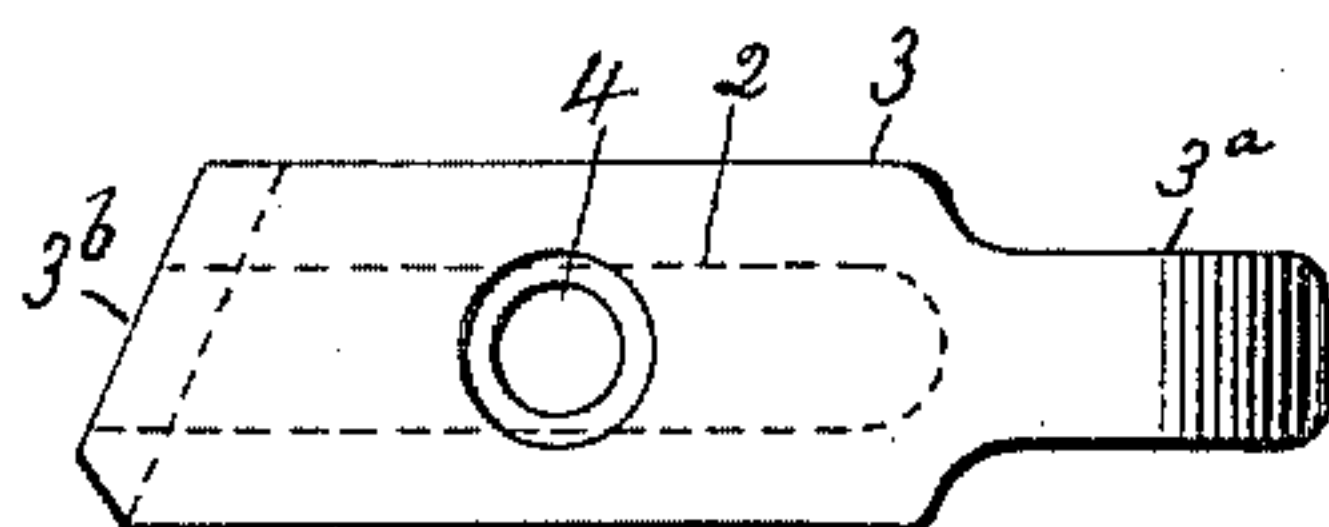


Fig. 4

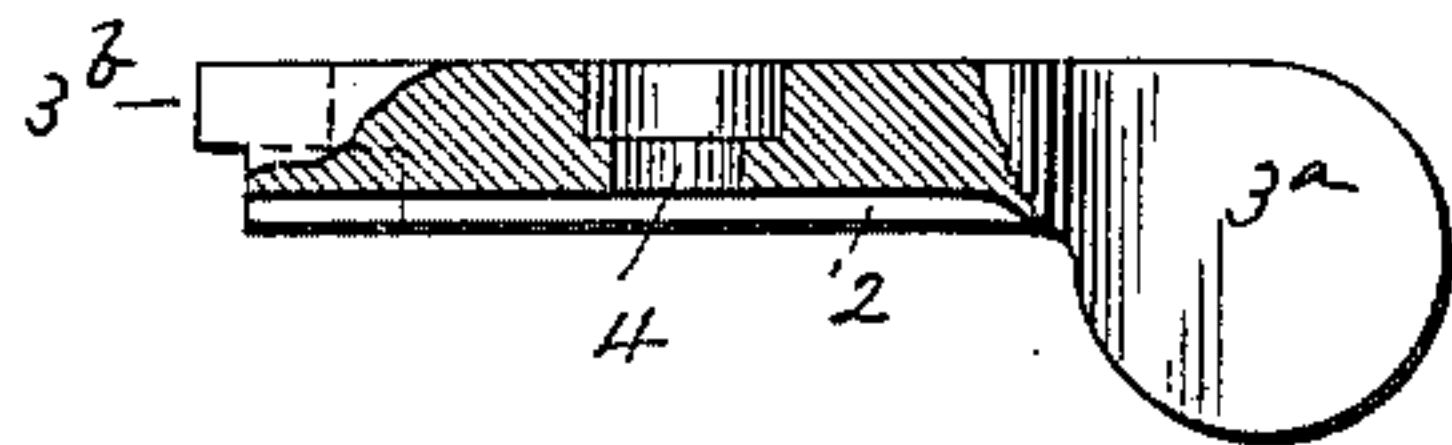


Fig. 5

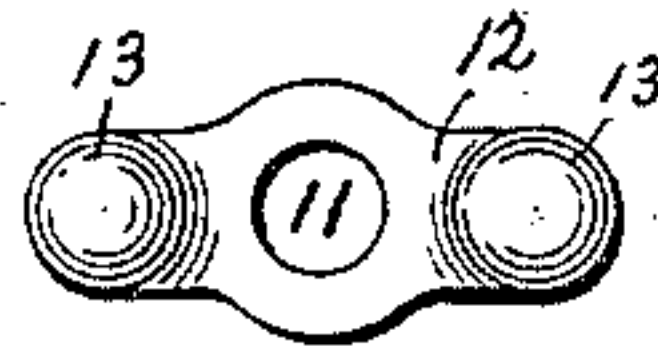


Fig. 6

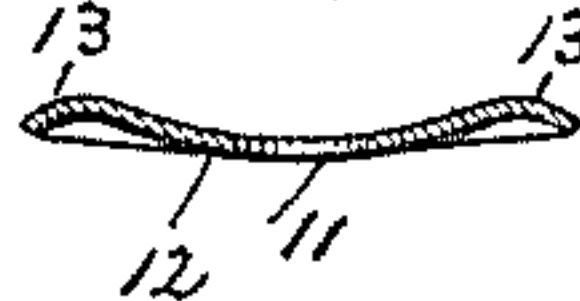


Fig. 7



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH P. LAVIGNE, OF NEW HAVEN, CONNECTICUT.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 661,374, dated November 6, 1900.

