

No. 719,590.

PATENTED FEB. 3, 1903.

R. H. HEARN.
WRENCH.

APPLICATION FILED JUNE 9, 1902.

NO MODEL.

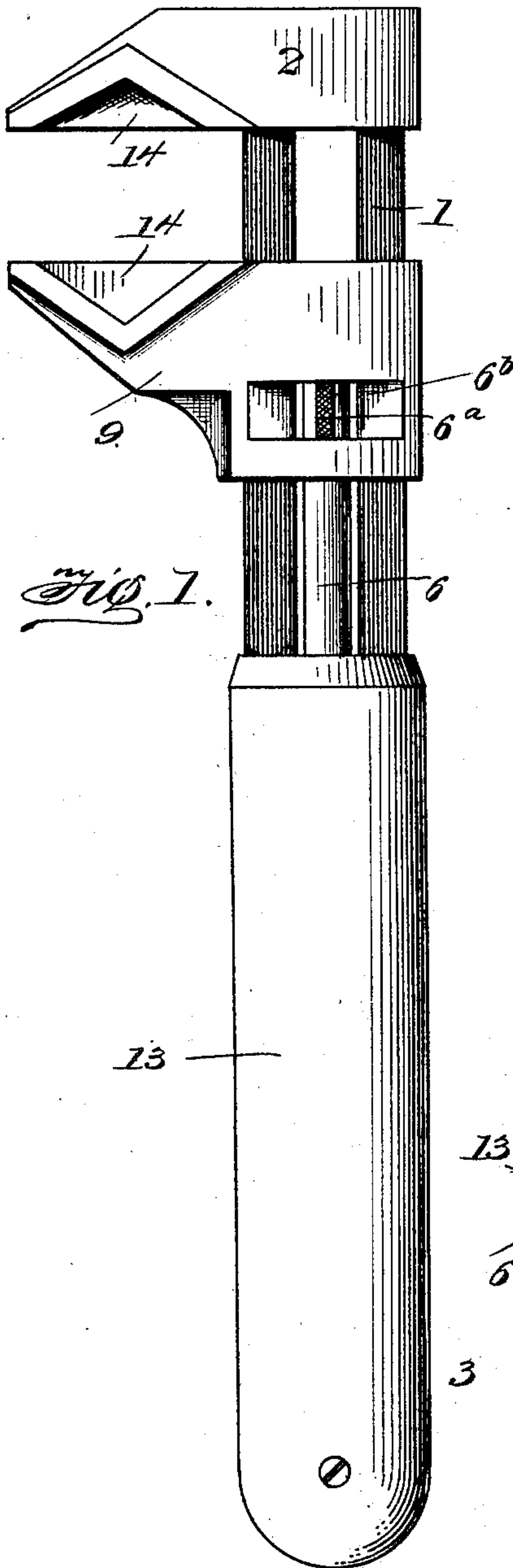


Fig. 1.

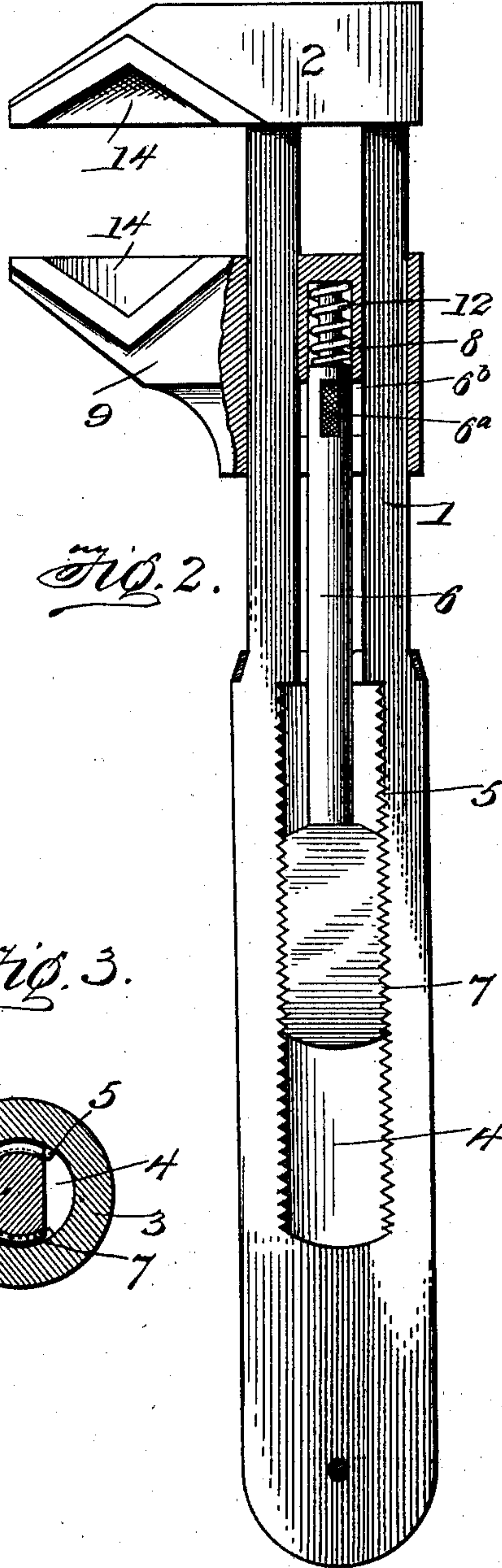


Fig. 2.

