No. 872,117. PATENTED NOV. 26, 1907.

O. H. GENTRY.

WRENCH.

APPLICATION FILED SEPT. 16, 1907.

Fig. 4.

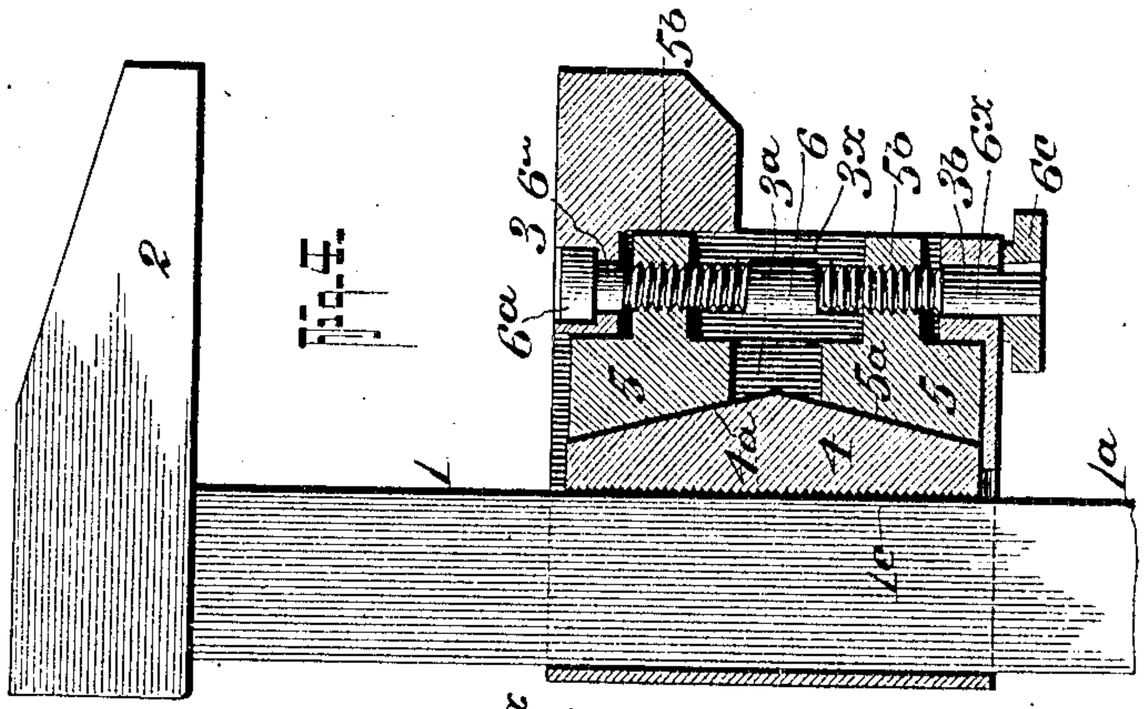


Fig. 3.

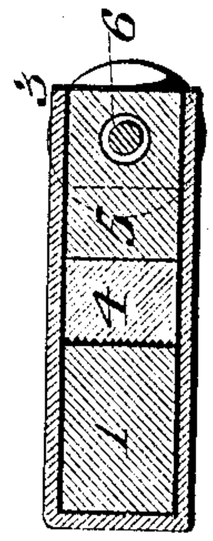


Fig. 2.

