

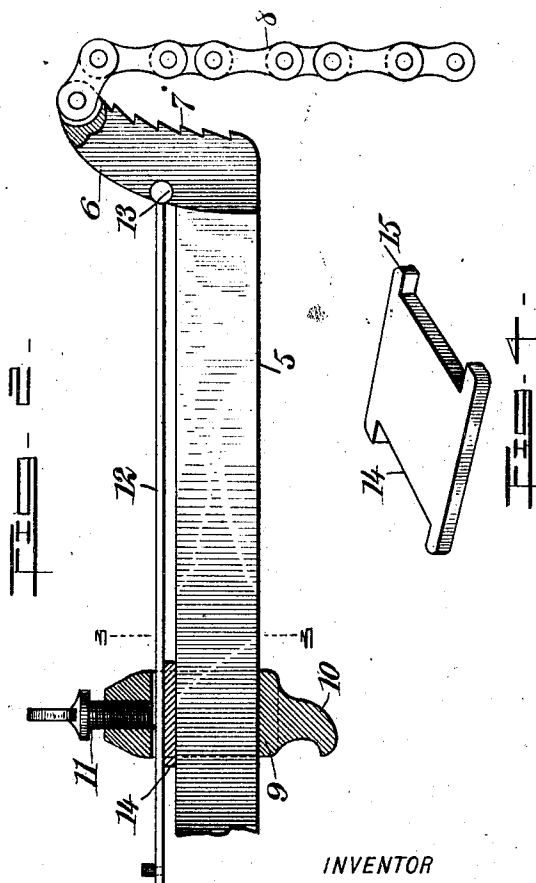
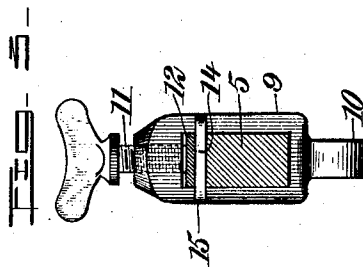
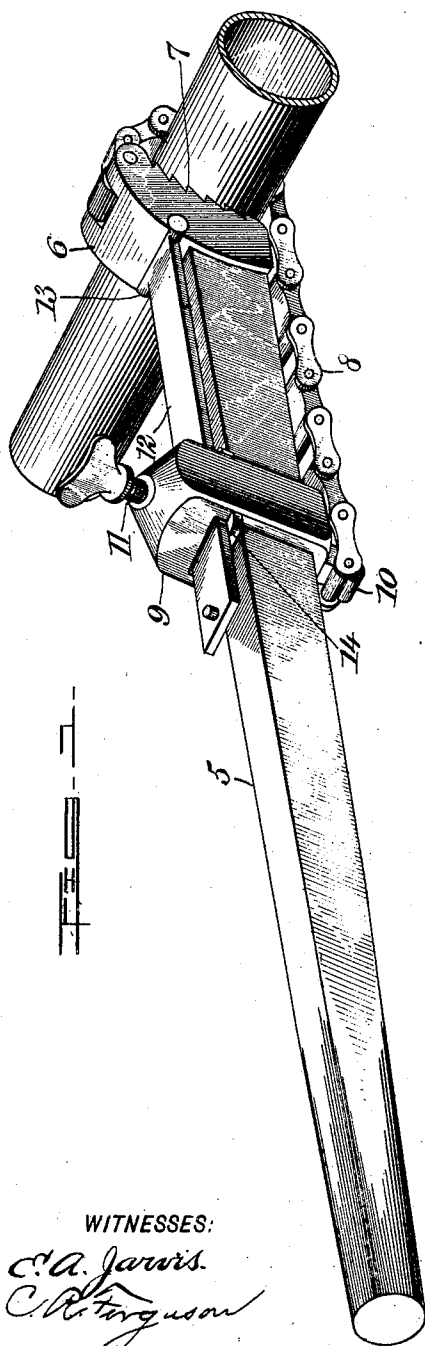
No. 770,165.

PATENTED SEPT. 13, 1904.

R. J. COSSEBOOM.
WRENCH.

APPLICATION FILED MAR. 15, 1904.

