

E. K. RIGHTER.

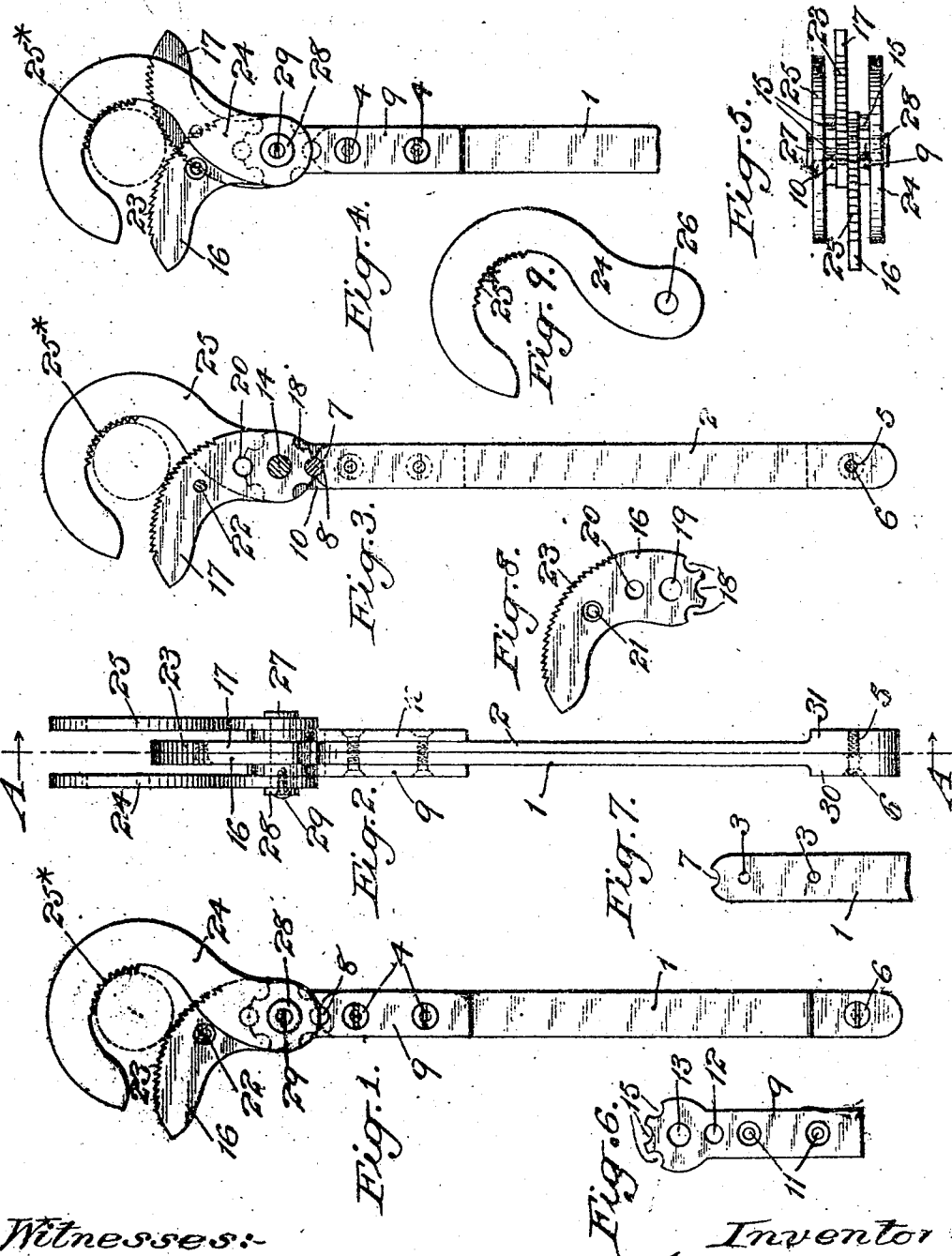
WRENCH.

APPLICATION FILED FEB. 24, 1912.

1,061,691.

Patented May 13, 1913.

2 SHEETS—SHEET 1.



Witnesses:

