

(No Model.)

D. R. PORTER.

PIPE WRENCH.

No. 376,396.

Patented Jan. 10, 1888.

Fig. 1.

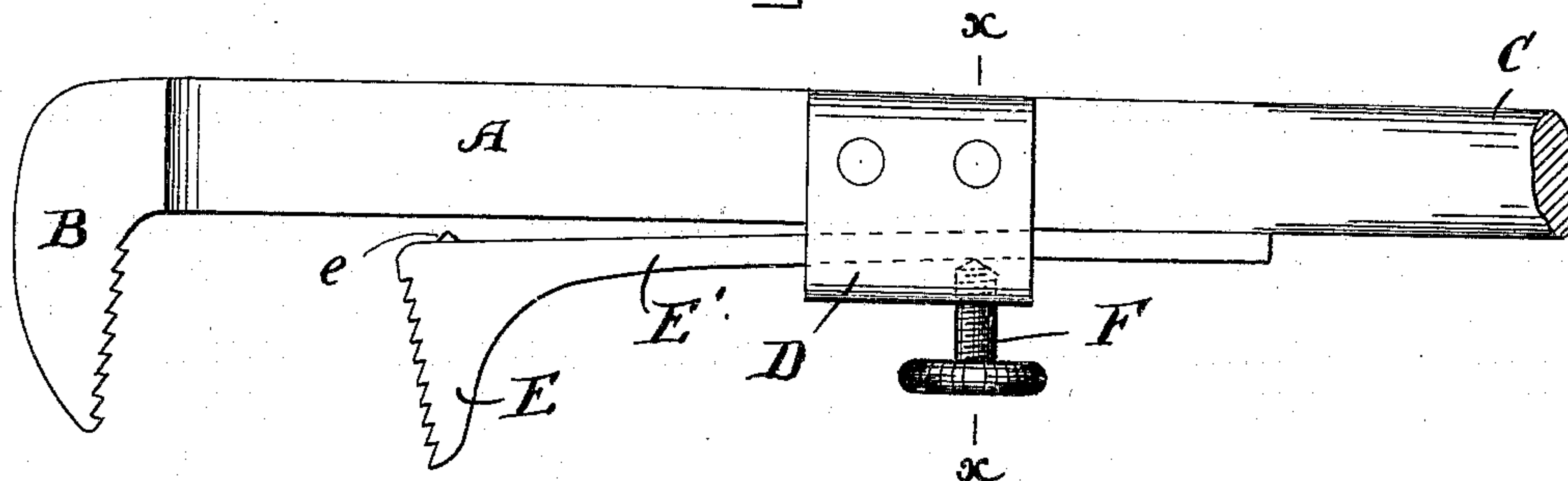


Fig. 2.

