

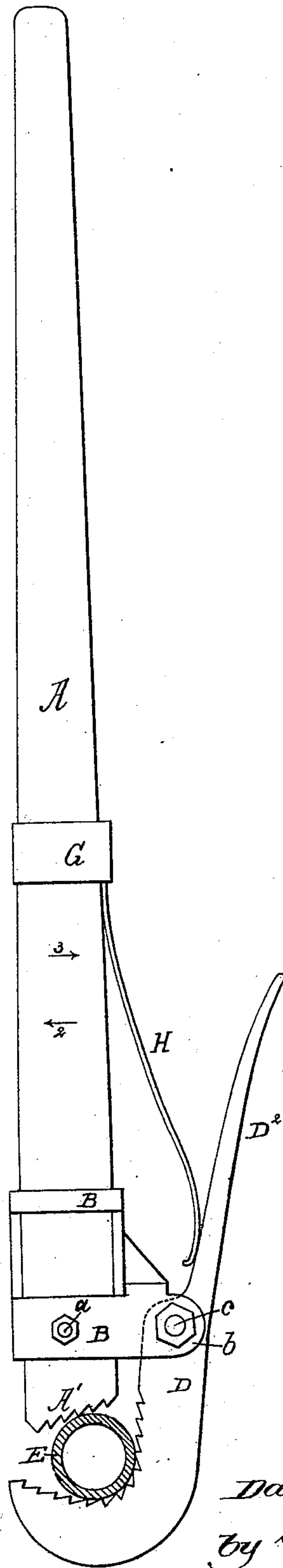
(No Model.)

D. R. PORTER.

WRENCH.

No. 291,934.

Patented Jan. 15, 1884.



Witnesses.

Arthur D. Porter.

John F. C. Prentiss.

Inventor.

Daniel R. Porter.

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UNITED STATES PATENT OFFICE.

DANIEL R. PORTER, OF REVERE, MASSACHUSETTS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 291,934, dated January 15, 1884.

Application filed November 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, DANIEL R. PORTER, of Revere, county of Suffolk, State of Massachusetts, have invented an Improvement in Wrenches, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

This invention has for its object the production of a simple, strong, and efficient pipe-wrench, which may be readily opened when it is desired to apply the same to a pipe.

My improved wrench is composed of a straight shank, provided at one end with a series of teeth forming a fixed jaw, a metal strap and fulcrum-block, a toothed concave jaw pivoted upon the said strap, and provided with an extended hand-piece, and a strong spring connected with the shank, and having its free end placed against the hand-piece.

The wrench herein shown is an improvement upon that represented in application No. 99,169, the object being to do away with the hand-lever and link therein shown, thus cheapening the construction and producing a more simple wrench.

The drawing represents one of my improved wrenches as grasping a section of pipe.

The shank A is composed of a long metal bar, having one end cut off at a slight bevel, and toothed or serrated to form a fixed jaw, A'. A metal strap, B, having a rectangular opening for the reception of the shank is connected therewith by a suitable bolt or rivet, *a*. The strap B has ears *b*, which form bearings for a fulcrum, *c*, upon which is mounted the concave movable jaw D, having a hand-piece, D², the said hand-piece being long enough to be readily engaged by the hand of the operator when the jaw D is to be moved away from jaw A', to enable a pipe, E, to be grasped and turned. The fulcrum *c* for the jaw D is so located with relation to the jaw A'

and the jaw D is so shaped as to extend well over the jaw A', as shown in the drawing, so that the jaws take a very firm hold upon the pipe when the shank is moved in the direction of the arrow 2 upon it, the pressure of the said jaws being relaxed by but the slightest movement of the shank in the direction of the arrow 3. The shank is provided with a metal loop, G, having an attached stiff spring, H, which bears against the movable jaw near its fulcrum.

I am aware that the concave jaw in a pipe-wrench has been acted upon by a spring to force it toward the fixed jaw; but I am not aware, prior to my invention, that a movable jaw pivoted, as described, upon a strap or block connected with a shank such as shown has ever had an arm or hand-piece extended beyond the fulcrum of the movable jaw far enough to be readily grasped by the hand, to separate the jaw D from the jaw A' and hold the jaws open in order that the pipe to be turned may be easily grasped.

I claim—

As an improved article of manufacture, the herein-described pipe-wrench, composed of the shank A, inclined at one end and toothed to form a fixed jaw, A', the attached metal strap or block B, the movable concave toothed jaw D, provided with the hand-piece D², and mounted upon the fulcrum-pin *c*, supported by an ear of the strap B, beyond the edge of the shank A, and the spring H, connected with or supported by the shank A, the spring acting against the hand-piece, substantially as shown and described.

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

DANIEL R. PORTER.

Witnesses:

G. W. GREGORY,
B. J. NOYES.