W. S. LEIGHTON.

WRENCH.

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1,011,974.

Patented Dec. 19, 1911.

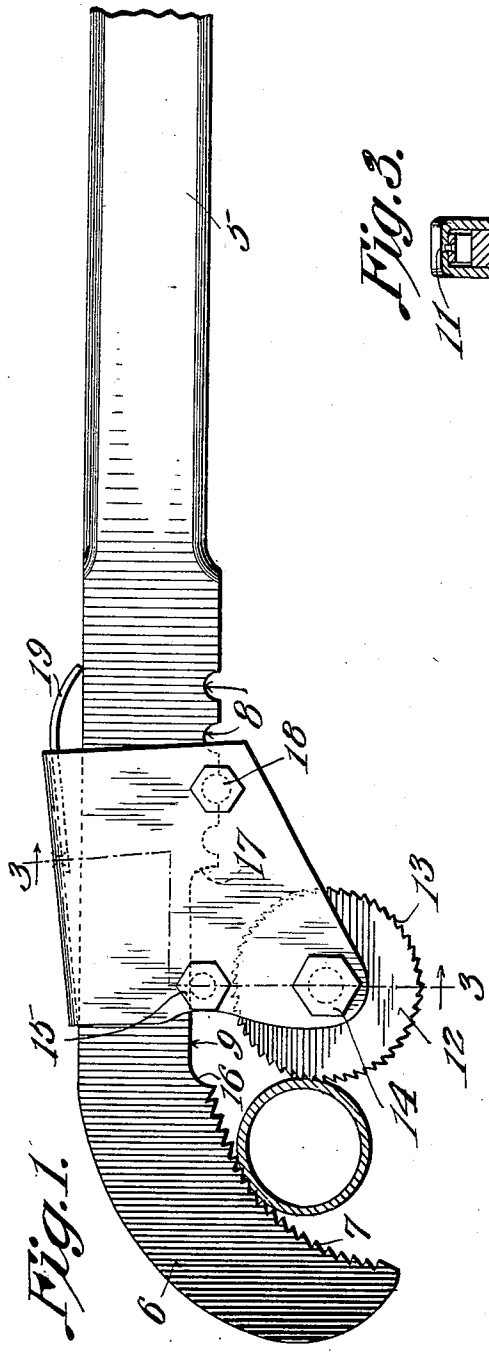

Fig. 1.

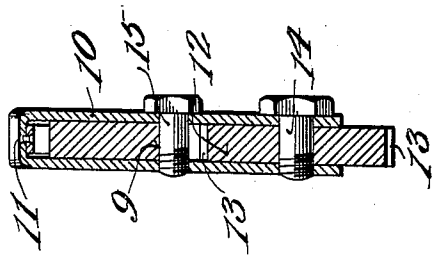

Fig. 3.

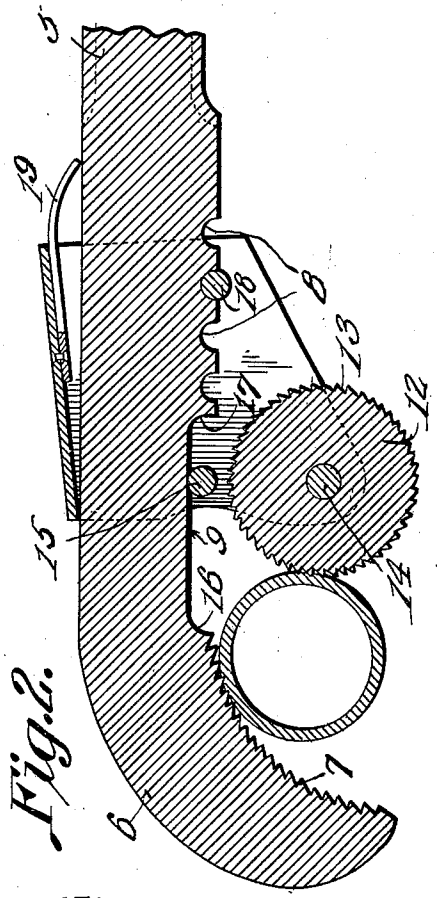

Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

WILLIS S. LEIGHTON, OF BIDDEFORD, MAINE, ASSIGNOR OF ONE-THIRD TO EURIE L. LEIGHTON AND ONE-THIRD TO HERMAN J. WENTWORTH, OF LAWRENCE, MASSACHUSETTS.

WRENCH.

1,011,974. Specification of Letters Patent. **Patented Dec. 19, 1911.**

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To all whom it may concern:

Be it known that I, WILLIS S. LEIGHTON, a citizen of the United States, residing at Biddeford, in the county of York and State of Maine, have invented a new and useful Wrench, of which the following is a specification.

It is the object of the present invention to provide an improved construction of pipe wrench and the invention aims primarily to provide a wrench of this type so constructed as not to require frequent adjustment and not be liable to be thrown out of adjustment while in use.

