No. 676,318. Patented June 11, 1901.

A. F. JACKSON.

WRENCH.

(Application filed Mar. 8, 1901.)

(No Model.)

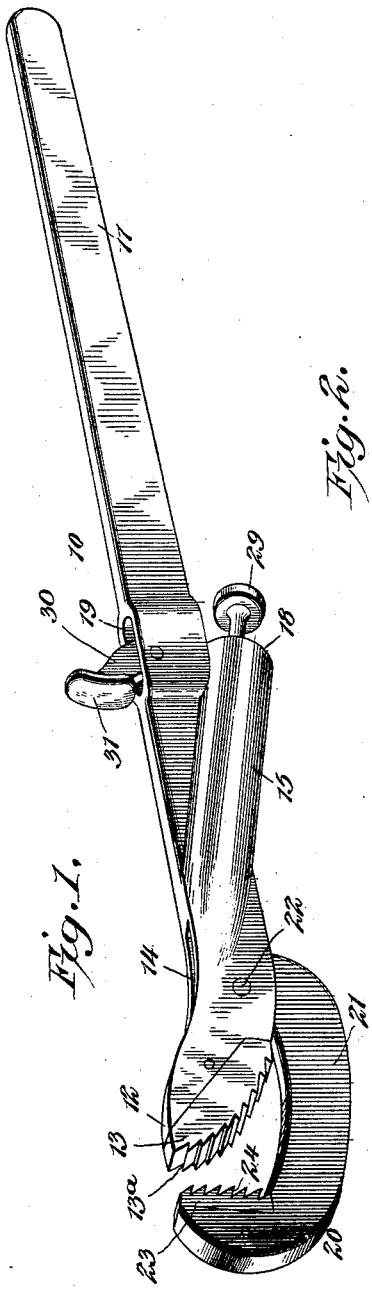

Fig. 1.

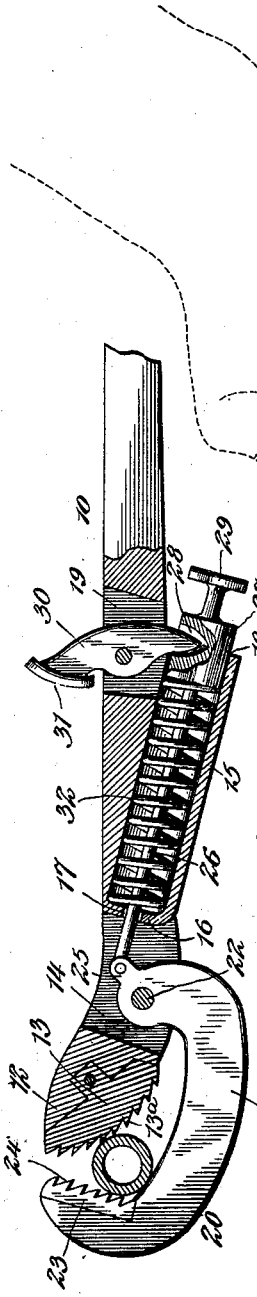

Fig. 2.

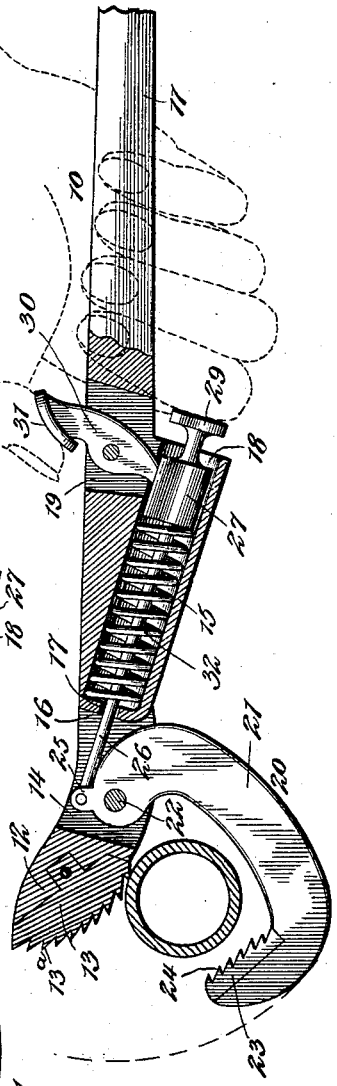

Fig. 3.

Witnesses
Howard P. Orr.
B. G. Foster.

Ambrose F. Jackson, Inventor.
By E. G. Siggers
Attorney.

UNITED STATES PATENT OFFICE.

AMBROSE F. JACKSON, OF ROCK ISLAND, ILLINOIS, ASSIGNOR TO THE W. W. WHITEHEAD COMPANY, OF DAVENPORT, IOWA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 676,318, dated June 11, 1901.

Application filed March 8, 1901. Serial No. 50,354. (No model.)

To all whom it may concern:

Be it known that I, AMBROSE F. JACKSON, a citizen of the United States, residing at Rock Island, in the county of Rock Island and State of Illinois, have invented a new and useful Wrench, of which the following is a specification.

The present invention relates to wrenches, and more particularly to that class embodied in a former patent issued to me dated February 26, 1901, and numbered 668,645.

The present invention aims to improve the construction set forth in that patent by greatly simplifying the construction and by housing the operating mechanism, so that it is not exposed to the rough usage and hard blows to which these instruments are ordinarily subjected. To the accomplishment of these objects the construction set forth in the following specification and illustrated in the accompanying drawings is preferred. It will be understood, however, that this construction is open to change and modification within the scope of the claims hereto appended.