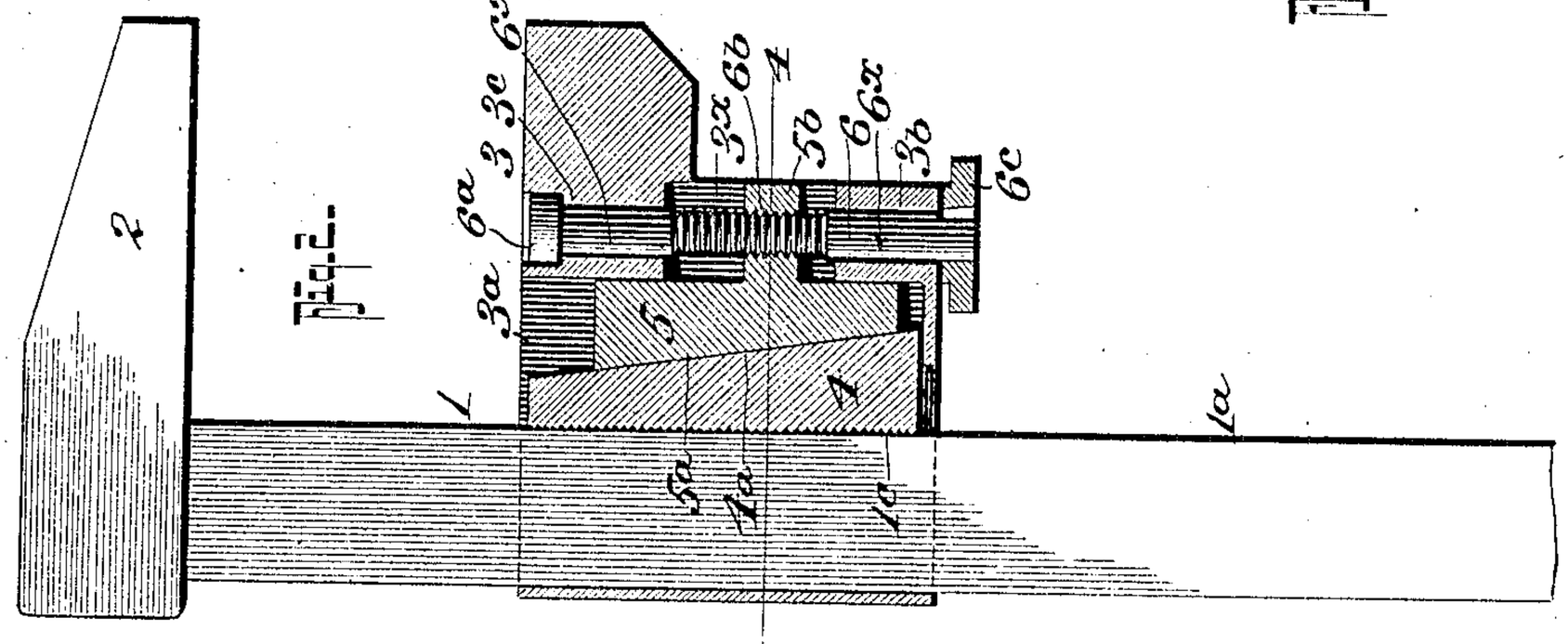
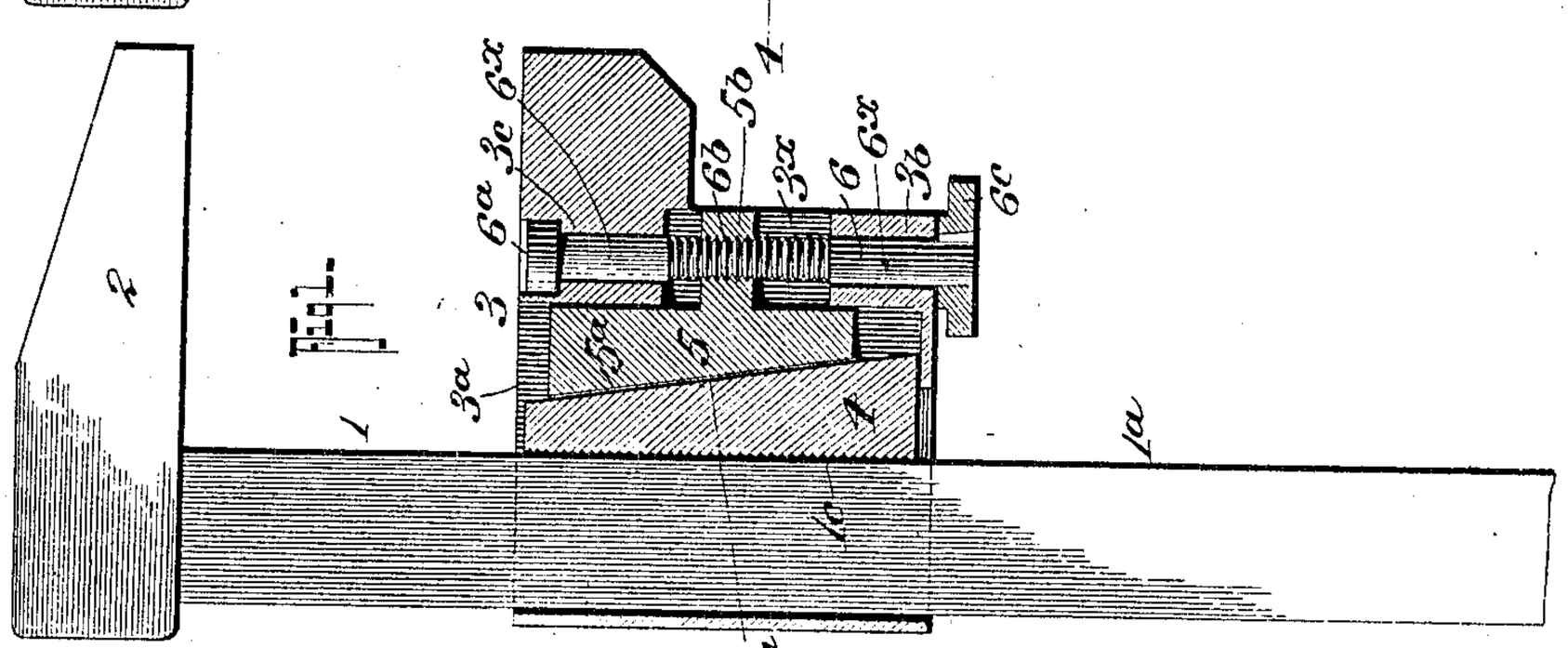


Fig. 1.



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WRENCH.

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Application filed September 16, 1907. Serial No. 393,027.