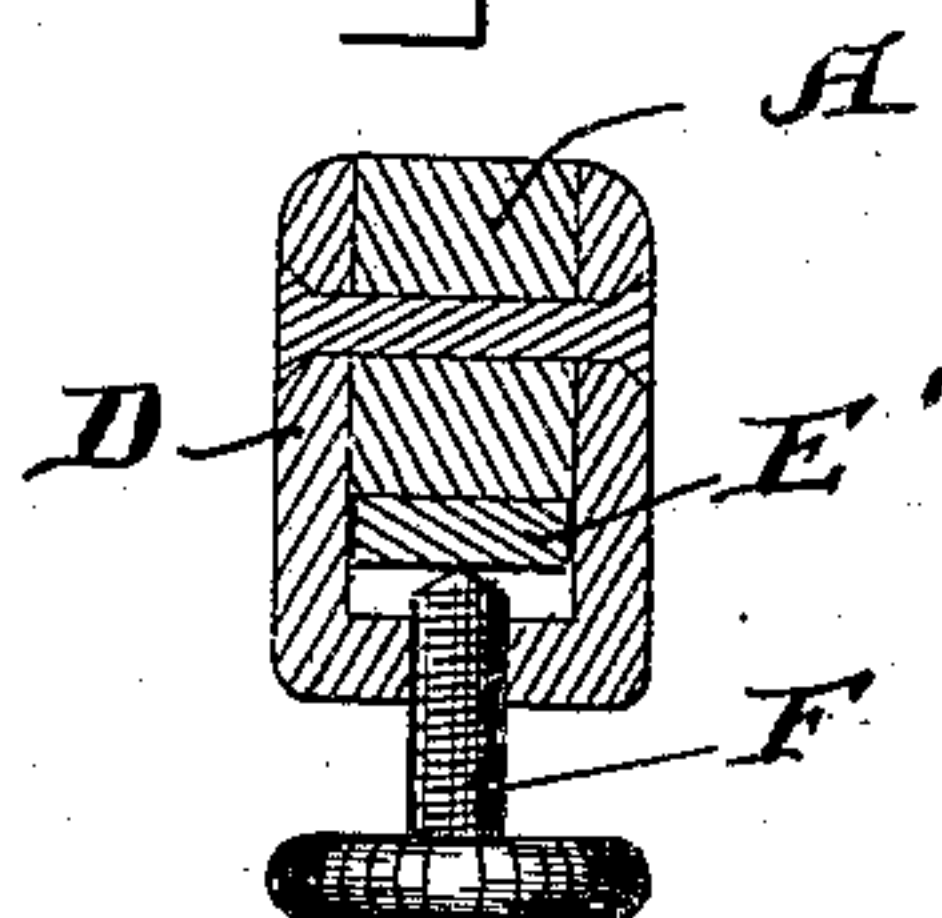


Fig. 3.

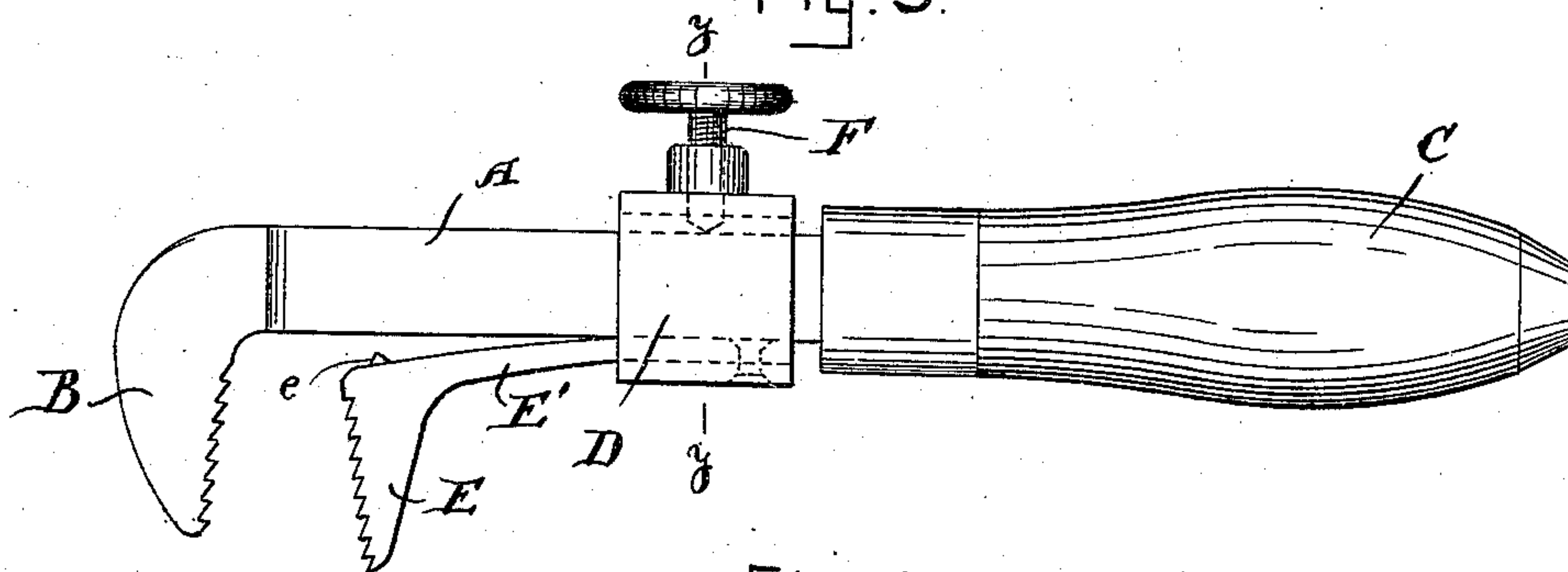
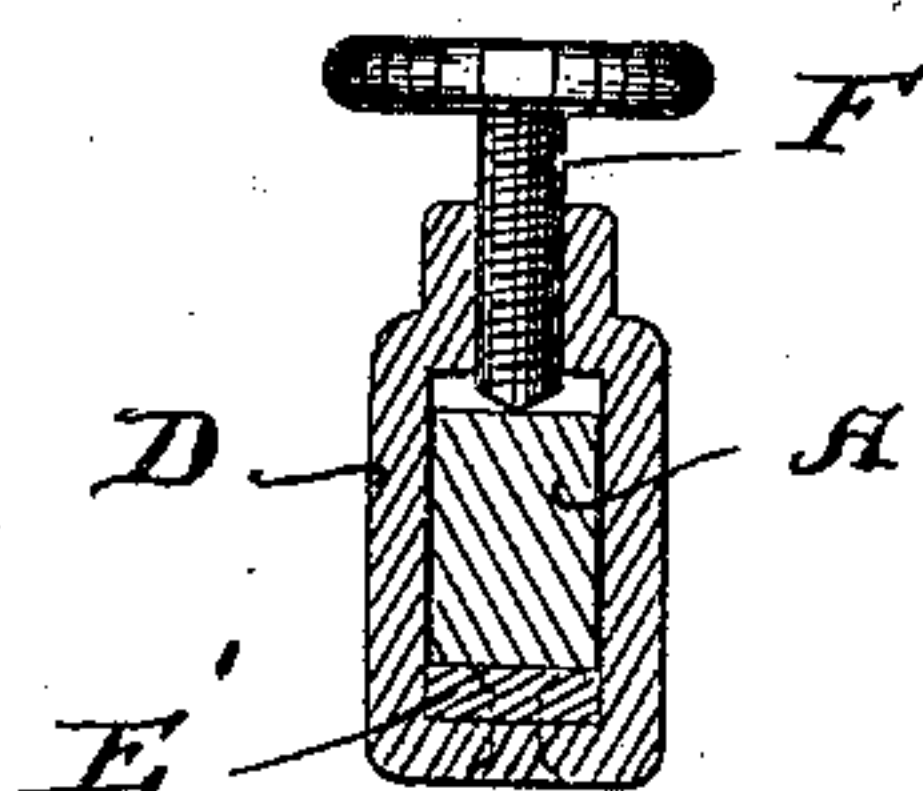


