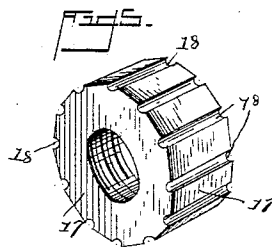
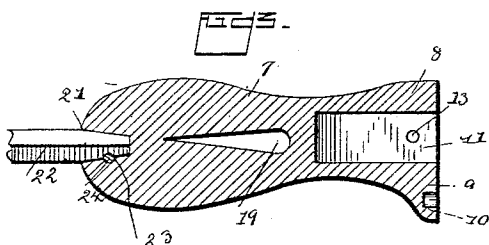
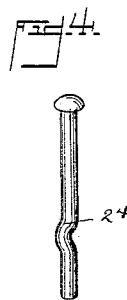
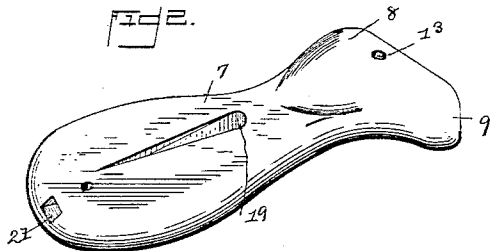
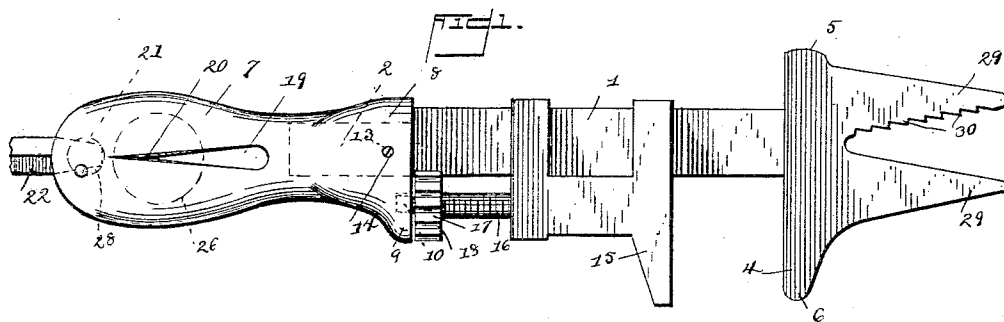


(No Model.)

F. W. SIMMONS.
WRENCH.

No. 476,693.

Patented June 7, 1892.



Witnesses:

Chas. A. Ford.

W. S. Dwyer.

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UNITED STATES PATENT OFFICE.

FRANK W. SIMMONS, OF BLUE MOUND, KANSAS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 476,693, dated June 7, 1892.

Application filed June 12, 1891. Serial No. 396,004. (No model.)

To all whom it may concern:

Be it known that I, FRANK W. SIMMONS, a citizen of the United States, residing at Blue Mound, in the county of Linn and State of Kansas, have invented a new and useful Wrench, of which the following is a specification.

This invention relates to improvements in wrenches, the objects in view being to provide a wrench that may be cheaply and conveniently constructed, the parts of which may be readily assembled, and will combine to form a wrench of great durability and strength, and, furthermore, to adapt the wrench to serve as a convenient handle for various tools, as screw-drivers, augers, gimlets, &c., and for certain other purposes, which will hereinafter appear.

With the above objects in view the invention consists in certain novel features and combination of parts hereinafter specified, and particularly pointed out in the claim.

Referring to the drawings, Figure 1 is an elevation of a wrench constructed in accordance with my invention. Fig. 2 is a detail in perspective of the handle. Fig. 3 is a sectional view of a portion of the handle. Fig. 4 is a detail of the locking-pin. Fig. 5 is a detail in perspective of the jaw-operating nut. Like numerals of reference indicate like parts in all the figures of the drawings.

1 denotes the rectangular stock of the wrench, which stock is reduced at its inner end to form the shank 2, having the transverse perforation. At its upper end the stock merges into the fixed jaw 4, which, as is usual, extends to each side of the stock, forming at its rear end the hammer head or face 5, which for the purpose of preventing marring is round, as shown. At its opposite side and end the jaw is reduced somewhat to form a conical rivet-heading hammer 6.

7 designates the metal handle, which is given a desired external shape to form a convenient hand-hold and has its opposite sides somewhat flattened. The handle at its upper end merges into a head 8, which is provided at one side with an offset 9, the upper surface of which is provided with a countersunk bearing-recess 10. The head is pro-

vided with a shank-receiving socket 11, which is continued for some distance down in the handle. The handle has formed therein opposite the perforation of the shank a corresponding perforation 13, and a rivet 14 passes through the two perforations.

15 designates the sliding jaw, having upon its under side a threaded opening, in which is seated the feed-screw 16, having the milled nut 17, the lower end of the screw being stepped in the countersunk bearing 10 of the lateral offset of the head.

Referring more particularly to Fig. 5, it will be noted that the nut 17 is polygonal-faced and that between each of its faces grooves 18 are formed. By such form of nut 17 not only provide a secure and convenient finger hold or grip, but each groove, in connection with the adjacent face, forms a "shoulder," so to speak, against which a hammer or other convenient tool may be struck in case the screw should bind within the sliding jaw, as sometimes occurs.

The handle is provided with a V-shaped opening 19, adapted to introduce over bolts, nails, &c., moved along until the same fit snugly in the V portion thereof, by which the handle may be used to withdraw them from their positions. From the inner end of the V-shaped opening to near the opposite end the opposite edges of the opening are somewhat reduced or chamfered, as at 20, so as to more readily take under the head of the nail or bolt.

A conical socket 21 is formed in the extremity of the handle or at any other point desired, the same being adapted to receive the head of the shank of an ordinary screw-driver, auger, gimlet, chisel, or other bit 22, which bit is, as shown, provided with a transverse groove 23, by which the same may be held in position in the handle by a spring locking-pin 24, passed through the lower end of the handle, adjacent to the socket 21. It will be obvious that, if desired, the socket 21 may be omitted and an opening 26 (shown by dotted lines in Fig. 1) may be substituted and an ordinary perforation 28, also shown by dotted lines, be employed for hanging up the tool.

From the foregoing description it will be seen that I not only provide a wrench the handle and stock of which, though formed separately, are practically integral so far as
5 their rigidity and durability are concerned, but also that the wrench is capable of use in various other ways, such as serving as a handle for other tools, &c. It will also be evident that the sticking or binding of the
10 feed-screw upon the jaw may be speedily remedied and its looseness secured by a few taps of the hammer or other handy device.

The head of the wrench is provided with a V-shaped recess 29, one of the inclined faces
15 of which is plain and the other provided with a series of inwardly-disposed inclined teeth 30. The recess is adapted to grip a pipe or

rod and by rotating the wrench to similarly rotate said pipe or rod.

Having described my invention, what I 20 claim is—

A wrench the head of which is provided with a V-shaped recess longitudinally disposed with the stock thereof, one face of the recess being provided with inwardly-disposed 25 inclined teeth, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

FRANK W. SIMMONS.

Witnesses:

W. A. JENNINGS,
L. F. KERNS.