(No Model.)

H. S. NOBLE & C. M. TUSSING.

WRENCH.

No. 589,668. Patented Sept. 7, 1897.

Fig. 1.

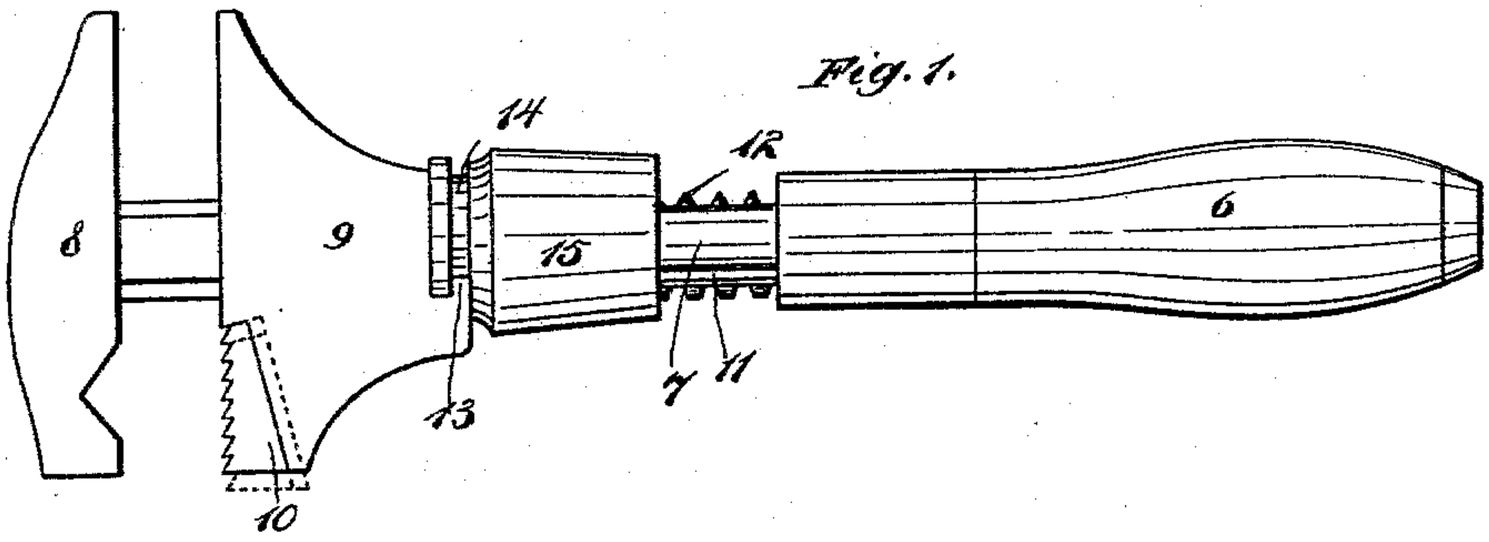


Fig. 2.

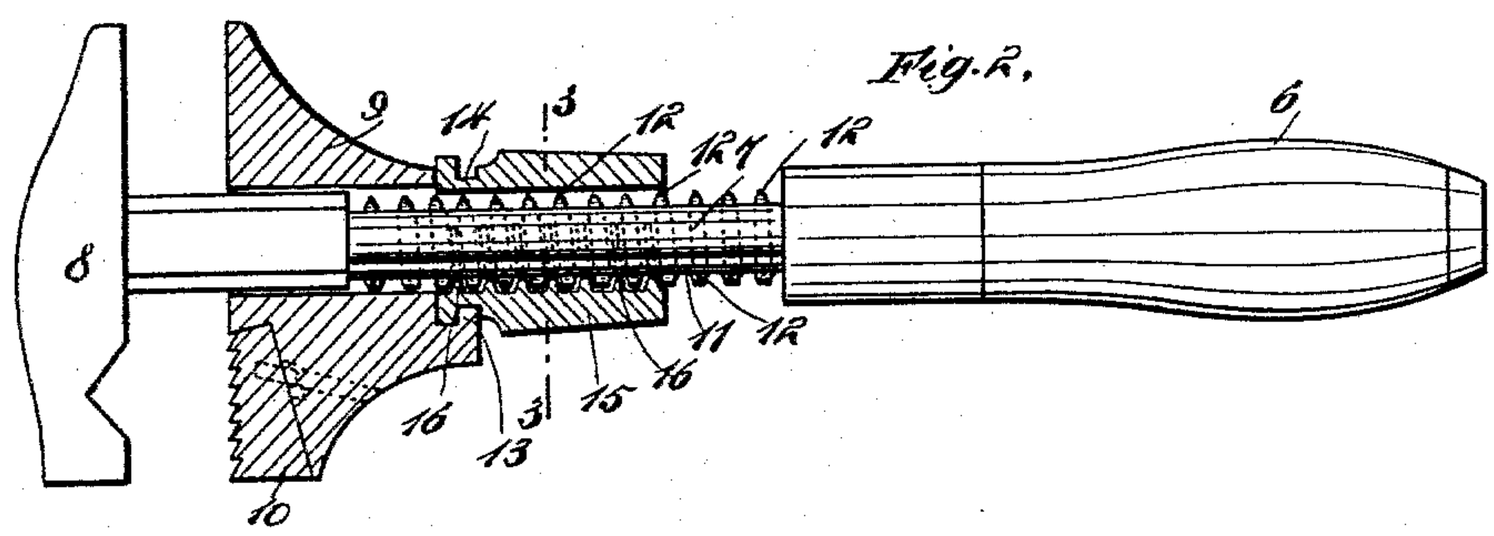


Fig. 3.