To all whom it may concern:

Be it known that I, OLIVER HOWARD GENTRY, residing at Langley, in the county of Aiken and State of South Carolina, have invented certain new. and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to certain new and useful improvements in sliding jaw wrenches, and in its generic nature my invention embodies a wrench comprising a shank having a fixed jaw, a sliding jaw shiftably mounted on said shank, and wedge devices carried by the sliding jaw for clamping the sliding jaw on the shank in its various adjusted positions.

In its more subordinate nature, the invention comprises certain novel features of construction, combination and arrangement of parts all of which will be first described in detail, and then be specifically pointed out in the appended claims, reference being had to the accompanying drawings in which,—

Figure 1, is a central, vertical, longitudinal section of a portion of the shank, the fixed jaw and the sliding jaw, showing the position of the parts when the sliding jaw is free to move along the shank. Fig. 2, is a similar view showing the position of the parts when the sliding jaw is clamped to the shank. Fig. 3, is a cross section on the line 4—4 of Fig. 2. Fig. 4, is a central, vertical longitudinal section similar to Fig. 2, showing a different form of my invention.

Referring now to the accompanying drawings, in which like letters and numerals of reference indicate like parts in all of the figures, 1 designates the shank to which the fixed jaw 2 is secured in the usual manner, the shank 1 being secured to a hand engaging portion 1^a in any approved manner.

3 designates the sliding jaw which in external appearance nearly resembles the ordinary type jaw, and which is internally provided with a chamber 3^a for the passage of the sliding jaw and for the reception of the clamping block 4 and the shiftable wedge block 5 as shown, the chamber 3^a merging with another chamber $3^\times$.

3^b and 3^c designate bearing portions in which the operating screw 6 is held, the screw 6 having a head 6^a and a threaded portion 6^b and the non-threaded bearing portions $6^\times$ that coöperate with the bearings 3^c and 3^b, the shaft 6 projecting through the jaw 3 and having a milled nut 6^c secured to its end by a key, or other suitable means.

The shiftable wedge block 5 is provided with an inclined face 5^a to coöperate with the similarly inclined face 4^a of the clamping block 4, and the block 5 is also provided with a bearing projection 5^b operable in the chamber $3^\times$ and through which bearing portion the threaded portion 6^b of the screw 6 passes. The clamping block 4 has a clamping face to clamp against the face 1^c of the shank 1 when the parts are in the position shown in Fig. 1 to lock the sliding jaw to the shank 1 in any position desired. When the screw 6 is turned to loosen the wedges, as shown in Fig. 1, the sliding jaw 3 may be slid backward and forward to adjust the jaws to any desired distance apart.

In Fig. 4, I have shown a slightly different form of my invention in which the chamber $3^\times$ is made slightly longer and in which a clamping block 4 with reversely arranged faces, and a pair of wedge blocks 5 are provided, each of which are arranged with their inclined faces 4^a and 5^a inclined in opposite directions and the threaded portions 6^b of the screw shaft 6 is reversely threaded, otherwise the form shown in Fig. 4 is not essentially different from that shown in the remaining figures. The shank engaging face of the block 4 may be serrated, if desired.

By constructing a wrench as shown and described, a more accurate and quick adjustment of the jaws can be obtained than by the use of other types of sliding jaw locking devices and furthermore the wrench embodying my invention can be easily and cheaply manufactured and it will readily and effectively serve its intended purposes.

From the foregoing description, taken in connection with the accompanying drawings, it is thought the complete construction, operation and many advantages of my invention will be readily understood by those skilled in the art to which the invention appertains.

What I claim is:—

1. The combination with the fixed jaw and shank, of a sliding jaw mounted on said shank and having an internal chamber open at one end and a supplemental chamber merging with said internal chamber, said sliding jaw having bearing portions at the ends thereof, a screw shaft mounted in said

bearing portions and projecting through said supplemental chamber, said screw shaft having smooth surfaced bearing portions to cooperate with said bearing portions of the sliding jaw, and a threaded portion, said shaft projecting to the outside of the sliding jaw, an operating nut secured to the projecting portion of the shaft, a slidable wedge block held within said sliding jaw and insertible through the open end thereof, said slidable wedge block having a bearing portion projected into said supplemental chamber and having a threaded portion to coöperate with the threaded portion of the shaft, a clamping block interposed between the wedge block and the fixed shank and retained from exit through said open end of the sliding jaw by said wedge block, all being arranged so that as the screw shaft is turned in one direction the wedge block will force the clamping block against the fixed shank to lock the sliding jaw thereto, substantially as shown and described.

2. The combination with the fixed jaw and shank, of a sliding jaw mounted thereon having an internal chamber and bearing portions, a screw shaft mounted in said bearing portions and having a pair of reverse threads, a pair of wedge blocks mounted in said sliding jaw and having bearing portions for cooperating with said screw shaft, a clamping block with reversely arranged clamping faces held in said sliding jaw, one coöperating with each wedge block, all being arranged substantially as shown and described.

OLIVER HOWARD GENTRY.

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