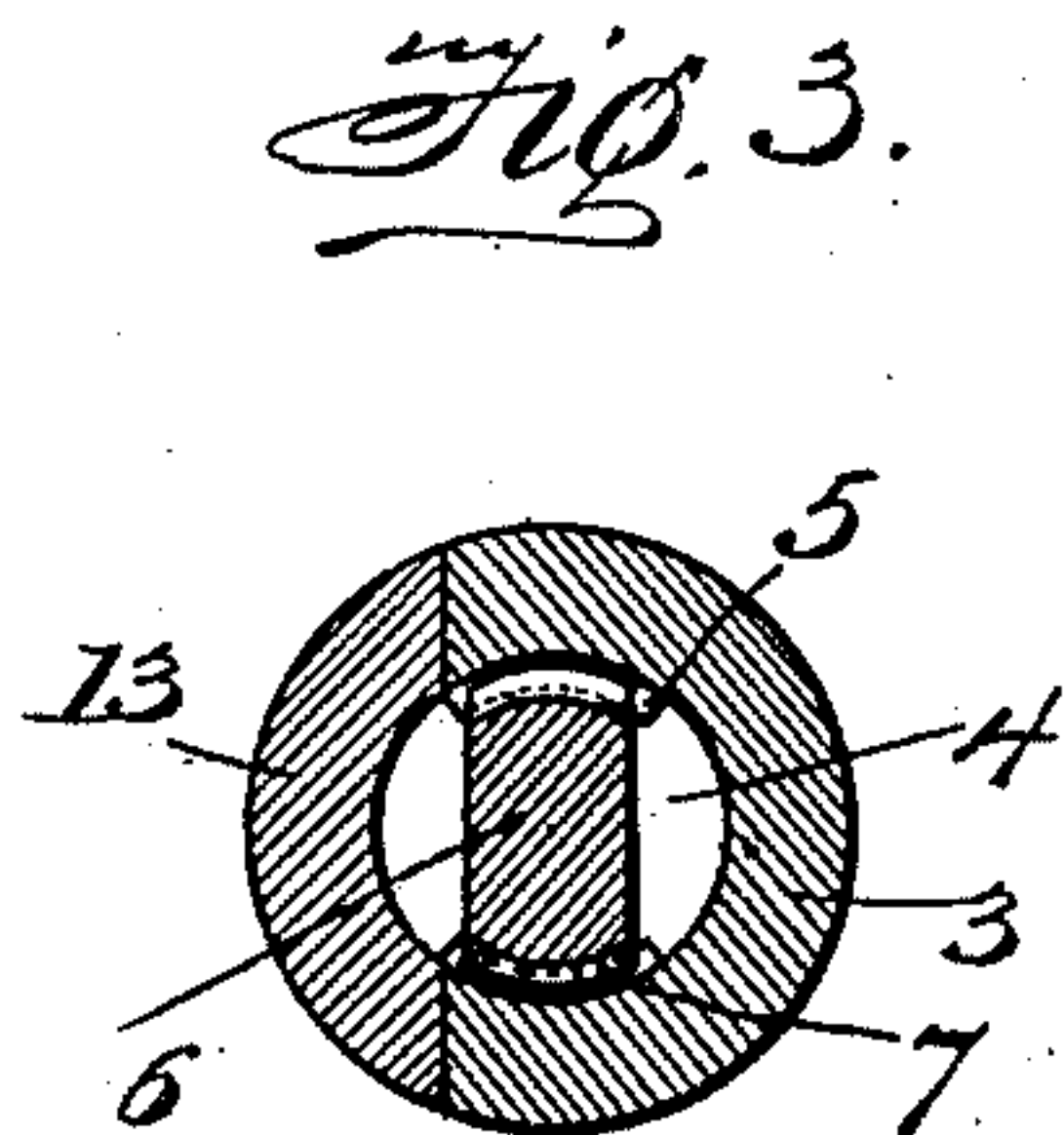


Fig. 3.

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UNITED STATES PATENT OFFICE.

ROBERT H. HEARN, OF DYER, TENNESSEE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 719,590, dated February 3, 1903.

