

No. 655,026.

Patented July 31, 1900.

L. SMITH.
WRENCH.

(Application filed Mar. 3, 1900.)

(No Model.)

Fig. 1.

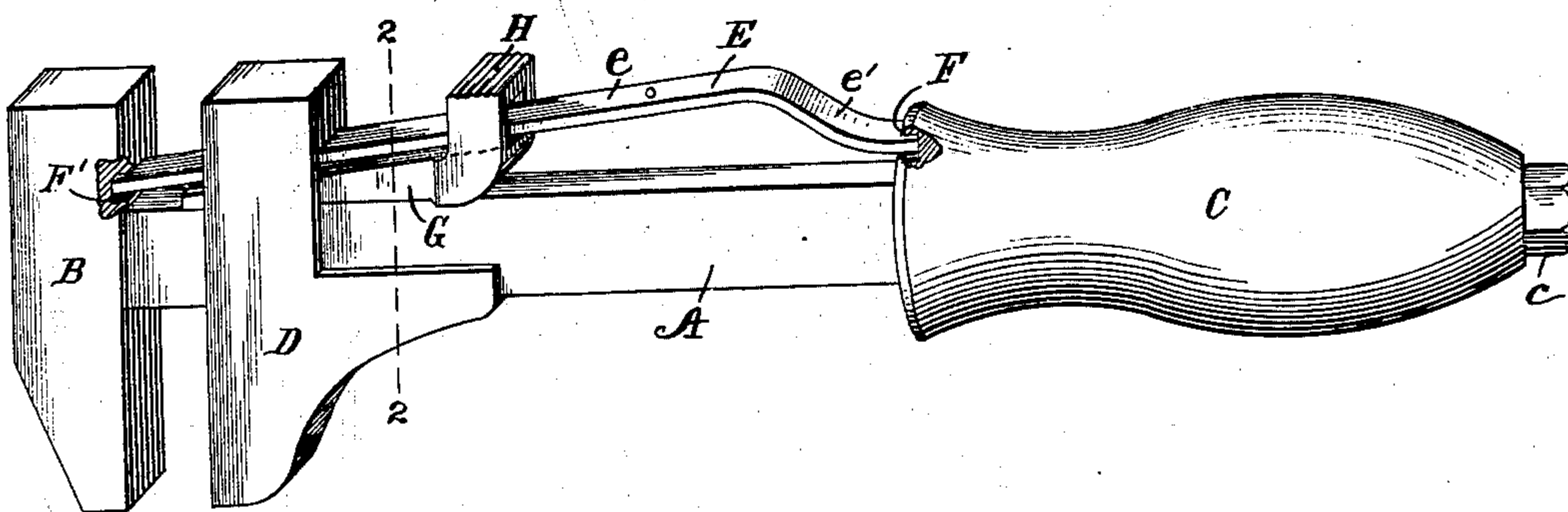


Fig. 3.

