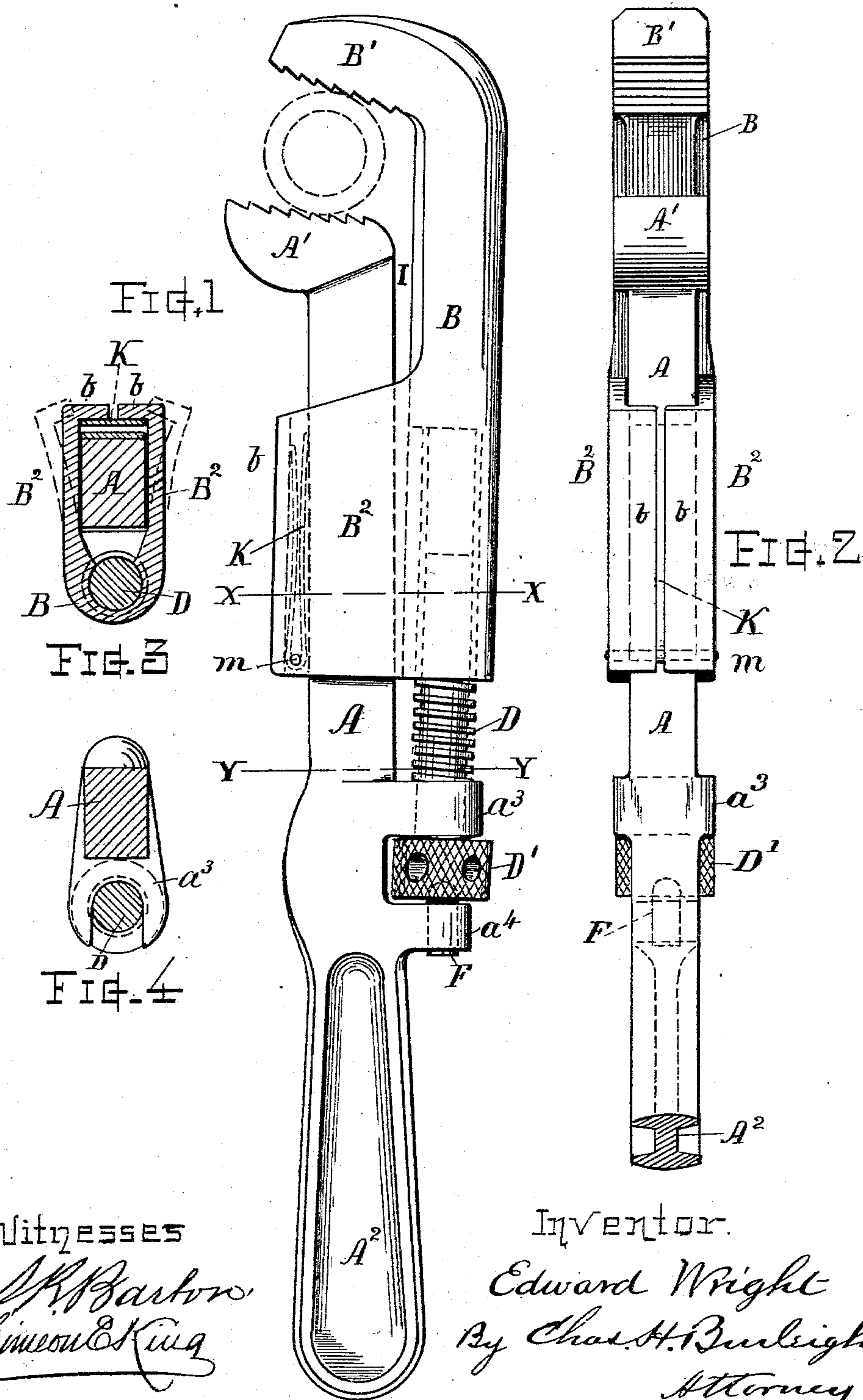


(No Model.)

E. WRIGHT.
PIPE WRENCH.

No. 546,443.

Patented Sept. 17, 1895.



Witnesses
A. K. Barlow
Simone C. King

Inventor.
Edward Wright
By Chas. H. Burlingame
Attorney.

UNITED STATES PATENT OFFICE.

EDWARD WRIGHT, OF WORCESTER, MASSACHUSETTS.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 546,443, dated September 17, 1895.

Application filed February 9, 1895. Serial No. 537,765. (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 Pipe-Wrench, 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 object of my present invention is to provide a strong, simple, and practically efficient adjustable pipe-wrench that can be manufactured with economy and facility; and my invention consists in a pipe-wrench in which the parts are made and combined in the peculiar manner hereinafter set forth.