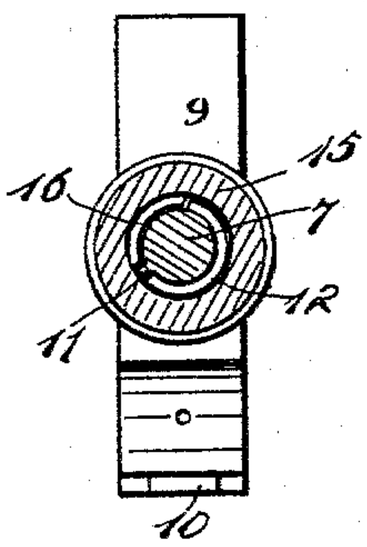


Fig. 4.

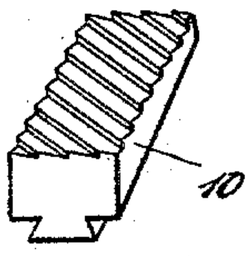
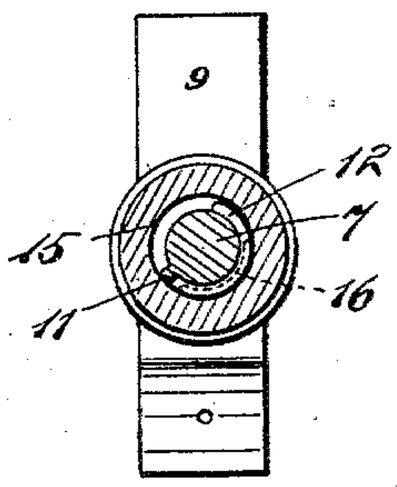


Fig. 5



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HARRY S. NOBLE AND CHARLEY M. TUSSING, OF ST. MARY'S, OHIO.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 589,668, dated September 7, 1897.

Application filed April 2, 1897. Serial No. 630,338. (No model.)

To all whom it may concern:

Be it known that we, HARRY S. NOBLE and CHARLEY M. TUSSING, of St. Mary's, in the county of Auglaize and State of Ohio, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

This invention is a wrench of that class in which the wrench has a fixed and a sliding jaw, and means coacting with the sliding jaw by which the sliding jaw may be held at any adjustment within the range of the movement of the sliding jaw.

This specification is the disclosure of one form of our invention, while the claims define the actual scope of the conception.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of our invention. Fig. 2 is a sectional view thereof. Fig. 3 is a sectional view taken on the line 3 3 of Fig. 2. Fig. 4 is a perspective view of a portion of the movable jaw, and Fig. 5 is also a section on the line 3 3 of Fig. 2 and showing the parts in different position.

The wrench has a handle 6 to which a shank 7 is fixed. The outer end of the shank 7 carries the fixed jaw 8. The sliding jaw 9 runs on the shank 7 and has a shifting tie-piece 10 to permit the recovery of the grip of the wrench on the pipe or other round object.

The major portion of the shank 7 and that portion which is adjacent to the handle 6 is formed round and provided with a rib 11, running longitudinally throughout its length. Running spirally around the rounded portion of the shank 7 are a series of broken threads 12, the lengths of which are equal and amount to a little over one-half the circumference of the rounded portion of the shank 7. The outer edges of the threads 12 are within the diameter of the large or outer portion of the shank. This large or outer portion of the shank is angular, so that the jaw 9 will not turn on the shank.

The jaw 9 has an inwardly-running flange 13, curved in the arc of a circle and fitting loosely within an annular groove 14, formed on the front portion of the thimble 15. The thimble 15 is provided with a series of threads 16, the lengths of which are equal and amount to less than one-half of the circumference of the rounded portion of the shank 7. The threads 16 are adapted to coact with the threads 12, so as to hold the thimble 15, and consequently the jaw 9, at any position on the shank. When the threads 16 are in the position shown in Fig. 3, the thimble 15 will be free to slide along the shank. To hold the thimble in this position, the operator should turn the thimble until the threads 16 engage with the side of the rib 11, which side is opposite the side on which the threads 12 are located. This will keep the thimble in the proper place and permit it to slide freely. When it is desired to lock the sliding jaw, the thimble is turned oppositely to the direction above described, so that the threads 16 will engage with the threads 12 and the thimble with the jaw 9 will be locked firmly on the shank.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In a wrench, the combination of a shank with a rigid jaw fixed thereon and a shank with a series of broken threads at one side of which a rib runs longitudinally along the shank, a jaw sliding on the shank, and a thimble revolubly connected with the jaw and turning on the shank, the thimble having broken internal threads coacting with the threads on the shank.

2. The combination of a shank having broken threads at one side of which a rib runs longitudinally with the shank, and a thimble turning on the shank and having internal threads coacting with the threads on the shank.

3. The combination of a shank with a rigid jaw thereon and with broken threads at one side of which is a rib running longitudinally with the threads, a jaw sliding on the shank, and a thimble revolubly connected with the jaw and having internal threads coacting with the threads on the shank.

4. The combination of a shank having a series of broken threads, the lengths of which are separated from each other to form a longitudinal space running along the shank, and the shank also having a rib running longitudinally at one side of the threads, and a

thimble turning on the shank and having broken internal threads coacting with the threads on the shank, the threads of the thimble being capable of moving through the space between the ends of the threads on the shank when not engaging said threads on the shank.

5. The combination of a shank having broken threads, with a stop at one side of the threads, the ends of the threads being separated to form a space running longitudinally along the shank between the ends of the threads, and a thimble turning on the shank and having broken internal threads coacting with the threads on the shank and capable of running through the space between the ends of the threads on the shank.

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