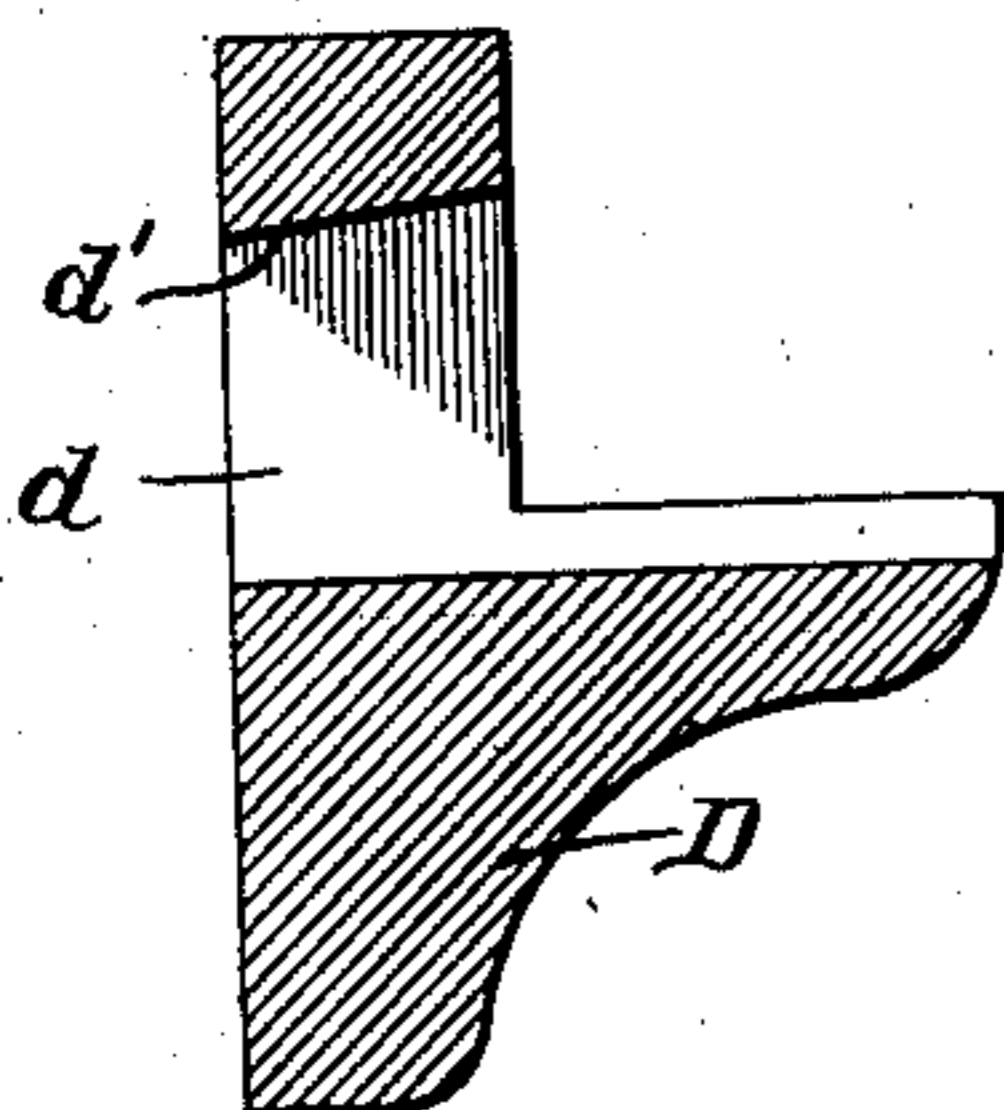
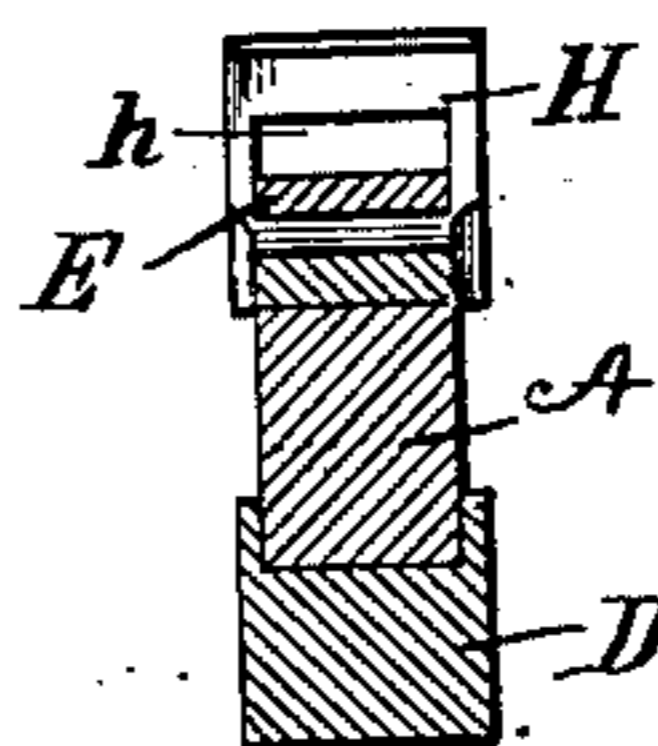


Fig. 2.



Witnesses

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SPECIFICATION forming part of Letters Patent No. 655,026, dated July 31, 1900.

Application filed March 3, 1900. Serial No. 7,183. (No model.)

To all whom it may concern:

Be it known that I, LOWELL SMITH, a citizen of the United States, residing in the township of Wheeler, Gratiot county, and State of Michigan, (whose post-office address is Breckenridge, Michigan,) have invented an Improvement in Wrenches, of which the following is a specification.

This invention relates to improvements in wrenches, and has for one object to provide a wrench having a movable jaw with means for quickly and easily holding the movable jaw in the position to which it is adjusted and enable a very exact adjustment to be had.

