No. 710,040. Patented Sept. 30, 1902.

T. H. CAHILL.

WRENCH.

(Application filed Jan. 23, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

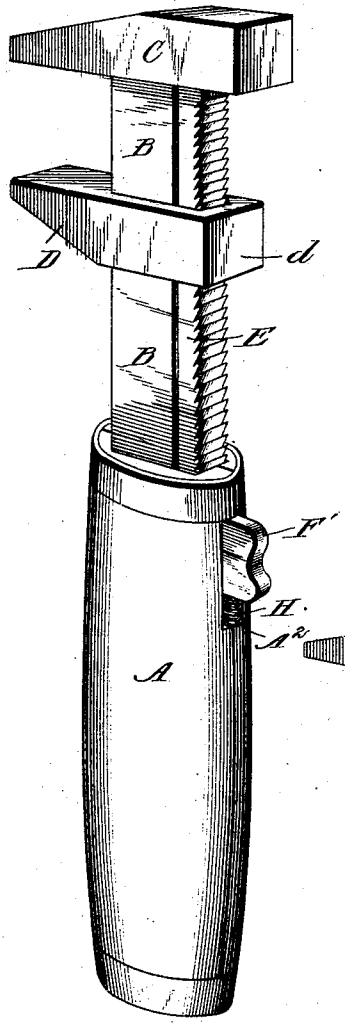


Fig. 3.

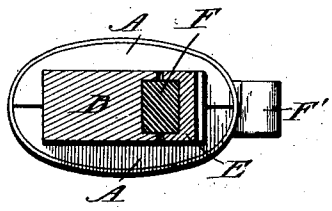


Fig. 2.

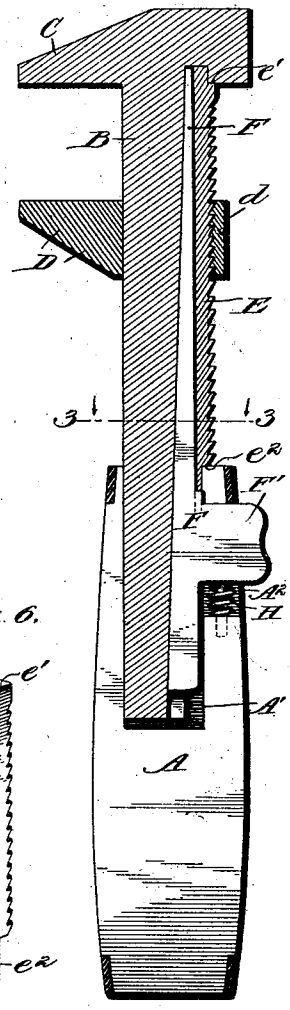


Fig. 4.

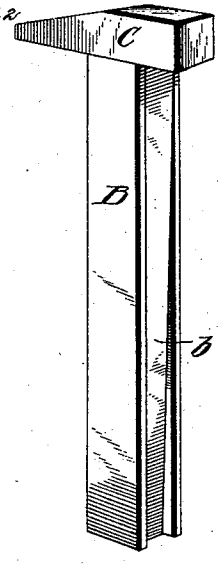
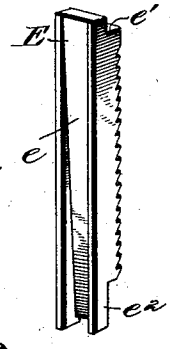


Fig. 5.

Fig. 6.



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(No Model.) 2 Sheets—Sheet 2.

Fig. 7.

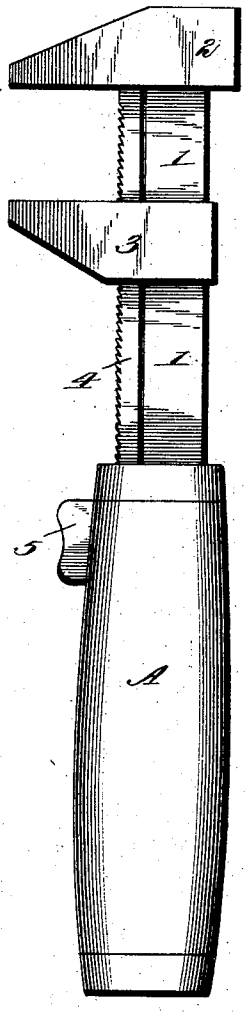
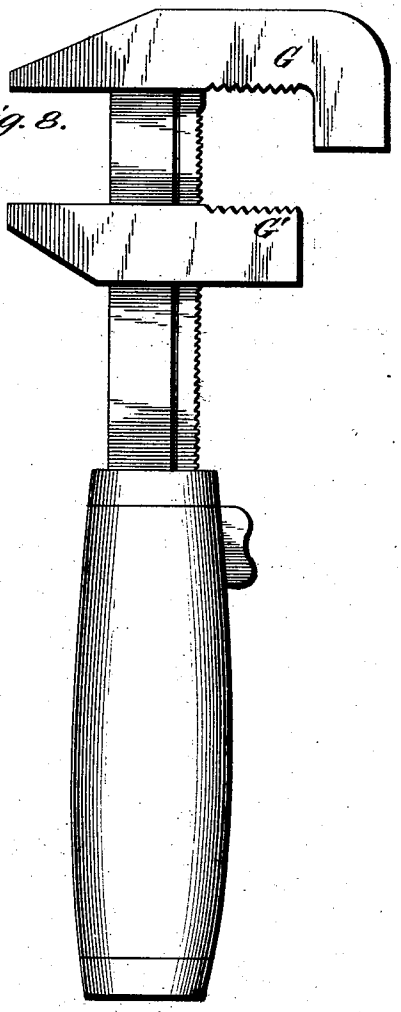


Fig. 8.