NO MODEL.



WITNESSES:
C. A. Jarvis.
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UNITED STATES PATENT OFFICE.

ROBERT J. COSSEBOOM, OF LEADVILLE, COLORADO.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 770,165, dated September 13, 1904.

Application filed March 15, 1904. Serial No. 198,242. (No model.)

To all whom it may concern:

Be it known that I, ROBERT J. COSSEBOOM, a citizen of the United States, and a resident of Leadville, in the county of Lake and State of Colorado, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

This invention relates to improvements in pipe-wrenches of the general type, the object being to provide a wrench of this character that will be simple in construction, having no parts liable to get out of order, and that may be readily adjusted to a pipe or rod and rigidly grip the same without danger of marring or crushing the same.

I will describe a wrench embodying my invention and then point out the novel features in the appended claims.

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

Figure 1 is a perspective view of a wrench embodying my invention. Fig. 2 is a side elevation thereof, partly in section. Fig. 3 is a section on the line 3-3 of Fig. 2, and Fig. 4 is a perspective view of a friction-plate employed.

The wrench comprises a lever or handle-bar 5, here shown as rectangular in cross-section, and provided at one end with a jaw member 6, the front of which is curved and provided with ratchet-shaped teeth 7. This jaw extends substantially at right angles to the lever and pivotally connected to its end is the other jaw member consisting of a chain 8. Mounted to slide on the lever 5 is a yoke 9, having a hook portion 10 for engaging with the end link of the chain 8, as clearly indicated in the drawings. The yoke 9 carries a clamping-screw 11, and extended through the yoke is a friction-plate 12, on which the screw 11 is designed to clamp. This friction-plate 12 has a cross-head 13, designed to slide laterally into a channel formed in the rear side of the jaw 6. By this arrangement the parts may be quickly and readily assembled.

Arranged between the plate 12 and the lever and movable with the yoke 9 is a supplemental friction-plate 14. This plate 14 has

outwardly-extended lugs 15, which engage with the opposite sides of the yoke and cause the plate to move with the said yoke, as above mentioned. By using these friction-plates, and as the yoke bears with three of its inner surfaces against the lever, there is a very large area of frictional engagement between the parts when the screw 11 is turned down, and therefore the yoke will be held from any possible slipping while the wrench is in use.

In the operation the chain is to be passed around the part to be turned and the end link thereof engaged with the hook 10, and the yoke is to be moved to engage the chain closely around the pipe or rod.

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

1. A pipe-wrench comprising a lever, a jaw on one end thereof, a chain attached to the jaw, a yoke slidable on the lever and having a portion for engaging with said chain, a clamping-screw carried by the yoke, and a friction-plate arranged between the screw and the lever.

2. A pipe-wrench comprising a lever, a jaw on one end thereof, a chain attached to the jaw, a yoke slidable on the lever and having a portion for engaging with said chain, a clamping-screw carried by the yoke, a plate extended from the jaw on the lever through said yoke and adapted to be engaged by the screw, and a supplemental plate arranged between the first-named plate and the lever, and movable with the yoke.

3. A pipe-wrench, comprising a lever, a toothed jaw on said lever, a chain having swinging connection with the jaw, the said jaw having a transverse channel in its rear side, a yoke movable along the lever and having a part for engaging with the chain, a friction-plate having a rounded head for engaging in said channel, the said friction-plate being extended through the yoke and adapted to be engaged by a screw, and a supplemental friction-plate arranged between the first-named plate and the lever, and carried with the yoke.

4. A pipe-wrench comprising a lever rectangular in cross-section, a yoke surrounding the lever and slidable thereon, a jaw on one

end of the lever, a chain pivoted to said jaw
and adapted to engage with a part on the yoke,
a clamping-screw carried by the yoke, a plate
extended from the jaw through said yoke and
5 adapted to be engaged by the screw, and an-
other plate arranged between the first-named
plate and the lever and movable with the yoke.

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

ROBERT J. COSSEBOOM.

Witnesses:

GEO. W. CASEY,

W. C. STECKLEY.