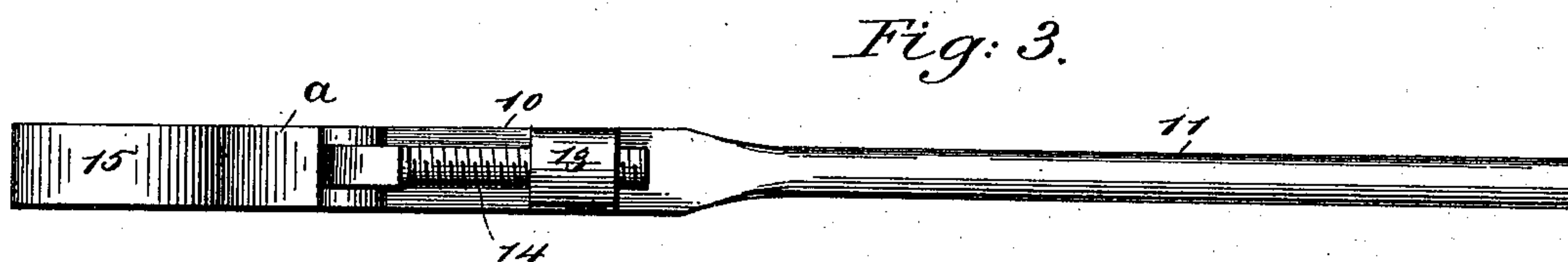
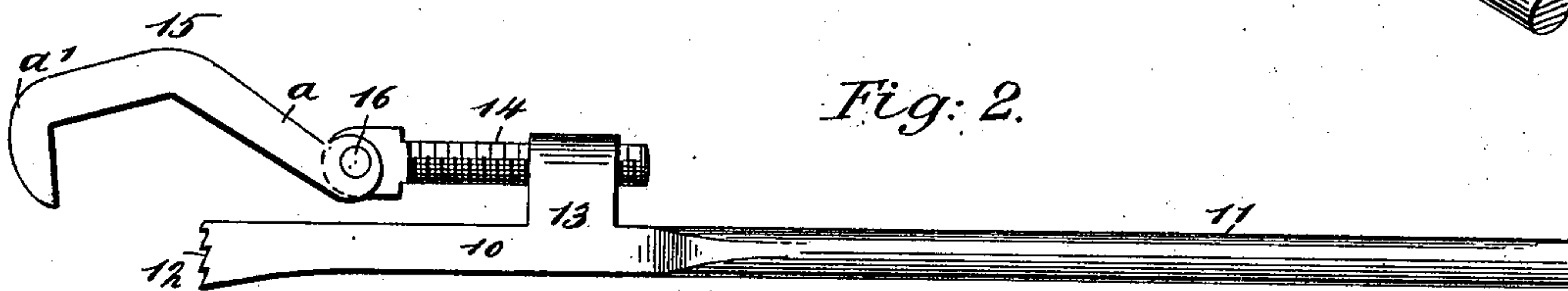