In the drawings, Figure 1 is a side view of the pipe-wrench constructed in accordance with my invention, with dotted lines indicating the internal structure. Fig. 2 is a front view of the same. Fig. 3 is a transverse section at line X X, and Fig. 4 is a transverse section at line Y Y.

Referring to parts, A denotes the main bar, having upon its upper end the jaw A' and at its lower end the handle A². Upon the back of the bar there are formed two projections a³ and a⁴, with an intervening space between them. The projection a³ is bifurcated or vertically recessed to serve as a journal-bearing for the adjusting-screw.

B indicates the slide-bar, having the outer jaw B' formed on its upper end and provided at its lower portion with cheek-plates B², with inwardly-overhanging lips b along their front edges, that loosely embrace the main bar A and form a guide-box for the adjustable jaw-bar, in the manner indicated. The lower end of the slide-bar B is chambered and internally screw-threaded to receive the adjusting-screw D, which latter is provided with a rosette-head D', that is disposed and loosely confined within the space between the projection a³ and a⁴ upon the bar A, the neck of the screw being embraced by the bifurcated projection a³ and the screw centrally retained by a pintle-stud F, fixed in the projection a⁴, with its end entering an axial recess formed in the rosette and there fitting loosely, so as to allow free action of the screw while retain-

ing it centrally in position. The space within the guide-box of the slide-bar is made of sufficient width to afford a limited degree of backward and forward play between the bars A and B, as at I, the parts swinging from the rosette as a center, and a spring K is arranged between the inner surface of the lips b and face of the bar A to normally press the bars toward each other. Said spring is retained by a pin m or in other suitable manner. The bars are preferably of steel castings or drop-forged, and the cheek-plates B², which form the guide-box, are primarily made outwardly inclined, as per dotted lines, Fig. 3, so that the bar A can be entered between the lips b. Then these cheek-plates are bent or set inward by aid of suitable dies, bringing the cheeks parallel with the sides of the bar A and closing the lips b over the angle of said bar, as shown in full lines, Fig. 3.

The body portion of the bar B is best made the same width as the jaw B', thus giving ample strength to avoid bending or fracture when put to the severest strains in the use of the wrench.

The jaw-faces are both upwardly inclined, that of the jaw B' being inclined to somewhat greater degree than the face of the jaw A'. Their faces are serrated or provided with oppositely-directed teeth, as usual in pipe-wrenches.

The operation of placing the jaws upon the pipe swings back the top of the bar B, as indicated in Fig. 1. Then when the handle is swung around in the direction of the arrow the jaws, by the slight rolling action afforded by the space I, are caused to firmly grip and turn the pipe. The strain of the jaw B' is sustained by tensile action through the screw D drawing the rosette D' against the projection a³, and this is sustained by a thrust action on the bar A from the jaw A'. This construction makes a very strong wrench, that can be operated with convenient facility, and which can be manufactured with economy and little labor.

I claim as my invention herein to be secured by Letters Patent—

1. The within described pipe-wrench, comprising the main bar, its upper end formed as a jaw and its lower end a handle, and provided with projecting bearing portions upon

its back edge above the handle, the slide-bar having the outer jaw at its upper end, and internally chambered and threaded at its lower end, its lower body portion provided with lipped cheek-plates that form a guide-box loosely about said main bar, and the adjusting screw its thread fitting the thread in said slide-bar, its neck embraced by the bifurcated bearing projection on the main bar with its rosette head loosely confined in the space below said bearing, said slide-bar and its jaw having a limited backward and forward swing relative to the main bar, from the rosette head as a center, for the purpose set forth.

2. In a pipe-wrench, the main bar A having the jaw A', the handle A² and the backward projections a³ and a⁴ thereon, with a recess between said projections; the slide-bar B formed

with jaw B' and cheek-plates B², the latter loosely embracing said main-bar, the adjusting-screw D threaded into said slide-bar, its neck journaled in the projection a³ and having the rosette-head disposed within the recess between the projections, and the pintle-stud F fixed in the projection a⁴ with its end engaging within an axial opening in said rosette-head, and the spring disposed between the overhanging lips on said cheek-plates and the front of said main bar, all combined for operation substantially as and for the purposes set forth.

Witness my hand this 7th day of February, 1895.

EDWARD WRIGHT.

Witnesses:

CHAS. H. BURLEIGH,

ELLA P. BLENUS.