Hyperion Barry
George Barry

Inventor
Edward K. Righter
by his attorneys
Brown & Ward

E. K. RIGHTER.

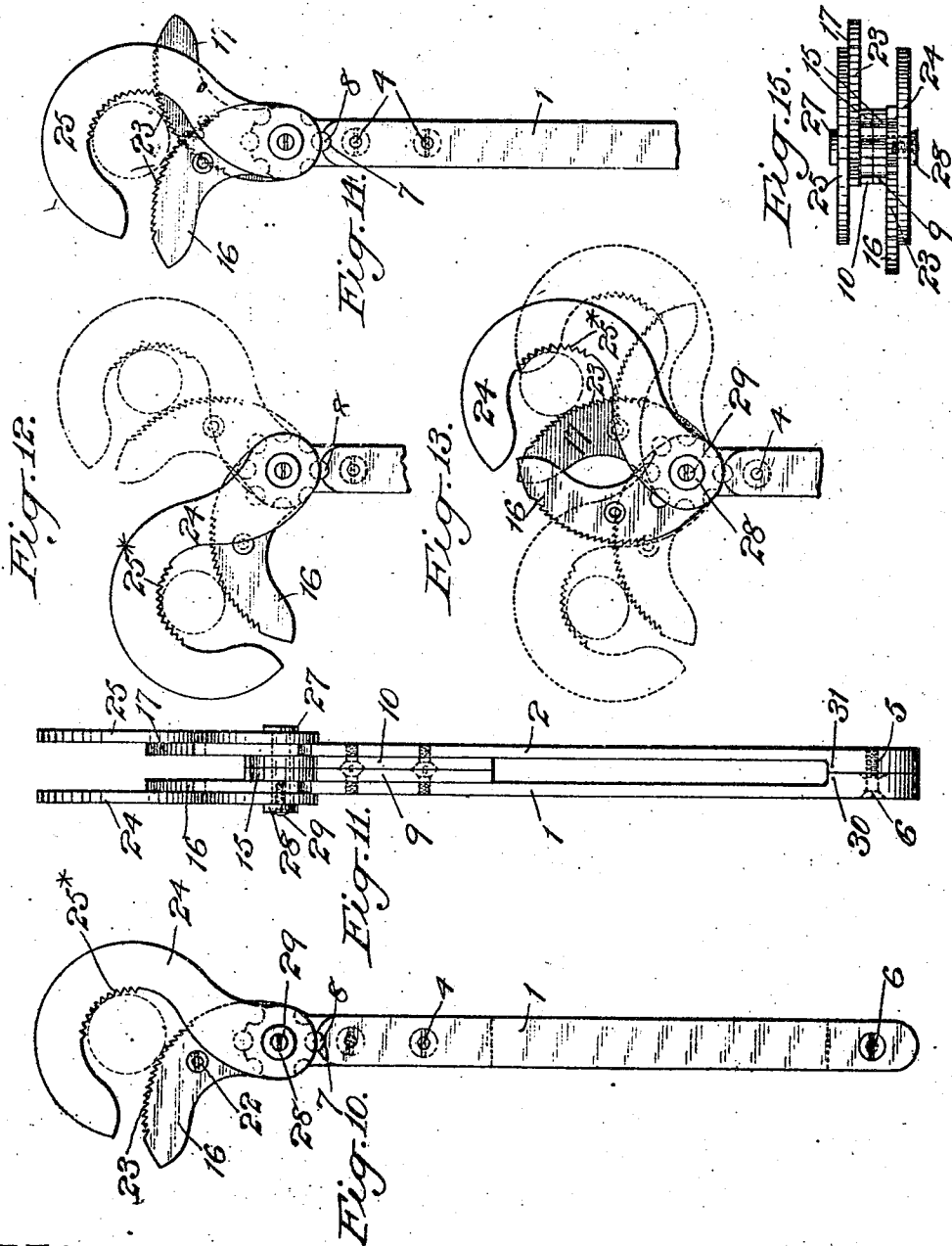
WRENCH.

APPLICATION FILED FEB. 24, 1912.

1,061,691.

Patented May 13, 1913.

2 SHEETS—SHEET 2.



Witnesses:
Hyperion Barry
J. George Barry

Inventor
Edward K. Righter
by his attorney
Bernard Ward

UNITED STATES PATENT OFFICE,

EDMUND K. RIGHTER, OF NEWARK, NEW JERSEY.

WRENCH

1,061,691.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed February 24, 1912. Serial No. 679,550.

To all whom it may concern:

Be it known that I, EDMUND K. RIGHTER, a citizen of the United States, and resident of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Wrenches, of which the following is a specification.

The object of my invention is to provide a novel pipe wrench, the parts of which are so connected and capable of re-arrangement as to render the wrench applicable for use in many different positions.

The wrench comprises a divided offset handle, a divided head removably secured thereto, a divided stationary jaw, and a divided movable jaw, the stationary jaw being adjustable rotatively and its members adjustable laterally.