A further object is to construct a wrench having a freely-sliding jaw, with means for positively holding the jaw in its adjusted position without the employment of ratchet or engaging teeth which necessitate the movement of the jaw in adjusting it at least the distance of one tooth, and consequently prevent a nice or exact adjustment, and which teeth also present parts easily broken or marred.

A further object is to provide a device having a stationary member and freely-sliding member thereon with novel and particularly-effective wedge-locking means for said freely-sliding member.

A further object is to so construct and arrange the parts that the locking device can be readily operated by the thumb or finger of the hand holding the wrench.

A further object is to so construct and arrange the parts that the displacement of the wedge device is impossible.

A further object is to construct a simple, strong, and effective wrench which can be produced at a minimum cost.

With such and other objects in view the invention is embodied in the parts, arrangement, and combinations of parts hereinafter described, and particularly set forth in the claims.

In the accompanying drawings I have illustrated a practical embodiment of my invention, but desire it understood that I do not limit the invention in its useful applications to the construction there shown for the purpose of an understanding of the invention.

In the drawings, Figure 1 is a perspective

view, partly broken away, of a wrench embodying my improvements. Fig. 2 is a cross-sectional view. Fig. 3 is a longitudinal view through the movable jaw.

Referring to the drawings, A indicates a stationary member which in the present instance is shown to be the shank of a nut-wrench having at one end a stationary jaw B and at the other end a handle of suitable form, (indicated at C,) which is shown as being sleeved on a part of the shank A and retained in place by suitable means, such as a nut c, engaging a threaded portion of the shank.

D indicates a movable member which in this instance is shown to be the movable jaw of the wrench. The movable jaw has an angular hole d extending therethrough, through which passes the shank A, which is also angular, and on which the jaw D is freely slidable between the handle C and stationary jaw. The hole d is of greater width than the diameter of the shank A to enable the insertion therein of the locking means hereinafter described, and a wall d' of the hole d is inclined, as shown.

The locking means for holding the movable member in adjusted positions on the stationary member comprises a strip E, extending from the stationary jaw B to the handle C through the hole d and preferably on the rear side of the shank, which strip has an inclined portion e, diverging from the jaw end of the shank toward the handle, and an inbent portion e' at the handle end. The ends of the strip E are held in sockets F and F', respectively, in the stationary jaw and handle C, thus permitting the strip to move laterally toward and from the shank, but preventing endwise movement thereof. Located between the strip E and shank A is a wedge device G, having a relatively-long straight side engaging the shank A and a relatively-long inclined side contacting with the flat inner side of the strip E and having also a head or operating portion H, provided with a hole h, through which the strip E passes, the latter serving as a retaining means for the wedge. The end of the head H is milled or roughened to enable a better hold when moving the wedge. This arrangement of the strip E and wedge G, in

conjunction with the stationary and movable members, provides a holding or locking means which will hold much more perfectly than when the wedge alone is employed and enables me to dispense with the engaging teeth usually heretofore found necessary.

It is believed that the use of the wrench will be readily understood. To adjust the movable jaw, the finger or thumb is placed on the milled head of the wedge and the latter moved toward the handle, which movement releases the jaw D. When the jaw has been set as desired, the wedge is shoved home into the hole d in the jaw D between the strip E and the shank A.

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

1. In a wrench, the combination of a shank and a stationary jaw, of a movable jaw slidably mounted on said shank, a strip, and a wedge device between said strip and shank and having an operating-head projecting beyond the strip substantially in a plane passing longitudinally through said shank and strip, substantially as described.

2. In a wrench, the combination of a shank, a stationary jaw, a strip having an inclined portion, a movable jaw having a hole through which said strip and shank pass, and a wedge between said shank and strip and having an operating-head provided with a hole through

which said strip passes, substantially as described.

3. The combination with a stationary member, of a movable member slidable on the stationary member, a strip, and a wedge between said stationary member and strip and having relatively-long faces lying flat against said stationary member and one face of the strip and having an operating portion projecting beyond the opposite face of the strip, substantially as described.

4. In a wrench, the combination of a shank, a stationary jaw thereon, a handle thereon, a strip held by said jaw and handle from endwise movement and permitted to move laterally, a movable jaw having a hole through which said shank and strip pass, and a wedge between said shank and strip and having an operating-head provided with a hole through which said strip passes, substantially as described.

5. The combination of a stationary member, a movable member slidable on the stationary member, a strip secured at each end on said stationary member, and a wedge between said strip and stationary member and having an operating portion, substantially as described.

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Witnesses:

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