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WRENCH.

SPECIFICATION forming part of Letters Patent No. 710,040, dated September 30, 1902.

Application filed January 23, 1902. Serial No. 90,994. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. CAHILL, a citizen of the United States, and a resident of Terra Alta, in the county of Preston and State of West Virginia, have made certain new and useful Improvements in Wrenches, of which the following is a specification.

My invention is an improvement in wrenches, and has for an object to provide a novel construction of wrench whereby the movable jaw can be quickly locked in any desired position and can be easily released for adjustment to another position, as is frequently desired in the use of monkey-wrenches; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a wrench embodying my invention. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a cross-section on about line 3 3 of Fig. 2. Fig. 4 is a detail perspective view of the wrench-shank with the fixed jaw. Fig. 5 is a detail perspective view of the adjusting-key. Fig. 6 is a detail perspective view of the locking-bar. Fig. 7 is a side view of the wrench, showing a different arrangement of the locking-bar from that shown in Fig. 1; and Fig. 8 is a side view of a combined pipe and nut wrench, all of which will be described.

The wrench has a handle A, a shank B, provided with the fixed jaw C, the sliding jaw D, the locking-bar E, the adjusting-key F, and in the construction shown in Fig. 8 is adapted at G and G′ to serve as a pipe-wrench.

The shank B is secured in the handle A, which handle is mortised at A′ to receive the butt-end of the key F and is provided at A^2 with a slot in which operates the thumb-lug or projection F′, which projects beyond the handle, so it can be conveniently operated, and is engaged by the spring H, which actuates the key F normally to the position shown in Fig. 2. The shank B is grooved longitudinally at *b*, the base-wall of the groove tapering, as shown in Figs. 2 and 4, and adapted to receive the key F, as shown in Fig. 2. The locking-bar E is grooved on its inner side at *e* and is provided at its ends with projections or tenons *e′* and e^2, which extend, respectively, into the fixed jaw C and the handle A and serve to retain the locking-bar in place, as will be understood from Fig. 2. This locking-bar extends within the boxing *d* of the sliding jaw D and is preferably toothed or serrated on its outer side to engage the said jaw and lock the same in any position to which it may be adjusted when the said locking-bar is forced outward by the key F in the position of parts shown in Fig. 2. It will be noticed the grooves *b* and *e* combine to form a tapered seat for the key F, which is also tapered and when adjusted, as shown in Fig. 2, presses the locking-bar out against the inner side of the boxing *d* and secures the sliding jaw D. At the same time the thumb-piece F′ can be easily operated to release the bar E by sliding the adjusting-key F back from the position shown in Fig 2, when the jaw D can be adjusted to any desired position.

The construction shown in Fig. 7 is similar to that shown in Figs. 1 and 2, except the adjusting-bar and the locking-bar are arranged on the front side of the shank in Fig. 7 instead of on the rear side, as shown in Fig. 1. In said Fig. 7 the shank 1 has the fixed jaw 2 and the sliding jaw 3 overlies the locking-bar 4, which may be operated by the thumb-piece 5 of the adjusting-key.

In Fig. 8 the fixed and sliding jaws are extended at G and G′ and adapted for operation upon pipes and other round objects.

By the invention it will be noticed the sliding jaw can be quickly adjusted to any desired position and then locked by the key F, which key may be automatically adjusted to locked position by means of the spring H. It will also be noticed the key is practically incased within the shank and locking-bar and the several parts are simple in construction, easily operated, and not likely to get broken or out of repair.

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

1. The improvement in wrenches herein described comprising the handle having a mortise for the butt of the adjusting-key, the shank having a fixed jaw and provided with

the longitudinal groove for the adjusting-key, the sliding jaw, the locking-bar having a groove in its inner side coinciding with that in the shank and provided at its ends with projecting tenons engaging with the handle and the fixed jaw, and the adjusting-key operating in the grooves of the locking-bar and of the shank and having its butt-end operating in the handle and provided with a thumb-piece, and the spring for actuating said key substantially as set forth.

2. The combination of the handle, the shank having the fixed jaw, the sliding jaw, the locking-bar held at its ends to the handle and to the fixed jaw, and the key operating between the locking-bar and the handle and having in rear of the locking-bar a projection or thumb-piece operating in a recess in the handle substantially as set forth.

3. A wrench comprising the handle, the shank, the fixed jaw, the sliding jaw, the locking-bar arranged for adjustment to engage the sliding jaw and held loosely at one end to the fixed jaw and at its other end to the handle and the sliding key bearing between the shank and locking-bar and extended at its rear end within the handle beyond the rear end of the locking-bar substantially as set forth.

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