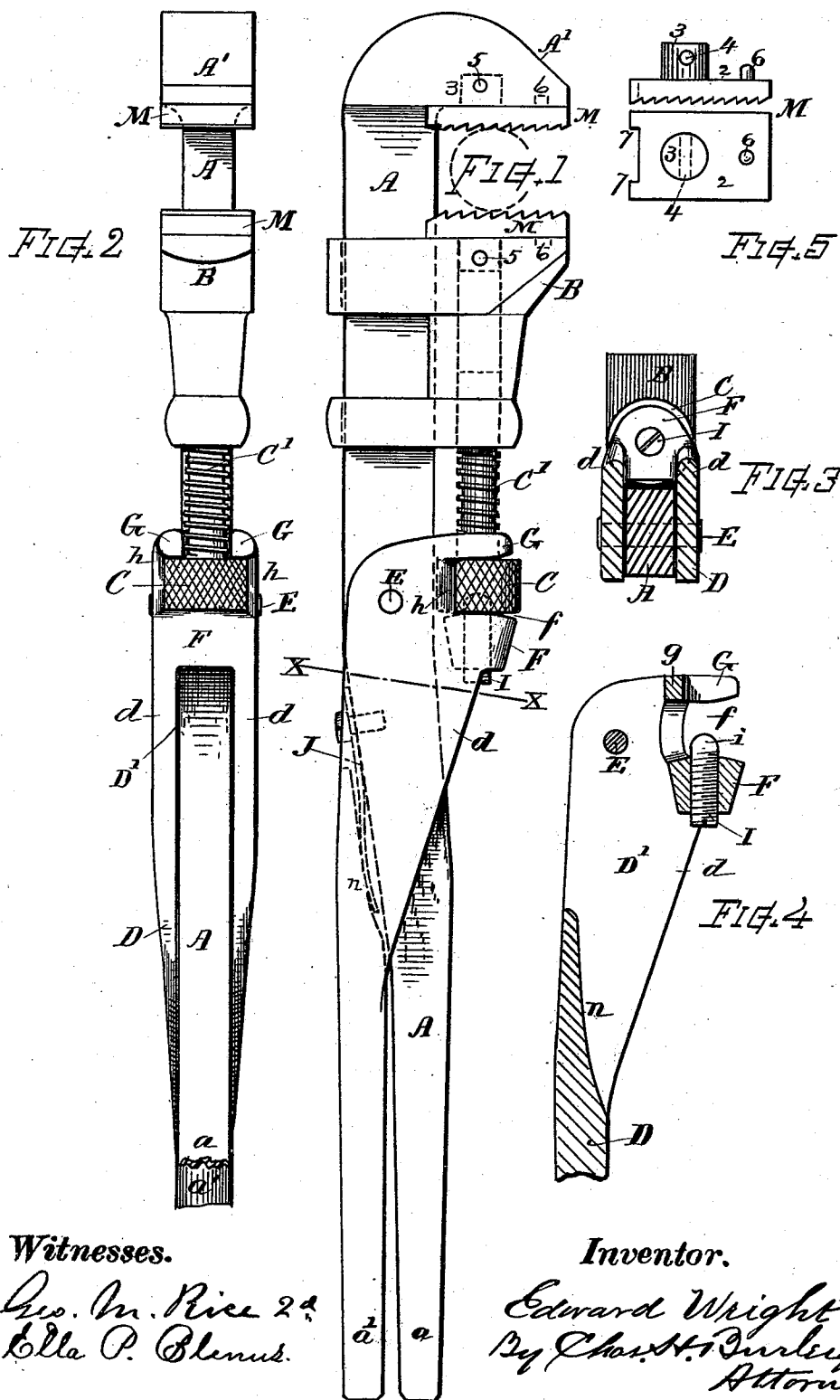


(No Model.)

E. WRIGHT.
PIPE WRENCH.

No. 505,869.

Patented Oct. 3, 1893.



UNITED STATES PATENT OFFICE.

EDWARD WRIGHT, OF WORCESTER, MASSACHUSETTS.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 505,869, dated October 3, 1893.

Application filed July 27, 1893. Serial No. 481,607. (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 convenient and desirable adjustable pipe-wrench in which the operating and adjusting devices are constructed and organized for operating in the manner hereinafter explained; also, to afford a simple and efficient means for the attachment of the jaw-facing plates.

In the drawings, Figure 1 is a side view of my improved pipe-wrench; Fig. 2 a front view of the same; Fig. 3 a transverse section at line *x x*; Fig. 4 a longitudinal section of the lever, and Fig. 5 shows form of the jaw-plate.

My improved pipe-wrench is composed of the following named parts, formed and disposed as shown.

A denotes the main bar formed with a rectangular body, an integral head or fixed jaw A' at its upper end, while its lower end is reduced and rounded to afford a suitable handle, as at *a*.

B indicates the sliding jaw mounted in well known manner on the bar A to move toward and from the fixed jaw A' with which it matches.

C' indicates the rosette-screw threaded to the interior of the jaw B, and having at its lower end the rosette or cylindrical head C burred on the peripheral surface in usual manner, to facilitate rotation of the screw.