Application filed June 9, 1902. Serial No. 110,882. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. HEARN, a citizen of the United States, residing at Dyer, in the county of Gibson and State of Tennessee, have invented certain new and useful Improvements in Sliding-Jaw Wrenches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to sliding-jaw wrenches, and particularly to that class of wrenches of the quick-action type, in which the sliding jaw is mounted for quick adjustment toward and from the fixed jaw.

The object of the invention is to provide a wrench of this character having a sliding jaw, with adjusting means for sliding said jaw, and means for quickly locking and unlocking said adjusting means to permit of the rapid adjustment of the sliding jaw.

With the above and other objects in view, which will readily appear as the nature of the invention is better understood, said invention consists in certain novel features of construction and combination and arrangement of parts, which will be hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a sliding-jaw wrench embodying my invention. Fig. 2 is a similar view with one section of the handle removed and a part of the sliding jaw broken away to show the construction. Fig. 3 is a cross-section through the stem and handle.

Referring now more particularly to the drawings, the numeral 1 denotes a longitudinally-slotted shank provided at one end with a fixed jaw 2 and having its other end offset or deflected downwardly and forming one part of a handle 3. The handle 3 is provided with a longitudinal chamber 4, provided at diametrically opposite points with longitudinal series of threads or teeth 5. A stem 6 is fitted to slide longitudinally and to rotate in said slotted shank and chamber 4 and is formed at its inner end, at diametrically opposite sides, with similar threads or teeth 7, adapted to engage the teeth 5. The outer or forward end of the stem 6 is seated to rotate in a socket or chamber 8, formed in the rear part of the sliding jaw 9, and is provided with

a laterally-projecting finger-piece 6^a, which projects through a transverse slot 6^b, formed in the side of said jaw, whereby said stem is held from longitudinal displacement, while permitted to have a free rotary movement. Forward or backward movement of the stem, except to a limited extent, is prevented by the engagement of said finger-piece 6^a with the front and rear walls of the slot, while the finger-piece is free to be swung or tilted in the slot in a direction transversely of the shank, thereby imparting a quarter-turn to the stem 6. When the stem is turned in one direction, so as to bring the threads or teeth 7 to a position at right angles with the threads or teeth 5, said stem is free to slide longitudinally in the chamber 4, thus permitting of the adjustment of the sliding jaw 9 toward and from the fixed jaw 2; but when the stem is given a quarter-turn in either direction the teeth 7 will be brought into engagement with the teeth 5, thus forming a locking connection which will hold the stem against longitudinal movement and maintain the sliding jaw in fixed position relative to the fixed jaw. It will thus be seen that as the stem is free to turn at its forward end in the sliding jaw an axial movement of the stem in one direction will permit of the quick adjustment of said jaw, and an axial movement of the stem in a reverse direction will bring the teeth 5 and 7 into locking engagement, thus fixing the jaw in adjusted position. To prevent casual turning of the stem and accidental disengagement of the teeth while the wrench is in use, a spiral spring 12 is provided in the socket 8 to bear upon the front end of the stem, thus holding the finger-piece 6^a in frictional engagement with the rear wall of slot 6^b and preventing the stem from accidentally turning. The handle is completed by the application of a removable section 13 to the fixed section 3, said removable section being secured to said fixed section by the use of any desired fastening devices. If desired, I may provide each jaw with a supplemental V-shaped or angular jaw 14, which is found very useful in some classes of work.

From the foregoing description, taken in connection with the accompanying drawings, it is thought that the construction, mode of operation, and advantages of my improved

wrench will be readily apparent without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be
5 resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters
10 Patent, is—

1. In a wrench, the combination with a handle or shank having a fixed jaw and formed with teeth: of a sliding jaw and a rotary stem mounted at one end to turn in and slide with
15 the sliding jaw and provided at its opposite end with teeth to engage the teeth on the handle, said teeth being thrown into and out of engagement by a rotative movement of said stem, substantially as set forth.

20 2. In a wrench, the combination with a shank provided with a fixed jaw and a handle the latter having a longitudinal chamber; of locking-teeth in said chamber, and a stem slidable in the chamber and rotatably connected at one end with a sliding jaw and pro-
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vided at its opposite end with teeth to engage said teeth in the chamber, whereby when the stem is turned in one direction the teeth will be thrown into engagement, and when turned in the reverse direction, the teeth will be disengaged, substantially as specified. 30

3. In a wrench, the combination with a handle or shank having a fixed jaw and formed with teeth: of a stem mounted at one end to turn loosely in the fixed jaw and provided at
35 its opposite end with teeth to engage the teeth on the handle, said teeth being thrown into and out of engagement by a rotative movement of said stem, and means upon the sliding jaw for holding said stem against casual rotative movement, substantially as and
40 for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBT. H. HEARN.

Witnesses:

JAMES ROGERS, Jr.,

J. W. BAIRD.