In the drawings, Figure 1 is a perspective view of the preferred form of construction. Fig. 2 is a longitudinal sectional view of the same, showing the jaws in operative position upon a pipe. Fig. 3 is a view similar to Fig. 2, but illustrating the jaws moved out of coacting relation and indicating the manner of accomplishing said movement.

Similar numerals of reference designate like and corresponding parts in the several figures of the drawings.

In the embodiment shown a stock 10 is provided, which is formed at one end into a handle 11 and carries at its opposite end a jaw 12. While the jaw 12 may be of any desired construction, it preferably comprises a slightly-offset head having a cut-away portion in which is seated a bearing-block 13, having an outer rounded face which is serrated or provided with teeth 13^a. Directly in rear of the jaw 12 the stock is provided with a transverse opening or socket 14, and a cylindrical casing or barrel 15 is located directly in rear of the socket. This casing is preferably made integral with the stock and is disposed at an inclination thereto, the inner end being arranged within the stock adjacent to the socket 14 and separated therefrom by the web or partition 16, which is provided with a central opening 17, that affords communication between said socket and casing. The outer end 18 of the casing is open and is located contiguous to but offset from the face of the stock. A transverse opening 19 is arranged in the stock contiguous to the open or exposed end 18 of the casing 15, the wall of the stock being suitably thickened upon both sides of this opening to provide the required strength.

Pivotally mounted upon the stock 10 is a movable jaw 20, comprising a curved shank 21, having one end pivoted in the socket 14 by means of a suitable pin 22 and provided on the inner side of its opposite or free end with a block 23, having teeth 24, that coact with the teeth 13^a of the jaw 12, as will be readily understood. The pivoted end of the shank 21 is provided with a perforated extension-ear 25, said ear being located on the opposite side of the pivot-point from the jaw, thus forming an extension of said shank.

A longitudinally-arranged operating-rod 26 is slidably mounted in the casing 15, its inner end passing through the central opening 17 of the partition 16 and being connected to the ear extension 25. The outer end of the rod projects beyond the outer end of the casing and is provided with an enlarged head 27, having a notch 28 in the face which is adjacent to the transverse opening 19 of the stock, and furthermore is provided with a holding-knob or button 29. A coiled spring 32 surrounds the operating-head and bears, respectively, at its opposite ends against the partition 16 and the head 27, thus urging the rod outwardly, and consequently the pivoted jaw into coacting relation with the stationary one, as will hereinafter more fully appear. Pivotally secured intermediate its ends in the opening 19 of the stock is a small operating-lever 30, the inner end of which engages in the socket 28 of the head 27, the other end projecting beyond the face of the stock and having a thumb-piece 31.

In operation the jaws of the wrench are placed about a pipe, and the spring pressing against the plunger-head will draw the pivoted jaw into coacting relation with the stationary jaw, thus always insuring a secure

grip upon the pipe. When it is desired to open the jaws, either for the purpose of placing them upon or removing them from a pipe, it is only necessary to press upon the thumb-piece 31 of the lever or upon the knob 29. This knob is especially convenient in holding the jaws separated after they have been moved to such position by the pressure upon the lever, as is clearly indicated in Fig. 3.

By this construction a wrench is provided in which the working faces of the jaws are continuous as distinguished from those that are slotted and sectional. Furthermore, the operating mechanism is very simple and is all housed and protected against rough usage, the only parts exposed being those manually operated upon during the manipulation of the device.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a wrench, the combination with a stock provided with a stationary jaw and having a longitudinally-disposed casing, said casing having an opening upon one side of the stock, of a movable jaw pivotally mounted upon the stock and coacting with the stationary jaw, an operating-rod slidably mounted within the casing and connected to the movable jaw, said rod having a portion projecting through the opening of the casing upon one side of the stock, and a lever pivoted intermediate its ends upon the stock, said lever having an operative connection with the operating-rod at one end and having its other end located upon that side of the jaw which is opposite to the projecting portion of the rod.

2. In a wrench, the combination with a stock provided at one end with a fixed or stationary jaw and an opening located adjacent to said jaw, said stock being furthermore provided with an inclined casing having its inner end arranged adjacent to said opening and separated therefrom by a partition having an opening, a swinging jaw pivoted in the opening in the stock and arranged to coact with the fixed or stationary jaw thereof, an operating-rod slidably mounted within the casing with its inner end passing through the opening in the partition and connected to the swinging jaw and its outer end projecting from the outer end of the casing and provided with an enlarged head which is located on one side of the stock, a coiled spring housed within the casing and bearing against the partition and the enlarged head, and an operating-lever pivoted intermediate its ends to the stock and having one end engaging the head of the operating-rod and the other end projecting from the stock on the side opposite the head and forming a handle.

3. In a wrench, the combination with a stock provided at one end with a stationary jaw, and having a tubular casing, of a movable jaw pivotally mounted upon the stock and coacting with the stationary jaw, a spring-pressed operating-rod slidably mounted in the tubular casing and connected to the movable jaw at one end, the opposite end of said rod projecting from the casing on one side of the stock, and a lever pivoted on the stock, said lever being connected at one end to the operating-rod and having its opposite end projecting from the side of the stock opposite to the projecting end of the operating-rod, whereby, when the hand is placed upon the stock the thumb will be in a position to engage the projecting end of the lever and the forefinger may be brought to bear against the projecting end of the operating-rod.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

AMBROSE F. JACKSON.

Witnesses:
W. W. WHITEHEAD,
LOUIS BLOCK.