Fig. 4.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 376,396, dated January 10, 1888.

Application filed May 4, 1887. Serial No. 237,043. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL R. PORTER, a citizen of the United States, residing at Chelsea, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Pipe-Wrenches, of which the following is a specification.

My invention relates to that class of pipe-wrenches that are provided with a sliding jaw; and it consists in certain details of construction, hereinafter fully described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a side view of a pipe-wrench embodying my invention. Fig. 2 is a section taken on line *x x* of Fig. 1. Fig. 3 shows a modification of my invention. Fig. 4 is a section taken on line *y y* of Fig. 3.

A represents a shank, provided at its outer end with a fixed jaw, B, and at its other end formed into or provided with a handle, C.

D is a U or saddle shaped piece of metal riveted or otherwise securely fastened to the shank A, and E is a movable jaw provided with an extension, E', that passes through the U-shaped piece D.

F is a set-screw for holding the movable jaw in the required position.

Instead of the fixed U-shaped piece D, a slide or collar, D', as shown in Figs. 3 and 4, may be employed, in which case I rivet the end of the extension E' to the collar D', as shown, so that they are both moved together, and when in the desired position clamped by the set-screw F.

The extension E' of the jaw E acts as a spring, so that when the jaws are placed over a pipe and the wrench turned in the proper direction the tendency will be to force the jaw E toward the shank A, thereby firmly gripping the pipe, and when it is desired to release the grip upon the pipe all that has to be done

is to turn the wrench in the opposite direction, the teeth on the face of the jaw E being cut in reverse direction to those in the jaw B, so that they will grip only when the wrench is turned one way.

On the inner part of the jaw E, next to the shank A, I provide a small teat or projection, *e*, so that when the jaw E is forced onto the shank A the teat or projection *e* will come into contact with the shank and assist in preventing the jaw being forced backward.

The operation of the wrench is as follows: After adjusting the sliding jaw so as to fit the pipe or the other article to be operated upon, the wrench is turned in the proper direction, thus causing the teeth of the movable jaw to engage the pipe, and the jaw is forced in an inward direction and securely clamps the pipe.

What I claim as my invention is—

1. In a pipe-wrench, the combination of a shank and fixed jaw with a movable jaw provided with an extension that forms a spring, and adjustable upon the shank, substantially as and for the purposes set forth.

2. In a pipe-wrench, the shank A, fixed jaw B, and saddle or slide D, in combination with the adjustable jaw E, provided with an extension, E', that forms a spring, and set-screw F, substantially as shown and described.

3. In a pipe-wrench, the shank A, fixed jaw B, saddle or slide D, and set-screw F, in combination with the adjustable jaw E, provided with a spring-extension, E', and teat *e*, substantially as and for the purposes set forth.

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

DANIEL R. PORTER.

Witnesses:

JOS. G. HOLT,  
E. PLANTA.