Application filed July 19, 1900. Serial No. 24,232. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH P. LAVIGNE, of New Haven, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Pipe-Wrenches; and I do hereby declare the following, when taken in connection with the accompanying drawings and the numerals of reference marked thereon, to be a full, clear, and exact description of
10 the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a broken plan view of a wrench containing my improvement; Fig. 1^a, a detached broken view of the handle of the
15 wrench, showing the groove formed therein for the reception of the locking-spring of the locking-lever; Fig. 2, a broken view of the wrench, partly in elevation and partly in vertical section; Fig. 3, a detached plan view of
20 the locking-lever; Fig. 4, a detached view thereof, partly in side elevation and partly in vertical section; Fig. 5, a detached plan view of the locking-spring; Fig. 6, a view thereof in vertical longitudinal section; Fig. 7, a detached
25 view, in side elevation, of the stud on which the locking-lever swings.

My invention relates to an improvement in pipe-wrenches, the object being to provide
30 simple and effective means for holding their locking-levers in place.

With this end in view my invention consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

35 In carrying out my invention as herein shown I form a narrow groove 2 in the center of the lower face of the locking-lever 3, the said groove intersecting and extending on opposite sides of the hole 4, formed in the lever for the reception of the screw-stud 5, upon
40 which it turns, and which is entered into the handle 6 of the wrench. At a point directly below the lever 5 the said handle is provided with a bearing 7, which is formed with a groove
45 8, corresponding to the groove 2 before mentioned, and having a central enlargement 9, concentric with the threaded opening 10, formed in the bearing for the reception of the screw 5 aforesaid. In the groove 8 and its
50 central enlargement 9 I locate a sheet-metal spring having a central opening 11, a body portion 12, and bosses 13 13, respectively lo-

cated at the ends of its body portion. In diameter the bosses 13 are just enough narrower than the width of the groove 2 to enter
55 the same and engage with the side walls of the groove for holding the locking-lever 3 in its normal or closed position, in which its groove 2 is in alinement with the groove 8 before mentioned. When, however, pressure
60 is applied to the finger-piece 3^a at the outer end of the lever, the side walls of the groove 2 therein will operate upon the rounded surfaces of the bosses 13 of the spring and crowd the same downward into the groove 8,
65 whereby the lever will be freed to swing so as to clear its beveled inner end 3^b from engagement with the correspondingly-formed outer end of the pivotal arm 14, the opposite
70 end of which is secured by a pivot 15 to the handle 6 at a point at or near the base of the fixed jaw 16, formed upon the said handle. The pivotal or swinging jaw 17 of the wrench has its shank divided to form two arms 18 18,
75 terminating in hubs 19 19, receiving a screw-stud 20, which has bearing in one of the three transversely-arranged grooves 21, formed in the handle 6, the stud 20 being held down in one of these grooves by means of the pivotal
80 arm 14, which in turn is held in its closed position by means of the locking-lever 3. It will be understood that by turning the said locking-lever to one side, as shown in Fig. 1,
85 the arm 14 may be lifted so as to permit the jaw 17 to be shifted for the introduction of its pivot 20 into any one of the three slots 21 formed in the handle, whereby the wrench is adjusted for use with pipes of different sizes. I do not, however, claim this pipe-wrench
90 broadly, but only my particular construction for effecting the holding of the locking-lever in its locked position.

Having fully described my invention, what I claim as new, and desire to secure by Letters
95 Patent, is—

1. In a pipe-wrench, the combination with a handle provided with two or more bearings and with a fixed jaw, of a pivotal jaw adapted to have its pivot shifted into one or the other
100 of said bearings, a pivotal arm for holding the pivot of the pivotal jaw in one of the said bearings, a locking-lever for holding the said arm in its locked position, and a spring co-acting with the said lever for holding it in

its locked position, the said lever and handle being grooved for the reception of the spring, which, when the lever is turned, is forced out of the groove in the lever into the groove of the handle.

2. In a pipe-wrench, the combination with a handle provided with two or more bearings and with a fixed jaw, of a pivotal jaw adapted to have its pivot shifted into one or the other of said bearings, a pivotal arm for holding the pivot of the pivotal jaw in one of the said bearings, a locking-lever for holding the said arm in its locked position, and a spring co-acting with the said lever for holding it in its locked position, the said lever and handle being grooved for the reception of the spring,

which, when the lever is turned, is forced out of the groove in the lever into the groove of the handle, and the said spring containing a central perforation, and provided with two bosses located at its respective ends and entering the groove in the lower face of the lever when the same is in its closed position, and being crowded into the groove in the handle when the lever is not in that position.

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

JOSEPH P. LAVIGNE.

Witnesses:

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