D. B. COOK.

PIPE-WRENCH.

No. 185,078. Patented Dec. 5, 1876.

Fig. 2.

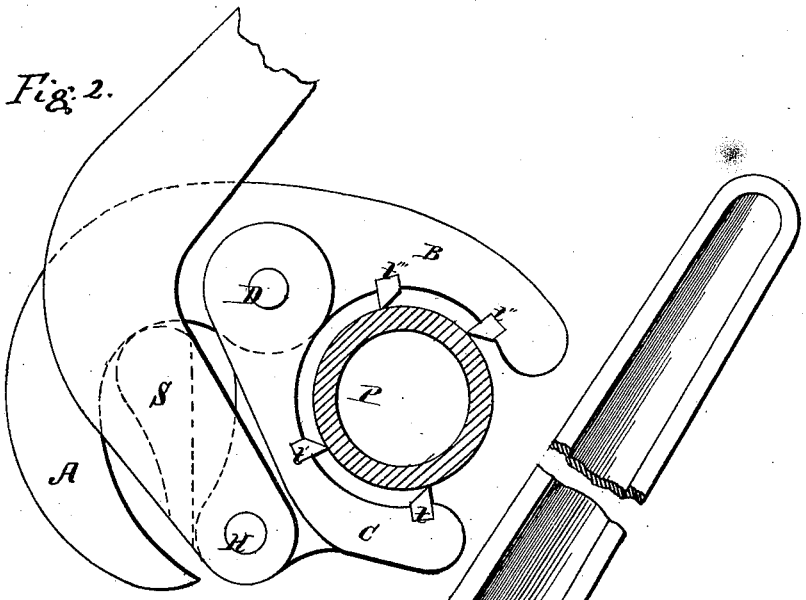
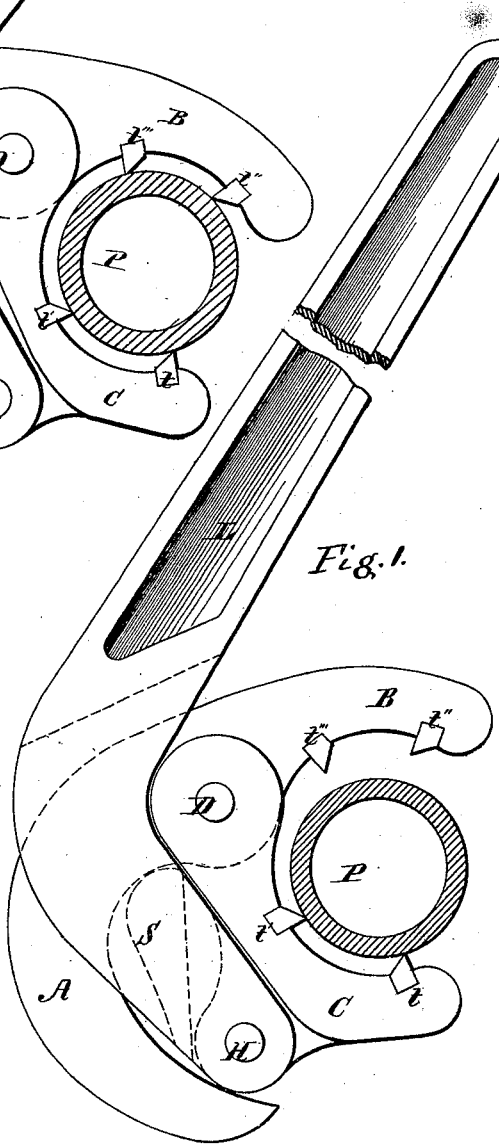


Fig. 1.



Witnesses.

Frank C Cornell

Horace J Smith

Inventor.

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UNITED STATES PATENT OFFICE.

DANIEL B. COOK, OF ITHACA, NEW YORK.

IMPROVEMENT IN PIPE-WRENCHES.

Specification forming part of Letters Patent No. **185,078**, dated December 5, 1876; application filed March 13, 1876.

To all whom it may concern:

Be it known that I, DANIEL BARNARD COOK, of Ithaca, in the county of Tompkins and State of New York, have invented a new and useful Improvement in Pipe-Wrenches, which invention and improvement is fully set forth in the following specification, reference being had to the accompanying drawing, where—

Figure 1 shows the tool open, and Fig. 2 shows it shut about a pipe.

This wrench consists of a slotted bent lever, L, with a sliding shoulder, S, attached to a gripe, C, by a hinge-joint, H, as shown in the drawing, and a second gripe, B, attached, by a similar joint, to gripe C at D, and prolonged in a curve through the slot in the lever L, as shown at A. The gripes B and C are furnished with teeth *t t' t''*, (and *t'''*, when desired,) which are fitted into the gripes in such a manner as to be easily replaced, each one of them being dovetailed into the gripe, and held from sliding by a slight "upset" made with a "prick-punch." The wrench is to be made of cast-steel or malleable iron, with steel teeth and rivets, the teeth being hardened.

To use this wrench, place the teeth *t t'* of gripe C against the pipe P, as shown in the drawing, and then give a slight pull in the direction of the lever L. This causes a rotation about *t t* in a direction opposite to that in which the pipe is to be turned, thus causing a departure of D from the lever L; and as this motion takes place, the sliding shoulder of the slot S acts upon the inner curved surface of the portion A of gripe B, gradually pushing it outward, and causing a revolution about D until one of the teeth *t''* or *t'''* comes in contact with the pipe P. Then, by moving the lever L in the direction in which the pipe is to be turned, the gripes are held firmly against the pipe by the wedge-like action of the sliding shoulder S upon the curved portion A of pipe B, and the reaction of gripe C, caused by the two connections *t t* and D. The crushing power of the gripes is a direct function of the force acting at the end of the lever; hence there can be no danger of a "slip" in cases of great resistance, when the teeth are in reasonable condition. By reversing the lever, the gripes are opened and the pipe released, and by reversing the wrench the pipe can be turned in the opposite direction.

I claim as my invention—

The combination of slotted bent lever L, having the sliding shoulder S, gripe B, with curved extension A, riding in the slot of the lever, and gripe C, hinged to gripe B, and to the end of the slotted lever, as and for the purpose set forth.

DANIEL B. COOK.

Witnesses:

FRANK C. CORNELL,

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