In the accompanying drawings, Fig. 1 represents my improved pipe wrench in side elevation with the parts assembled in one relationship, Fig. 2 is a back view of the same, Fig. 3 is a section taken in the plane of the line A—A of Fig. 2, Fig. 4 is a partial side view of the wrench, showing the parts assembled in a second relationship, Fig. 5 is a plan view of the wrench with the parts in the position shown in Fig. 4, Fig. 6 is a side view of one of the divided head members, Fig. 7 is a side view of the inner end of one of the handle members, Fig. 8 is a side view of one of the stationary jaw members, Fig. 9 is a side view of one of the movable jaw members, Fig. 10 is a view in side elevation of the wrench with the parts assembled in a third relationship, Fig. 11 is a back view of the same, Fig. 12 is a detail view in side elevation, showing the parts assembled as in Figs. 10 and 11, with one different adjustment in full lines and another different adjustment in dotted lines, Fig. 13 is a similar view with the parts assembled in a fourth relationship, the parts being shown in full lines in one adjusted position and in dotted lines in two other adjusted positions, Fig. 14 is a similar view with the parts assembled in a fifth relationship, and Fig. 15 is a top plan view of the same.

The handle of the pipe wrench is divided into two members 1 and 2, each of said parts having near its inner end one or more holes 3 for receiving the movable fastening screws 4, and near its outer end one or more holes 5 for receiving the removable fasten-

ing screw 6. These two handle members are also provided at their inner ends with aligned recesses 7 for partly housing a removable locking pin 8 for securing the divided stationary jaw in different rotative adjustments as will hereinafter more fully appear.

The divided offset head comprises two head members 9 and 10, each having one or more holes 11 through its shank for receiving the fastening screw or screws 4. These offset head members 9 and 10 are also provided with aligned holes 12 which are also in alinement with the recesses 7 in the handle members for receiving the removable locking pin 8. These head members are also provided with aligned holes 13 for receiving therethrough the removable pin 14 which serves as a pivot for the divided stationary jaw and divided movable jaw. The head members are also provided with an annular series of aligned recesses 15 which are fitted to receive the removable locking pin 8, or a second removable locking pin, not shown, if it is desired to use the single locking pin at another position than that shown in the accompanying drawings, or if it is desired to use two locking pins.

The divided stationary jaw comprises two jaw members 16, 17, which members are provided with an annular series of aligned recesses 18, for receiving a portion of the removable locking pin 8 therein to secure the stationary jaw members in different rotative positions. These stationary jaw members are also provided with aligned holes 19 for receiving the pivot pin 14 therethrough, and aligned holes 20, which holes are in alinement with the annular series of recesses 15 for the reception of a second removable locking pin, not shown, or for the reception of the single locking pin 8. These stationary jaw members are also provided with aligned holes 21 for receiving a fastening screw 22 to more rigidly secure these two stationary jaw members together when they are used in proximity to each other in the same relative adjustment. The stationary jaw members may be provided with serrated faces 23.

The movable jaw is divided into two members 24, 25, of hook form having serrated edges 25* arranged to coact with the serrated edges 23 of the stationary jaw members. These movable jaw members are provided with aligned holes 26 for receiving there-

through the removable pivot pin 14. This removable pivot pin is provided with a head 27 serving as an abutment at one end of the pin and with a washer 28 and fastening screw 29 serving as an abutment at its other end for retaining the stationary jaw members and the movable jaw members in assembled adjustment. The outer ends of the handle members 1 and 2 are increased in thickness, as shown at 30, 31, the thickness of the head members 9 and 10, so as to bring the parts into the proper relative position when the handle members are reversed, as shown in Figs. 10 and 11.

In Figs. 1, 2 and 3, I have shown the two handle members placed together, the two stationary jaw members placed together and the two head members as interposed between the stationary jaw members and the movable jaw members, the two stationary jaw members pointing in the same direction. In Figs. 4 and 5, I have shown the same arrangement with the exception that the two stationary jaw members are pointing in the opposite direction.

In Figs. 10, 11 and 12, I have shown the two head members as placed together between the stationary jaw members and the inner ends of the handle members, the movable jaw members occupying positions beyond the stationary jaw members, the stationary jaw members both pointing in the same direction. In Fig. 12, I have shown the stationary jaw members as adjusted to a different rotative position to that shown in Fig. 10.

In Fig. 13, I have shown the stationary jaw members as pointed in the opposite direction, and the movable jaw members as arranged to coact with one of the stationary jaw members. If it is desired to have these movable jaw members coact with the other stationary jaw member, it will only be necessary to reverse the direction of the movable jaw members.

In Fig. 14, I have shown the stationary jaw members as adjusted to a different rotative position from that shown in Fig. 13, so as to permit the movable jaw members to coact with either of the stationary jaw members without reversal of the movable jaw members.

When I speak of the parts as being "reversible" it is to be understood that I mean either by transposing the parts or by turning the parts on the longitudinal axis.

What I claim is:

1. A pipe wrench comprising a handle, an offset head, a stationary jaw, a movable jaw and means for holding the parts in assembled adjustment, the handle and stationary jaw being independently reversible for varying laterally the position of the stationary jaw in the wrench.

2. A pipe wrench comprising a handle, a

head secured thereto, a stationary jaw interlocked with said head, a movable jaw and means for holding the parts in assembled adjustment, the stationary jaw and the movable jaw both being independently reversible.

