(No Model.)

H. SIMON, Jr.

WRENCH.

No. 300,145. Patented June 10. 1884.

Fig. 1

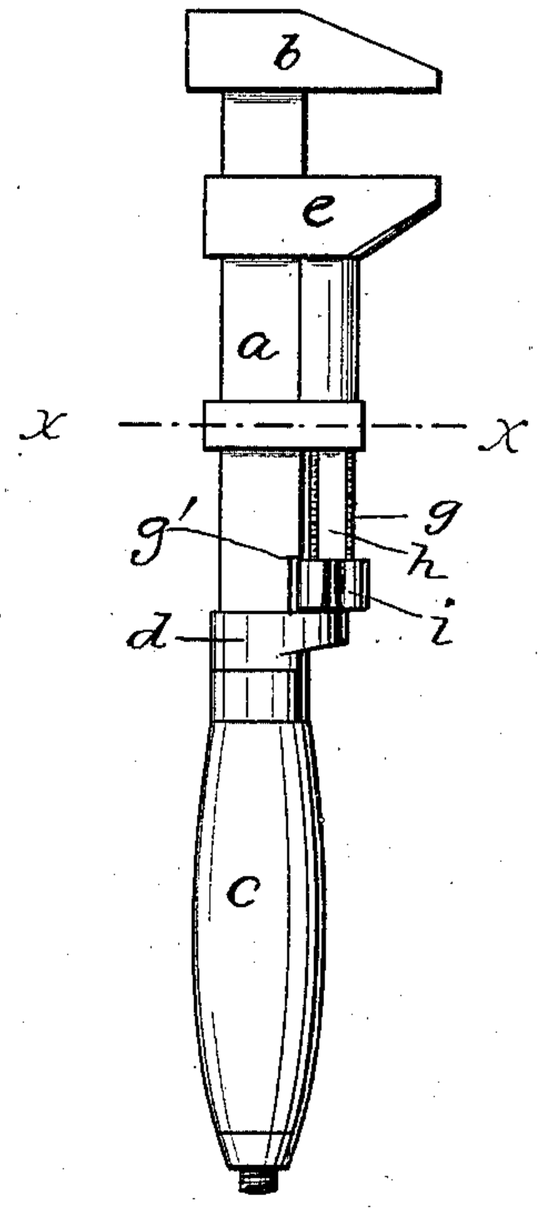


Fig. 2

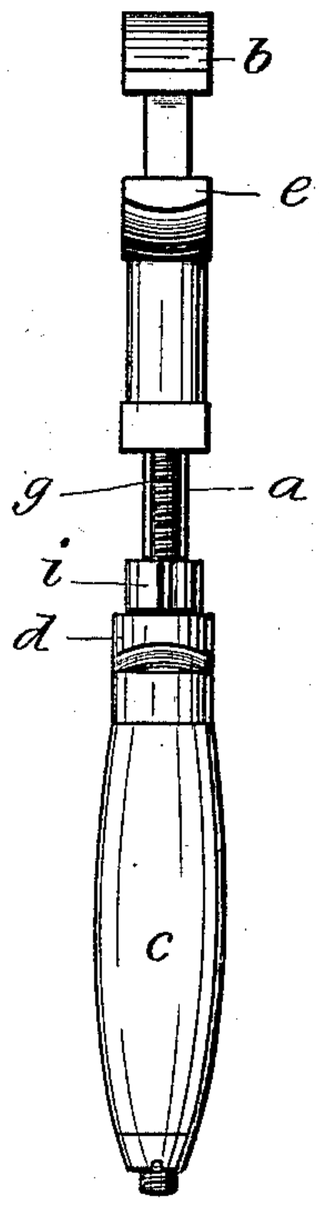


Fig. 5

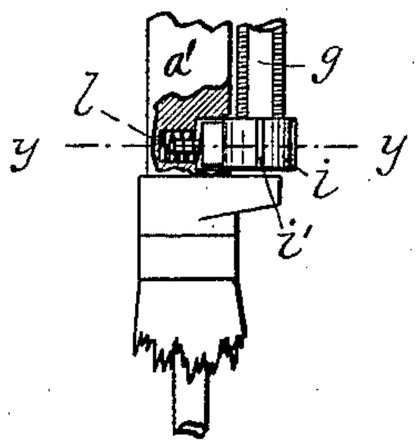


Fig. 3

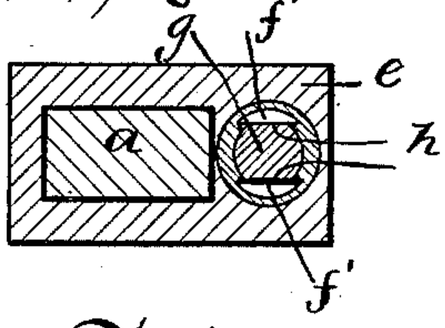


Fig. 4

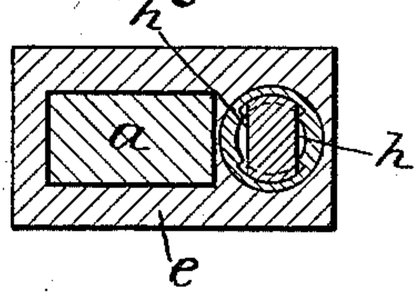
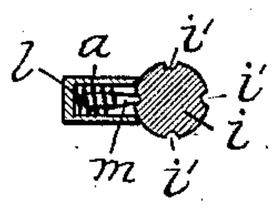


Fig. 6



Witnesses

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HENRY SIMON, JR., OF CHESTER, CONNECTICUT.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 300,145, dated June 10, 1884.

Application filed May 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY SIMON, Jr., of Chester, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Wrenches; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

Figure 1 is a side view of sliding-jaw wrench embodying my improvement. Fig. 2 is an edge view of same. Fig. 3 is a view of same in cross-section on line 1 1 of Fig. 1, showing the jaw locked. Fig. 4 is a view in cross-section on same plane, showing the jaw unlocked. Fig. 5 is a detail view of part of the wrench, showing the location and method of operation of a friction-catch for holding the shaft against rotation. Fig. 6 is a detail view of the same in cross-section on line *y y* of Fig. 4.

My invention relates to the ordinary class of wrenches which have a sliding jaw; and it consists in the new arrangement and combination of parts by which the sliding jaw is joined or released from the screw-rod, and in the location of the locking device in a convenient place to be operated by the hand that holds the wrench.

In the accompanying drawings, the letter *a* denotes the bar of the wrench; *b*, a fixed jaw; *c*, a handle; *d*, a step fast to the bar or between the handle and bar, these parts being of usual form and material. The sliding jaw *e* has the screw-threaded socket *f* channeled or cut away longitudinally on opposite sides, *f'*, in segments of about one-fourth the circumference in each, and the screw-rod *g*, fitted to operate in this socket, is also flattened or slabbed off on opposite sides, *h*, in such manner