

(No Model.)

J. H. PIERCE.
PIPE WRENCH.

No. 573,999.

Patented Dec. 29. 1896.

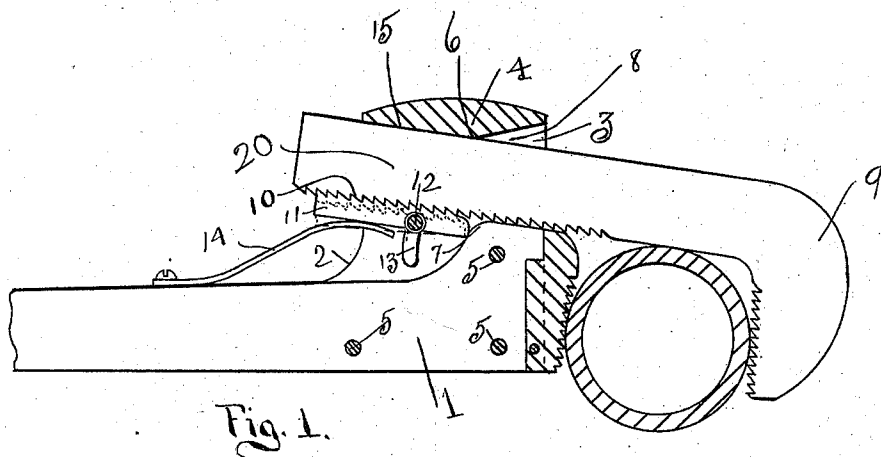


Fig. 1.

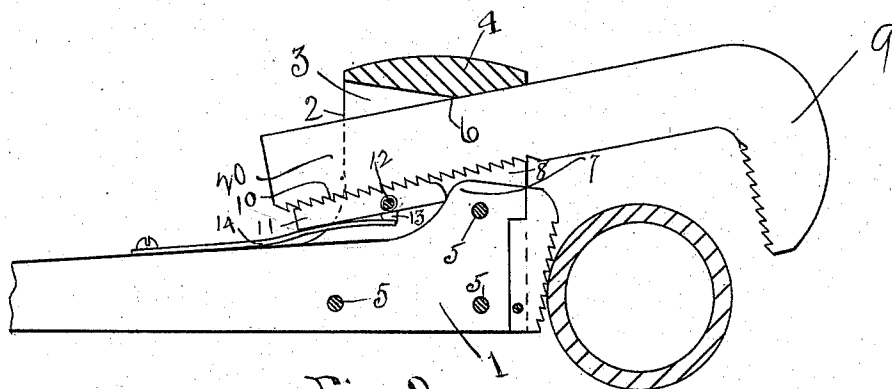


Fig. 2.

Attest:

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UNITED STATES PATENT OFFICE.

JAMES H. PIERCE, OF WEST BAY CITY, MICHIGAN.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 573,999, dated December 29, 1896.

Application filed September 8, 1896. Serial No. 605,147. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. PIERCE, a citizen of the United States, residing at West Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

My present invention relates to improvements in pipe-wrenches, and pertains more particularly to that class of pipe-wrenches in which a stationary jaw has a yoke secured thereto and carries a common or well-known drop or overhanging movable jaw for gripping the pipe; and the invention consists in the combination, arrangement, and construction of the various parts and elements, which will be hereinafter more fully described in detail, and which will be specifically pointed out in the claim of this specification. It is a well-known fact that various forms of pipe-wrenches of this class have been devised, but those best known and in common use are so constructed that the fulcrum of the movable jaw occurs at a point where the stock is the lightest, which is necessary on account of the operating mechanism used and which is highly objectionable, as will be readily seen, as it greatly tends to weaken the wrench.

One of the objects of the invention is to provide a pipe-wrench having a stationary jaw with a yoke firmly secured thereto and provided with a movable drop-jaw and so constructed that the fulcrum or bearing of said movable jaw will occur at that point of the wrench where the stock is the strongest.

Another object of the invention is to provide a means of rapidly adjusting the movable jaw of the wrench and firmly holding the same in the desired position when in operation.

Another object of the invention is to provide a pipe-wrench which may be cheaply and durably constructed, easy to manipulate, and accurate in its operation.

I attain these objects by means of the devices illustrated in the accompanying drawings, in which the same figures of reference will be found indicating the same parts or elements throughout both views, and in which—

Figure 1 is a side view of my improved pipe-

wrench, partly sectional, in position gripping a pipe. Fig. 2 is the same disconnected.

1 represents the stationary jaw of my improved pipe-wrench, and is provided with a suitable handle on its outer end.

2 is a yoke having the sides 3 and the arched portion 4 passed over the stationary jaw 1 and firmly secured thereto by means of the rivets 5, and this yoke is provided with a fulcrum-point 6 near its center on the under side of its arched portion 4, which portion is cut away from this fulcrum-point 6, forming a rest 15 for the back of the movable jaw when in operation.

7 is a shoulder on the upper side of the stationary jaw 1, and 8 is a space or opening in the yoke 2 between the shoulder 7 and the fulcrum-point 6, into which is fitted the shank 20 of the movable jaw 9, with the back of the shank resting against the fulcrum-point 6, and on which it is allowed to oscillate. The under side of the shank is provided with a series of teeth 10 for engaging with a pawl 11, secured to the yoke in rear of the shoulder 7 by means of the pin 12, passed through the said pawl 11 and through slots 13 provided therefor in the sides 3 of the yoke 2. This pawl 11 is of sufficient length to engage with several of the teeth 10 at one time (which it will be readily seen is a great advantage) and is held in position by means of the spring 14, secured to the handle of the stationary jaw 1.

To adjust the movable jaw 9 to grip the pipe, the pin 12 is pulled downward, releasing the pawl 11 from engagement with the teeth 10 on the shank 20, as shown by the dotted lines in Fig. 1, and the shank is then free to be moved outwardly or inwardly in the space 8, as desired, and on releasing the pin 12 the pawl 11 again engages with the teeth 10 by means of the spring 14, and as the handle of the stationary jaw is forced downwardly the back of the shank 9 is allowed to oscillate on the fulcrum-point 6 until it comes in contact with the rest 15 on the under side of the arch portion 4, while the jaw grasps the pipe opposite the side caught by the stationary jaw, so that the action of moving the stock to turn the pipe impinges the jaws firmly thereon. It will be readily seen that in this manner a strong and durable support is provided to receive the

strain of the work of the wrench, as the yoke 2 is securely attached to the stationary jaw 1, which, together with the said yoke, affords great strength for resistance, while the pawl 5 11, being of sufficient length to engage with several of the teeth 10 at one time and having the forward end coming in contact with the shoulder 7, will firmly resist any outward movement of the movable jaw 9.

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

In a pipe-wrench the combination of the stock having on its forward end a stationary 15 jaw, and provided with an upwardly-extending shoulder in rear of said stationary jaw, a yoke secured to said stock in rear of said stationary jaw and provided on its inner face

with a fulcrum-point and a supporting-surface in rear of said fulcrum-point, a movable 20 jaw passed through said yoke and with its upper side resting against said fulcrum-point and with a ratchet portion on its opposite side, with a pawl-piece having teeth engaging with said teeth in the movable jaw, and with its 25 forward end against said shoulder on the stationary jaw, and a spring for holding the pawl-piece in contact with the movable jaw substantially as set forth.

In testimony whereof I affix my signature 30 in the presence of two witnesses.

JAMES H. PIERCE.

Witnesses:

GEO. E. DICKERSON,
GEO. P. THOMAS.