3. A pipe wrench comprising a handle, a head secured thereto, a stationary jaw interlocked with said head, a movable jaw and means for holding the parts in assembled adjustment, the stationary jaw and the movable jaw both being independently reversible and the stationary jaw being rotatively adjustable with respect to said head.

4. A pipe wrench comprising a handle, an offset head secured thereto, a stationary jaw interlocked with said head, a movable jaw and means for holding the parts in assembled adjustment, the stationary jaw and the movable jaw both being independently reversible and the stationary jaw being also reversible for varying its lateral position in the wrench.

5. A pipe wrench comprising a handle, an offset head secured thereto, a stationary jaw interlocked with said head, a movable jaw and means for holding the parts in assembled adjustment, the stationary jaw and the movable jaw both being independently reversible and the stationary jaw being rotatively adjustable and reversible for varying its lateral position in the wrench.

6. A pipe wrench comprising a divided handle, a divided head secured thereto, a divided stationary jaw interlocked with said divided head, a divided movable jaw and means for holding the parts in assembled adjustment.

7. A pipe wrench comprising a divided handle, a divided head, a divided stationary jaw, a divided movable jaw and means for holding the parts in assembled adjustment, the handle members being reversible.

8. A pipe wrench comprising a divided handle, a divided offset head secured thereto, a divided stationary jaw interlocked with said divided head, a divided movable jaw and means for holding the parts in assembled adjustment, the parts of said handle being adapted to be secured together with the head members on the inside or on the outside.

9. A pipe wrench comprising a divided handle, a divided head secured thereto, a divided stationary jaw interlocked with said divided head, a divided movable jaw and means for holding the parts in assembled adjustment, the stationary jaw members being independently reversible with respect to the head.

10. A pipe wrench comprising a divided handle, a divided head secured thereto, a divided stationary jaw interlocked with said divided head, a divided movable jaw and means for holding the parts in assembled

bled adjustment, the stationary jaw members being independently rotatively adjustable with respect to the head.

11. A pipe wrench comprising a divided handle, a divided offset head secured thereto, a divided stationary jaw interlocked with said divided head, a divided movable jaw and means for holding the parts in assembled adjustment, the handle members being independently reversible for varying the lateral position of the stationary jaw members in the wrench.

12. A pipe wrench comprising a divided handle, a divided head attached thereto, a divided stationary jaw interlocked with said divided head, a divided movable jaw and means for holding the parts in assembled adjustment, the stationary jaw members being independently reversible and rotatively adjustable with respect to the head.

13. A pipe wrench comprising a divided handle, a divided offset head secured thereto, a divided stationary jaw interlocked with said divided head, a divided movable jaw and means for holding the parts in assembled adjustment, the stationary jaw members being independently reversible, the handle members being independently reversible for varying the lateral position of the stationary jaw members in the wrench.

14. A pipe wrench comprising a divided handle, a divided offset head secured thereto, a divided stationary jaw interlocked with said divided head, a divided movable jaw and means for holding the parts in assembled adjustment, the stationary jaw members being independently rotatively adjustable with respect to the head member, the handle members being independently reversible for varying the lateral position of the stationary jaw members in the wrench.

15. A pipe wrench comprising a divided handle, a divided offset head secured thereto, a divided stationary jaw interlocked with said divided head, a divided movable jaw and means for holding the parts in assembled adjustment, the stationary jaw members being independently reversible and

rotatively adjustable with respect to the head, the handle members being independently reversible for varying the lateral position of the stationary jaw members in the wrench.

16. A pipe wrench comprising a divided handle, a divided head secured thereto, a divided stationary jaw interlocked with said divided head, a divided movable jaw and means for holding the parts in assembled adjustment, the stationary jaw members and the movable jaw members being all independently reversible with respect to the head.

17. A pipe wrench comprising a divided handle, a divided head, a divided stationary jaw, a divided movable jaw and means for holding the parts in assembled adjustment, the handle members, the head members, the stationary jaw member and the movable jaw members all being reversible.

18. A pipe wrench comprising a divided handle, a divided offset head, a divided stationary jaw, a divided movable jaw and means for holding the parts in assembled adjustment, the handle members, the head members, the stationary jaw members and the movable jaw members all being independently reversible, the handle members being independently reversible for varying the lateral position of the stationary jaw members and the head members in the wrench.

19. A pipe wrench comprising a divided handle, a divided head, a divided stationary jaw, a divided movable jaw and means for holding the parts in assembled adjustment, the handle members, the head members, the stationary jaw members and the movable jaw members all being reversible, the stationary jaw members being also rotatively adjustable.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this twenty-third day of February 1912.

EDMUND K. RICHTER.

Witnesses:

F. GEORGE BARRY.

C. S. SUNDGREN.