and to such extent that the rod, when in the position shown in Fig. 4, allows the jaw to slide freely on it; but when the rod is turned to one side from this position the threads interlock and prevent any play. This peculiar construction and combination of parts enables the workman to change the jaw rapidly by simply a slight turn of the rosette *i*, which is located in the usual place on the end of the screw-rod and under the thumb of the hand grasping the handle of the wrench. The screw-rod *g* is pivoted at one end to the step *d*, and the rosette projects into a slight mortise in the bar that forms a shoulder, *g'*, that prevents the forward play of the screw-rod. The wrench illustrated is, except as to my improvement, of the ordinary form in common use. When unlocked, the jaw may be moved up closely against the nut, and by a partial turn of the rod the threads are engaged and the jaw locked.

I prefer to use the form of interlocking parts shown—that is, the male and female screw-threads—as the lead or pitch of the screw gives a better grasp of the nut in locking the parts.

In order to prevent an accidental or too free rotation of the shaft, I make use of a friction-catch, *l*, or similar device arranged in a socket in the bar or attached to it, so that the spring-bolt *m* engages with the roughened surface of the rosette *i*, or in the channels *i'*, cut in the periphery.

I claim as my invention—

1. In a wrench, in combination, the wrench-bar, the sliding head bearing the channeled screw-threaded socket, and the screw-rod *g*, flattened on opposite sides, and bearing integral with it the rosette by means of which the rod is turned, the said rod bearing directly against the step, all substantially as described.

2. In combination, the wrench-bar *a*, the sliding jaw *e*, having the threaded socket *f*, channeled on opposite sides, the screw-rod *g*, flattened on opposite sides, and bearing fast to it the rosette *i* at the end near the stop *d*, and the spring-bolt *m*, all substantially as described.

HENRY SIMON, JR.

Witnesses:

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