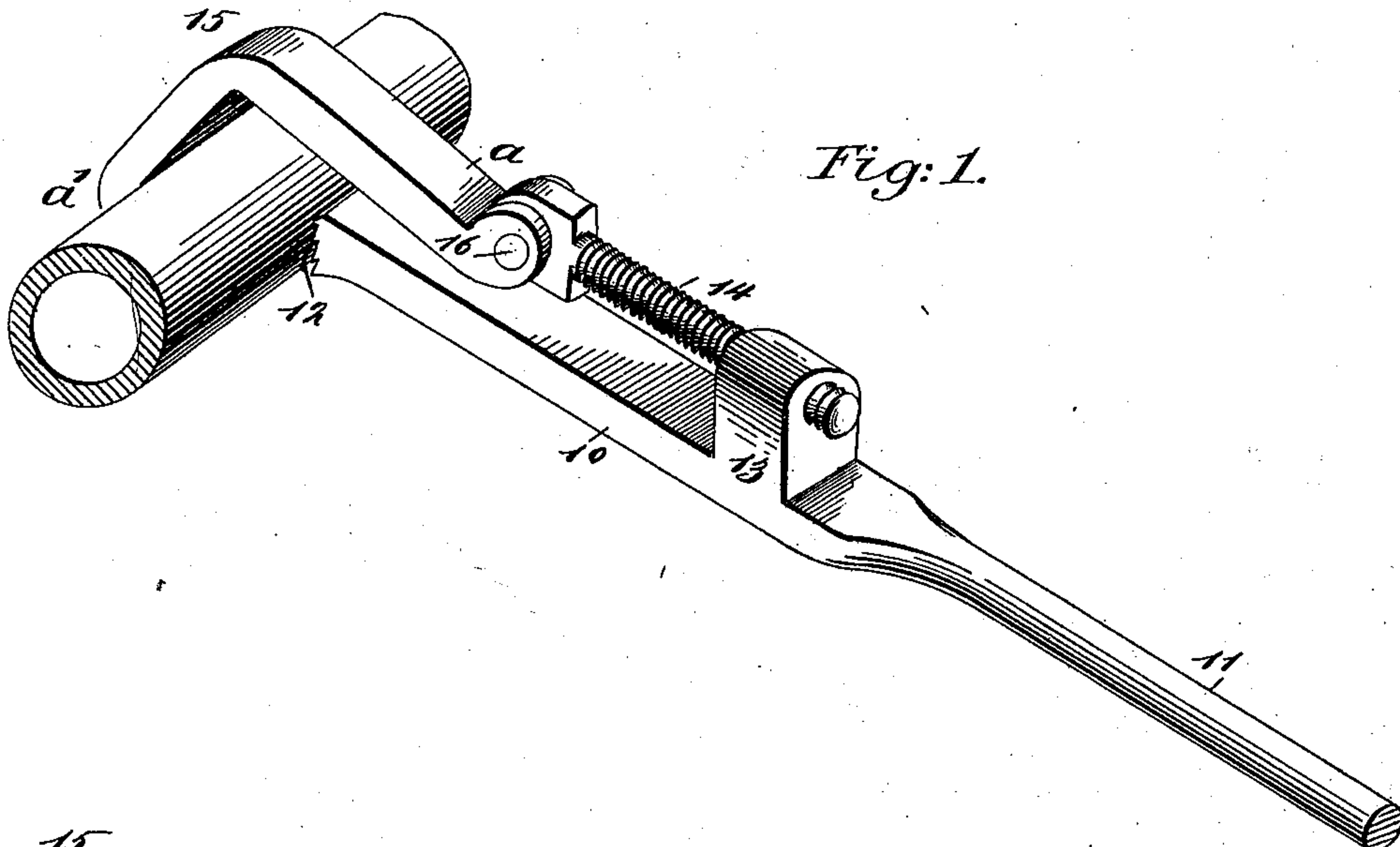


