No. 646,565. Patented Apr. 3, 1900.

E. WRIGHT.

PIPE WRENCH.

(Application filed Aug. 25, 1899.)

(No Model.)

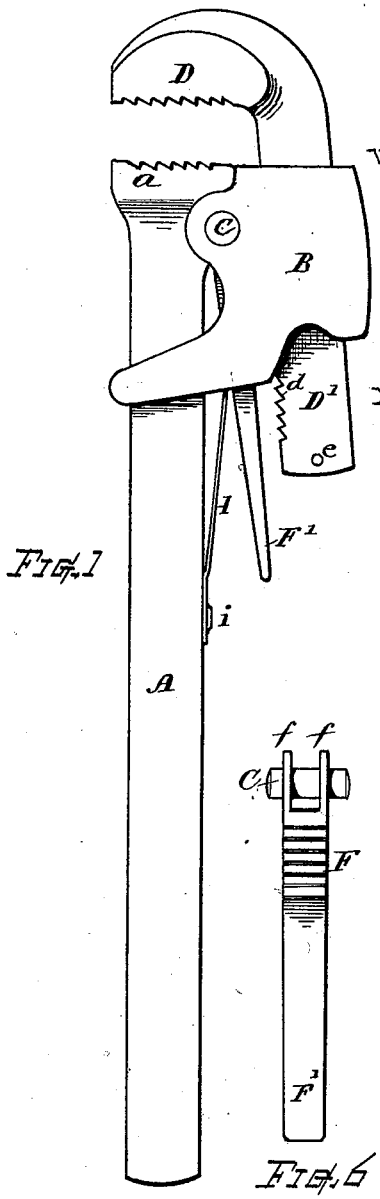

Fig. 1

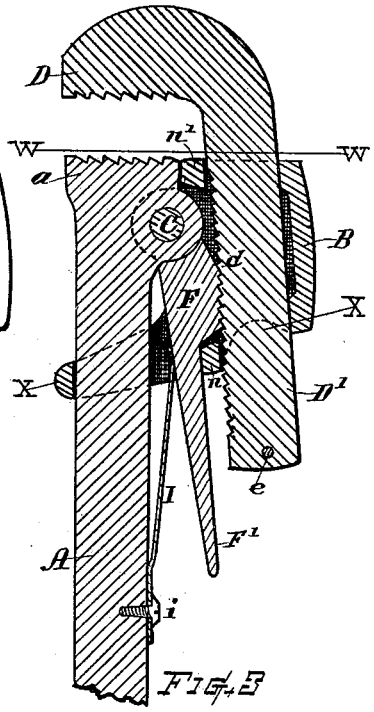

Fig. 3

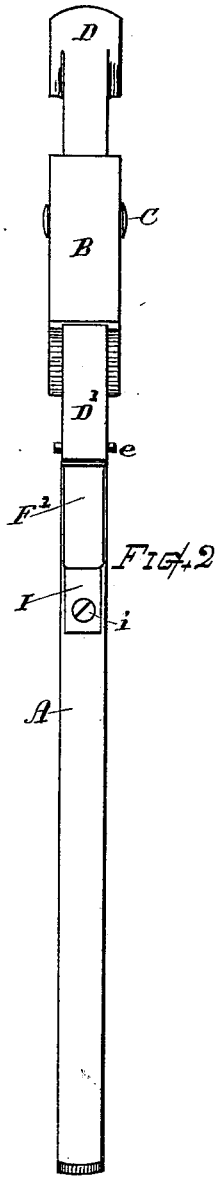

Fig. 2

Fig. 6

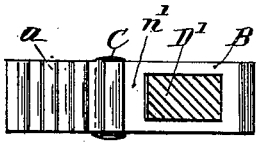

Fig. 4

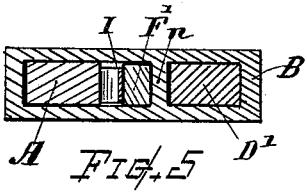

Fig. 5

Witnesses
Ella P. Blemus
Simeon E. King

Inventor:
Edward Wright
By Chas. A. Burleigh
Attorney

UNITED STATES PATENT OFFICE.

EDWARD WRIGHT, OF WORCESTER, MASSACHUSETTS.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 646,565, dated April 3, 1900.

