

No. 708,252.

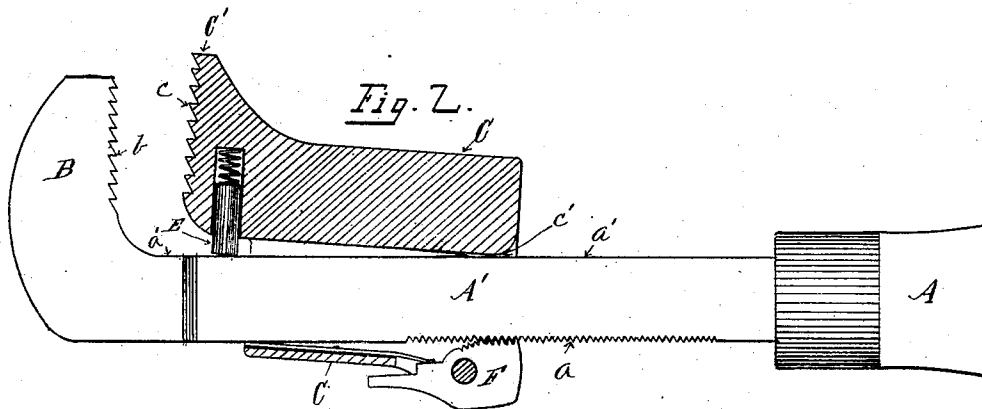
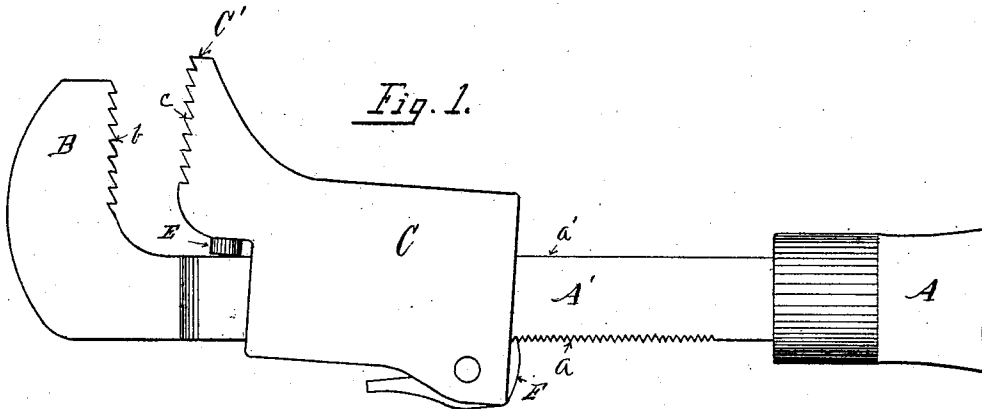
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F. A. PALMER & F. SHARPE.

PIPE WRENCH.

(Application filed Feb. 19, 1902.)

(No Model.)



WITNESSES.
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UNITED STATES PATENT OFFICE.

FRANK A. PALMER AND FRED SHARPE, OF ERIE, PENNSYLVANIA.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 708,252, dated September 2, 1902.

Application filed February 19, 1902. Serial No. 94,759. (No model.)

To all whom it may concern:

Be it known that we, FRANK A. PALMER and FRED SHARPE, citizens of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Pipe-Wrenches; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

This invention relates to improvements in pipe-wrenches, and has for its object the production of a rapidly-adjustable and serviceable wrench. In the construction of wrenches of this type it is usual to construct the wrench so that the ratchet-dog mechanism thereof operates in ratchet-teeth on the upper edge of the handle, which teeth receive the entire strain of the movable jaw and are rapidly destroyed. Again, with this construction it has been found difficult to give the sliding jaw of the wrench the necessary rocking motion to relieve it from the pipe and at the same time avoid complications and instability. We overcome these difficulties and construct a rapidly-adjustable and serviceable pipe-wrench in the manner hereinafter set forth and described, and illustrated in the accompanying drawings, in which—

Figure 1 is a side view in elevation of our improved pipe-wrench. Fig. 2 is a side view of the same, partially in elevation and partially in section.

In the drawings illustrating our invention, A A' represent the handle of the wrench. The part A' of the handle is rectangular in shape and has on its outer end a fixed jaw B, provided on its inner face with a serrated face b, adapted to engage a pipe, and on the rear edge of the part A' of the handle there are fine ratchet-teeth a.

Embracing the part A' of the handle there is a sliding jaw-frame C, adapted to slide on the part A' of the handle. On the side of the jaw-frame C opposite the jaw B there is a jaw C', the face c of which is serrated and adapted to engage a pipe placed between the jaws B and C'.

In the base of the jaw C' there is a spring-actuated plunger E, the lower end of which rests upon the upper side a' of the part A' of the handle, which operates to retain the front end of the jaw-frame C in an upraised position, as illustrated in the drawings.

In the under side of the rear end of the jaw-frame C there is a spring-operated cam-shaped ratchet-dog adapted to engage the teeth a on the under side of the part A' of the handle. In operation when the jaws B and C' are closed upon a pipe and the handle A A' is raised it operates to move the front end of the frame C downward, so that it is in contact with the upper surface a' of the handle, and as further strain is brought upon the pipe the point c' of the jaw-frame is forced into close contact with the upper surface a' of the handle with sufficient friction to take up the greater part of the strain, and thereby relieve the ratchet-dog F from the greater part of the strain in the operation of the wrench, and when the wrench-handle is moved downward again the spring-actuated plunger E operates to move the front end of the jaw-frame upward, so as to relieve the jaw C' from its grip on the pipe.

Having thus described our invention, so as to enable others to construct and utilize the same, what we claim as new, and desire to secure by Letters Patent of the United States, is—

The combination in a pipe-wrench, of a handle, a serrated jaw thereon, ratchet-teeth on the under side of the handle, a sliding jaw-frame on the handle, a serrated jaw on the front end of the jaw-frame, spring-actuated mechanism in the front end of the jaw-frame engaging the upper side of the handle, and a cam-shaped ratchet-dog in the under side of the rear of the frame adapted to engage the ratchet-teeth on the under surface of the handle, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK A. PALMER.
FRED SHARPE.

Witnesses:

H. M. STURGEON,
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