(No Model.)

W. C. LAWRENCE.
WRENCH.

No. 504,305.

Patented Aug. 29, 1893.



WITNESSES:

John A. Renner
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UNITED STATES PATENT OFFICE.

WILLIAM C. LAWRENCE, OF CASSELTON, NORTH DAKOTA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 504,305, dated August 29, 1893.

Application filed July 1, 1893. Serial No. 479,362. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CHARLES LAWRENCE, of Casselton, in the county of Cass and State of North Dakota, have invented a new and useful Improvement in Wrenches, of which the following is a full, clear, and exact description.

My invention relates to an improvement in wrenches, and it has for its object to provide a wrench of exceedingly simple, durable and economic construction, comprising but few parts and which may be conveniently and expeditiously adjusted.

A further object of the invention is to provide a wrench especially adapted as a pipe wrench, which when adjusted to one size of pipe need not necessarily be readjusted to grip a pipe of the next larger size for example.

Another object of the invention is to so construct the wrench that when it is applied to a pipe it will grip the pipe firmly, and whereby when it is desired to effect a release of the pipe the same may be accomplished by a single movement of the hand, without the aid of ordinary thumb or adjusting nuts.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improved wrench. Fig. 2 is a side elevation thereof; and Fig. 3 is a rear or bottom plan view of the wrench.

The body of the wrench consists of a bar 10 having one end shaped as a handle 11, or a handle of any approved construction may be attached to the body bar. What may be termed the outer end of the body bar is made wider than the remaining portion, and the end surface is beveled to a greater or less degree, as shown in Figs. 1 and 2, and is provided with a series of teeth 12. This toothed portion of the body bar constitutes one jaw of the wrench.

The body bar is provided at a predetermined distance below the jaw 12 with a lug 13, provided with an aperture extending

through it the wall whereof is threaded. The said lug is therefore the equivalent of a nut, but is firmly attached to or made integral with the body bar. The aperture of the lug 13, is adapted to receive a screw or bolt 14, and the head of the bolt is in direction of the jaw 12.

In addition to the jaw 12 a second jaw 15, is provided, which jaw comprises a shank α and a hook-shaped body α' , as is best shown in Fig. 2, and the lower end of the shank is preferably bifurcated to receive between it the head of the screw or bolt 14, and these two parts are pivotally connected by means of a pin 16. Thus it will be observed that the wrench consists of but three parts, the body bar having one of the jaws integral with it, the adjusting screw 14, and the hinged hook jaw 15.

In the operation of the wrench, the hook jaw is thrown over the pipe so as to partially surround it, as shown in Fig. 1. The body bar is then turned in a direction to cause the lug 13 to travel up or down the adjusting screw 14 until the jaw of the body is in gripping engagement with the pipe, or practically so, whereby upon carrying the handle end of the body bar in a direction to force the jaw of said bar against the pipe a gripping contact will be obtained between the two jaws and the pipe, whereby the pipe may be turned as desired without the possibility of the jaws slipping from it. When a release is necessary or desirable, the handle end of the body bar is carried in an opposite direction, and the body bar will immediately leave the pipe and the wrench can be disengaged from the said pipe at the same time. It will be observed that the hook jaw 15, being a pivoted jaw, may be dropped downward to stand practically at a right angle to the body bar; and in this position the jaw 15 may be utilized to support a pipe to push it up, or draw it in a given direction.

As heretofore stated the wrench is exceedingly simple, and when a gripping contact with the pipe is obtained it will not slip, and the wrench may be disconnected from the pipe by a single movement of the hand and without touching the adjusting screws on either of the jaws. Furthermore, by reason of the peculiar relation of the jaws to each

other, and the pivotal connection of the hook jaw 15 with the body bar, when the jaws have been adjusted to fit or to grip a pipe of two inches in diameter, for example, they need not be readjusted to engage firmly with a pipe of two-and-a-half inches; therefore it will be seen that the range between the jaws of the wrench when they are adjusted is considerable, and time is not lost in adjusting a wrench to take pipes differing but slightly in size, and oft-times it is necessary to change quickly from a pipe, for example six inches in diameter, to a pipe six-and-one-half, or five-and-a-half inches in diameter.

15 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. As an improved article of manufacture, a wrench, the same consisting of a body bar 20 having a jaw formed at one end and provided with a threaded guide forming a rigid portion

thereof, an adjusting screw carried by the guide, and a hook jaw having pivotal connection with the adjusting screw, as and for the purpose set forth.

25 2. In a wrench, the combination, with a body bar having a jaw formed at one of its ends, and a nut firmly secured upon one surface of the body bar, of an adjusting screw extending through the nut, and a substantially hook-shaped jaw adapted to extend over the jaw on the body, the shank of the hook shaped jaw being pivotally connected with the adjusting screw, whereby the hook-shaped jaw may be dropped to stand at substantially 30 a right angle to the body bar when occasion may require, as and for the purpose specified. 35

WILLIAM C. LAWRENCE.

Witnesses:

W. C. MACFADDEN,
C. D. HUNTER.