(No Model.)

S. STOCK.

WRENCH.

No. 457,232. Patented Aug. 4, 1891.

Fig. 1.

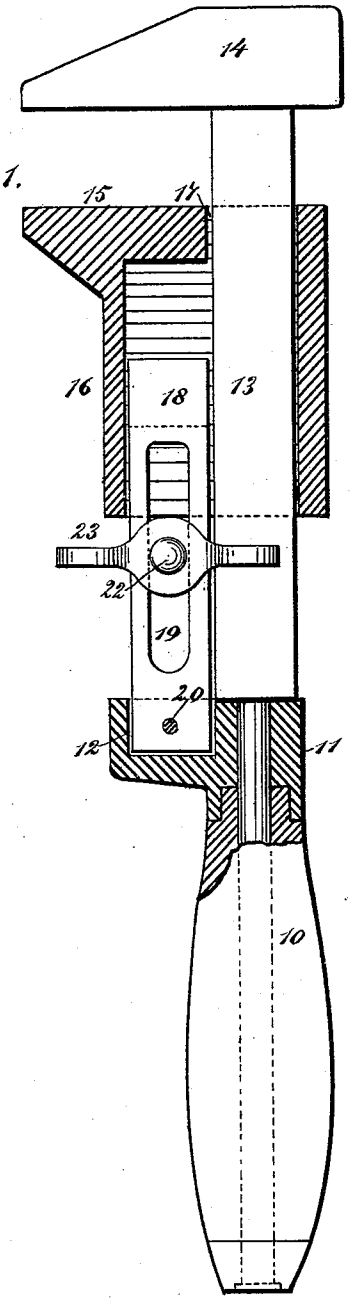
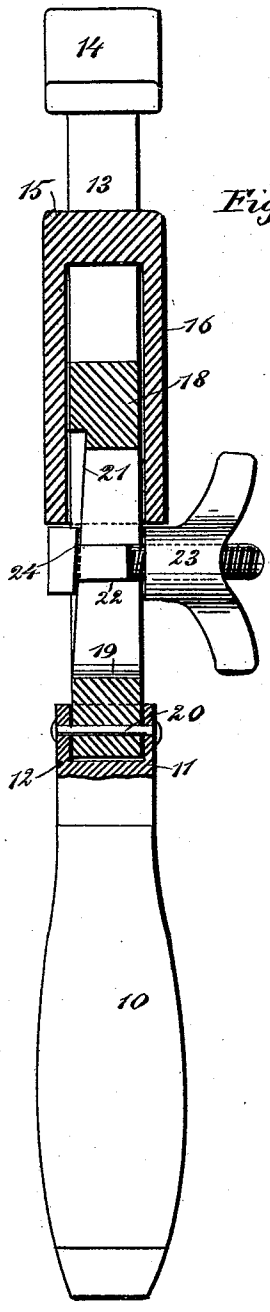


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

SAMUEL STOCK, OF PONTIAC, NEW YORK.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 457,232, dated August 4, 1891.

Application filed April 14, 1891. Serial No. 388,844. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL STOCK, of Pontiac, in the county of Erie and State of New York, have invented a new and useful Improvement in Wrenches, of which the following is a full, clear, and exact description.

My invention relates to an improvement in wrenches, and has for its object to provide a tool of exceedingly simple and durable construction, in which one of the jaws may be moved toward or from a fixed jaw and held in any desired position without threading the shank of the fixed jaw or the guide-bar of the movable jaw.

A further object of the invention is to provide a wrench of neat appearance and of but few parts and to construct such a wrench in an economical manner.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in both the views.

Figure 1 is a side elevation of the wrench, partly in section. Fig. 2 is a front elevation of the wrench, also partially in section.

The handle 10 is provided with a ferrule 11, the said ferrule being preferably so made as to extend beyond one side of the handle, and in the projecting portion of the handle a socket 12 is produced. The shank 13 of the wrench is secured in the socket and in the handle in any suitable or approved manner, and a fixed jaw 14 is firmly attached to the upper end of the shank. The movable jaw 15 is integral with a casing 16, the said casing being preferably rectangular in cross-section. The lower end of the casing is completely open, and the upper end or that forming a portion of the jaw is provided with an aperture 17 at one side, and through said aperture the shank 13 projects, and the casing is adapted to slide upon the shank in engagement with the rear side of the shank, as is best shown in Fig. 1.

The opening in the chamber of the casing 16 is much wider than necessary to receive the shank, and in front of the shank a guide-bar 18 is located, the upper end of which is made to enter the chamber of the casing. The guide-bar 18 also serves as a lock-bar and is provided with a longitudinal slot 19. The lower end of the guide and lock bar 18 is seated in the ferrule-socket 12 and secured therein by means of a pin 20 or an equivalent device. One side face of the guide and lock bar 18, having the slot 19 produced therein, is beveled the length of the slot, forming an inclined plane 21, and the inclination is so made that the thickness of the bar is greater at the lower end of the slot than at the upper end thereof.

In conjunction with the bar 18 a bolt 22 and a lock-nut 23 are employed, the nut being preferably a winged nut. The inner face of the bolt-face is beveled, as illustrated at 24, to correspond to the inclined face 21 of the lock and guide bar, with which surface the bolt-head engages. The bolt passes through the slot 19, and the bolt and nut are adapted as supports for the movable jaw 15, that portion of the bolt passing through the slot 19 being square in order to prevent the nut from turning.

By imparting an inclined face to the lock-bar and a corresponding inclination to the head of the bolt an equal pressure is preserved the entire length of the bolt-head, and the nut 23 will not have to be tightened to any great extent in order to hold the lower jaw in a fixed position, since the bolt cannot slip, as the inclined plane acts as a wedge.

In operation, the thumb or wing nut is manipulated to loosen the bolt 22, and the lower jaw is adjusted to clamp the object to be operated upon between it and the outer or fixed jaw. The nut 23 is then screwed in upon the bolt after the bolt-head and nut have been brought into engagement with the lower end of the casing 16. Thus the bolt and nut serve to prevent the lower jaw from leaving its set position. As the bolt and nut are located immediately beneath the movable jaw comparatively little strain is sustained by them when the wrench is in use.

It will be observed that the shank is not weakened by having a thread cut therein; and in the event the threads upon the bolt

should become worn, thus rendering it unfit for use, a new bolt may be substituted for the worn one at but a trifling cost.

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

1. In a wrench, the combination, with a fixed jaw and its shank, of a movable jaw provided with an integral casing and held to slide upon the shank, a slotted guide and lock bar having one slotted face beveled, the said guide-bar being secured at one end and loosely fitted in the jaw-casing at its opposite end, a bolt passed through the slot of the bar, the head of which bolt is beveled, and a nut screwed upon the end of said bolt, as and for the purpose specified.

2. In a wrench, the combination, with a fixed jaw, the shank thereof, a handle receiving the shank and provided with an extension-socket, and a casing the upper face of which constitutes a jaw, the said casing being held to slide upon the shank, of a guide and lock bar one end whereof is loosely fitted in the casing in front of the shank, the other end being secured in the handle-socket, the said guide and lock bar being provided with a longitudinal slot and an inclined surface in one slotted face, a bolt passed through the slot, the head of which bolt is beveled, and a nut screwed upon said bolt, as and for the purpose specified.

SAMUEL STOCK.

Witnesses:
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C. NEEDHAM.