Application filed August 25, 1899. Serial No. 728,401. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WRIGHT, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Pipe-Wrenches, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

The objects of my present invention are to provide, in a wrench of the class shown, a ratcheted pawl and thumb-lever arranged within the rocking frame for controlling the adjustment of the movable jaw in the manner hereinafter more fully described and to render the wrench simple, quick, and convenient of operation. I attain these objects by the mechanism illustrated in the drawings, wherein—

Figure 1 is a side view of a pipe-wrench embodying my invention. Fig. 2 is a back view; Fig. 3, a longitudinal central section; Fig. 4, a transverse section at line W W; Fig. 5, a transverse section at line X X, and Fig. 6 a back view of the pawl or thumb-lever separate.

Referring to parts, A denotes the usual main or handle bar, having the fixed jaw *a* formed on its upper end.

B indicates the rocking frame or guide, pivotally attached to said main bar by the transversely-disposed hinging-pin C to rock thereon in well-known manner.

D indicates the movable jaw, formed integral with a bar or shank portion D′, that is supported and guided within the rocking frame B and adapted for the usual extension and retraction in relation thereto.

In accordance with my invention the jaw-shank D′, which may be formed of rectangular or other cross-section, is provided with notches or detents *d* upon its inner face only, its sides and back edge being made smooth and fitting loosely the interior of the rocking frame, as shown. Disposed between said jaw-shank and the back of the main bar I provide a controlling-lever comprising a ratcheted pawl F, having a projecting or extended thumb-piece F′. The said lever or pawl is provided with a suitable ear or ears *f*, whereby it is fulcrumed on the hinging-pin C, together with the rocking frame, but capable of independent movement, and said pawl is adapted by means of its ratchet-teeth for engaging with the notches or teeth on the jaw-shank, and thereby holding the jaw D at any given position of adjustment. The pawl is arranged to swing outward from the main bar for interlocking with the shank D′, and a suitable spring I is provided for normally pressing said pawl outward or toward its engaging position. Said spring I is best made as a flat resilient plate attached to the handle-bar at one end, as *i*, and its other end pressing against the lever-pawl F within the rocking frame, as best shown in Fig. 3. By pressure of the thumb upon the projecting part D′ and depressing the lever the pawl-ratchets can be readily disengaged from the jaw-shank and quick adjustment of the jaw thus permitted. Then when the thumb-pressure is removed the spring I forces the pawl again into engagement with the jaw-shank. A stop-pin *e* is fixed in the end of the shank to prevent the movable jaw from escaping from the rocking frame when at extreme adjustment.

I preferably provide the rocking frame with integral cross-bars *n* and *n′*, respectively, disposed at the upper and lower ends thereof, which cross-bars serve to confine and guide the jaw-shank within the frame and prevent the rubbing together of the opposite ratchet-teeth by the longitudinal movement of the shank when effecting adjustment.

Among the advantages of my invention may be named the simplicity and convenience of operation, the controlling-lever being at a position to be readily manipulated by the thumb while grasping the handle of the wrench, and the jaw can be slipped to the position desired. The wrench is also flat and comparatively thin, as there is no side projecting nut, as heretofore employed in wrenches of this class. The position of the pawl is such that the teeth are protected and their engaging relation such that their holding capacity is not weakened by the swinging action of the movable jaw and rocking frame when the wrench is in use.

I am aware that different constructions of wrenches are well known in which the mov-

able jaw is carried in a rocking frame pivoted to the main bar, and I do not therefore claim such feature broadly as my invention.

What I claim as of my invention, and desire to secure by Letters Patent, is—

1. In a wrench of the class specified, the rocking frame provided with the cross-bars n and n', in combination with the main bar having the fixed jaw thereon, the movable jaw having a shank portion extending through said rocking frame and provided with notches or detents on its inner side, a pivoted lever comprising a pawl and thumb projection disposed between said main bar and jaw-shank for engagement with said jaw-shank, a pivot-pin hinging said rocking frame and said lever to the main bar, and a spring acting on said lever, substantially as and for the purpose set forth.

2. In combination with the main bar, the rocking frame pivoted to and embracing said bar, and the movable jaw having the shank portion fitting into and adjustable within said rocking frame, said shank formed externally smooth and provided with notches or detents on its inner edge, of a controlling-pawl disposed within said rocking frame between the bar and jaw-shank, its teeth engaging the notches on said shank, means for retracting said pawl, and means for normally pressing the pawl into engagement, for the purpose set forth.

Witness my hand this 21st day of August, 1899.

EDWARD WRIGHT.

Witnesses:
CHAS. H. BURLEIGH,
ELLA P. BLENUS.