D indicates the operating lever made with an opening D' therethrough, and side portions or cheeks *d d* that embrace the sides of the bar A, which latter is arranged through the opening in the lever and the lever pivoted thereto by a pin or bolt E that passes through the cheeks *d* and bar A at the position shown, so that the lower end of the lever, which is formed as a handle *a'*, can be swung toward and from the handle *a* of the bar. The upper end of the lever D projects forward of the bar and is fitted with a recess *f* for contain-

ing the rosette C, a back-support F that sustains the rosette and screw against the backward pressure of the jaw B, and fingers or lugs G that engage the projecting portion of the rosette at the sides of the screw for retaining the same in conjunction with the back support, and for drawing back the jaw when the lever is operated; the screw thus serving as an extendibly adjustable connection between the jaw B and shorter arm of the lever D. The two sides or lugs G are preferably joined by a connecting portion *g* that extends across from one to the other within the space between the front of the bar A and the screw C. The sides of the lever cheeks are properly rounded at *h*, so that the rosette can be conveniently rolled by the thumb or fingers. A screw-threaded stem I is preferably arranged through the back support, its forward end rounded, as at *i*, and setting into a corresponding axially disposed recess in the end of the rosette, thereby retaining the rosette in line with said back-support. If in any instance preferred the screw I can be omitted and the head of the rosette C allowed to rest against the back-supporter F with its central portion abutting directly against the surface thereof.

J indicates a flat spring secured to the bar A and pressing against the inner portion *n* of the lever for normally swinging said lever outward.

M M indicate the ratchet-faced jaw-facing plates, which in accordance with my improvement are formed as shown. These plates have their seating surfaces 2 formed to match the face of the jaw, and are provided with a cylindrical boss 3 that in size and position corresponds with the diameter and axial position of the rosette-screw C'. The opening for said screw is carried completely through the jaw B, and a recess of corresponding form and position is formed in the jaw A', as indicated by dotted lines on Fig. 1. The cylindrical boss 3 is inserted in said opening or recess in the jaw, and there secured by a pin 5 that passes laterally through the parts as indicated, a suitable hole 4 therefor being formed in the jaw and boss. The plate M is preferably also provided near its outer end with a pin or lug 6 that fits a corresponding recess in the jaw, thereby preventing any lat-

eral movement of the plate. Lugs 7 may also be formed thereon for embracing the angle of the main bar.

In the operation, when the end a' of lever D is swung outward the jaw B is moved away from the jaw A' by the action of the lugs G against the rosette C; and when said lever D is drawn inward the jaw B is advanced toward the jaw A' by the back-support F forcing upward the rosette and screw C', closing the jaws onto the pipe. By rotation of the rosette screw the jaw B is adjusted in manner similar to the well known "Coes" wrench to accommodate the action to larger or smaller pipes. This construction provides a very strong, durable and simple pipe-wrench which can be manufactured with economy and employed with convenient facility.

I claim and desire to secure by Letters Patent—

1. The combination of a main bar having the fixed jaw at its end, the sliding jaw mounted thereon adjacent to said fixed jaw, an operating lever having its longer arm at the back of the bar handle, its heel pivoted to said main bar and its shorter arm projecting at the front of the bar and fitted with a back-support below the sliding jaw, and the rosette-screw, threaded into and extendibly adjustable in said sliding jaw, the end of said rosette-screw seated against said back-support and connecting the sliding jaw and operating lever, substantially as and for the purpose set forth.

2. The operating lever having an opening therethrough and side cheeks that embrace the main bar and are pivotally connected thereto by a transversely disposed fulcrum pin, said lever projecting forward of the bar

and fitted with a recess for receiving the rosette or screw-head, a pair of lugs that embrace the screw above the rosette, and a back support against which the end of the rosette is seated, in combination with the main bar, the sliding jaw mounted on said main bar, and the rosette screw threaded in said sliding jaw, as and for the purpose set forth.

3. In a pipe-wrench, the jaw-facing plate fitted with a cylindrical boss corresponding in axial relation with rosette screw opening, or a recess in the jaw coincident therewith, and a projecting stud near the forward end of said plate, in combination with the wrench-jaw having recesses for receiving said boss and stud, and a laterally disposed pin passing through the boss and jaw from side to side, substantially as shown and described.

4. The within described pipe-wrench, consisting of the main bar carrying the fixed jaw at the end thereof, the sliding jaw mounted on the rectangular portion of said bar, the rosette-screw threaded in said sliding jaw parallel with and in front of the bar, the operating lever pivoted at its heel to the bar and having at its front, a recess within which the rosette or head of the screw is confined and a back-support against which the end of the rosette abuts, a centering stud fitted in said back-support with its point entering a recess in the rosette axis, and an expanding spring disposed between the bar and lever, all substantially as set forth.

Witness my hand this 24th day of July, A. D. 1893.

EDWARD WRIGHT.

Witnesses:

CHAS. H. BURLEIGH,
ELLA P. BLENUS.