A further aim of the invention is to provide a wrench of this type so constructed that there will be but little lost motion upon initial movement of the wrench to turn a pipe so that the wrench may be used in corners and other places where there is but little room, in an efficient manner.

In the accompanying drawings Figure 1 is a view in side elevation of a wrench constructed in accordance with the present invention. Fig. 2 is a vertical longitudinal sectional view through a portion thereof. Fig. 3 is a sectional view on the line 3—3 of Fig. 1 looking in the direction indicated by the arrow.

In the drawings the numeral 5 indicates the shank of the wrench having flattened sides and which shank constitutes the handle therefor and at one end this shank is formed with a curved jaw 6 which constitutes the fixed jaw of the wrench. The concave edge of this jaw is formed with teeth 7 designed to bite into the surface of the pipe to be turned by the wrench. In its under edge, the shank 5, adjacent the jaw 6, is formed with a number of substantially semi-circular seats 8 and between these seats and the series of teeth 7, is cut away as at 9. The purpose of the seats 8 and cut away portion 9 will be presently explained.

Fitted slidably upon the shank 5 of the wrench is a U-shaped yoke stamped from sheet metal embodying cheek pieces 10 and an upper connecting portion 11. This yoke is disposed upon the shank in position straddling the same and rotatably mounted between the lower corners of the cheek pieces which are located adjacent the fixed jaw 6, is a wheel 12 formed with teeth 13 corresponding to the teeth 7 both in shape and function and forming therewith a semi-crescent-shaped socket. A bolt 14 is preferably employed in rotatably mounting the wheel 12 between the cheek pieces and this bolt may be removed and wheels of different diameters mounted thereon, this being one manner of adjusting the wrench. A bolt 15 is secured through the cheek pieces and extends transversely of the yoke and in engagement with the wall of the cut away portion 9 of the shank 5, the bolt 14 being arranged below the bolt 15. This wall, at its ends, terminates in shoulders one indicated by the numeral 16 and the other by the numeral 17 and the sliding movement of the yoke upon the shank is limited by the abutment of the bolt 15 against these shoulders.

A bolt 18 is secured to the cheek pieces 10 of the yoke and a leaf spring 19 is riveted or otherwise secured to the under side of the connecting portion 11 of the yoke and lies flat against the said portion and projects beyond the rear end of the yoke and is bent to have its free end bear against the upper edge of the shank 3 of the wrench. The spring 19 serves by its tension to hold the yoke in an upward direction so that the bolts 18 will engage in one or another of the seats 8. By the engagement of this bolt 18 in the seat 8, interchangeably, the sliding yoke is held at adjustment upon the shank of the wrench the forward edge of the connecting portion riding on the upper edge of the shank. By referring to Fig. 2 of the drawing it will be observed that the upper rear corner of the yoke may be depressed so as to disengage the bolt 18 from the seat 8 in which it is engaged whereupon the yoke may be slid along the shank in either direction and the bolt be allowed to spring into another one of the seats 8, when the proper adjustment has been attained. This constitutes a further adjustment for the wrench whereby to adapt the same for use in rotating pipes of various diameters.

It will be observed that the means for holding the yoke at adjustment upon the shank is, while simple, exceptionally substantial and not liable to become disarranged while the wrench is in use.

It will also be noted that the bolts 14, 15 and 18 being removable from the cheeks of the yoke permit the yoke to be removed laterally from the shank without slipping the same over the handle, it being sometimes customary to have the handle of consider-

able size which would render it inconvenient to remove the yoke over the end of the shank or the handle. It is sometimes desirable to bring the wheel 12 in close contact with curved jaw 6 for gripping small objects such as wires, rods, or small tubing, and this is permitted by removing the bolt 15 and sliding the yoke toward the said jaw which will bring the wheel 12 in close contact with the jaw for this purpose.

What is claimed is:

In a wrench, a shank having flattened sides and at one end a fixed curved toothed jaw, and having a plurality of seats in its lower edge and a cut-away portion between the seats and the jaw, a U-shaped yoke stamped from sheet metal and straddling the shank, the forward edge of the connecting portion of the yoke riding upon the upper edge of the shank, a bolt extending across the cheeks of the yoke and riding upon the cut-away portion of the shank, a second bolt extending across the cheeks of the yoke and adapted to seat in one of the said seats, a leaf spring riveted to the connecting portion of the yoke and lying flat against the said portion and projecting beyond the rear end of the yoke and bent to have its free end bear against the shank, a bolt extending across the cheeks of the yoke below the former bolt, and a toothed wheel mounted upon the latter bolt and forming with the said jaw a semi-crescent shaped socket, as and for the purpose specified.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIS S. LEIGHTON.

Witnesses:
THOMAS STONE,
FRANK E. MOSES.