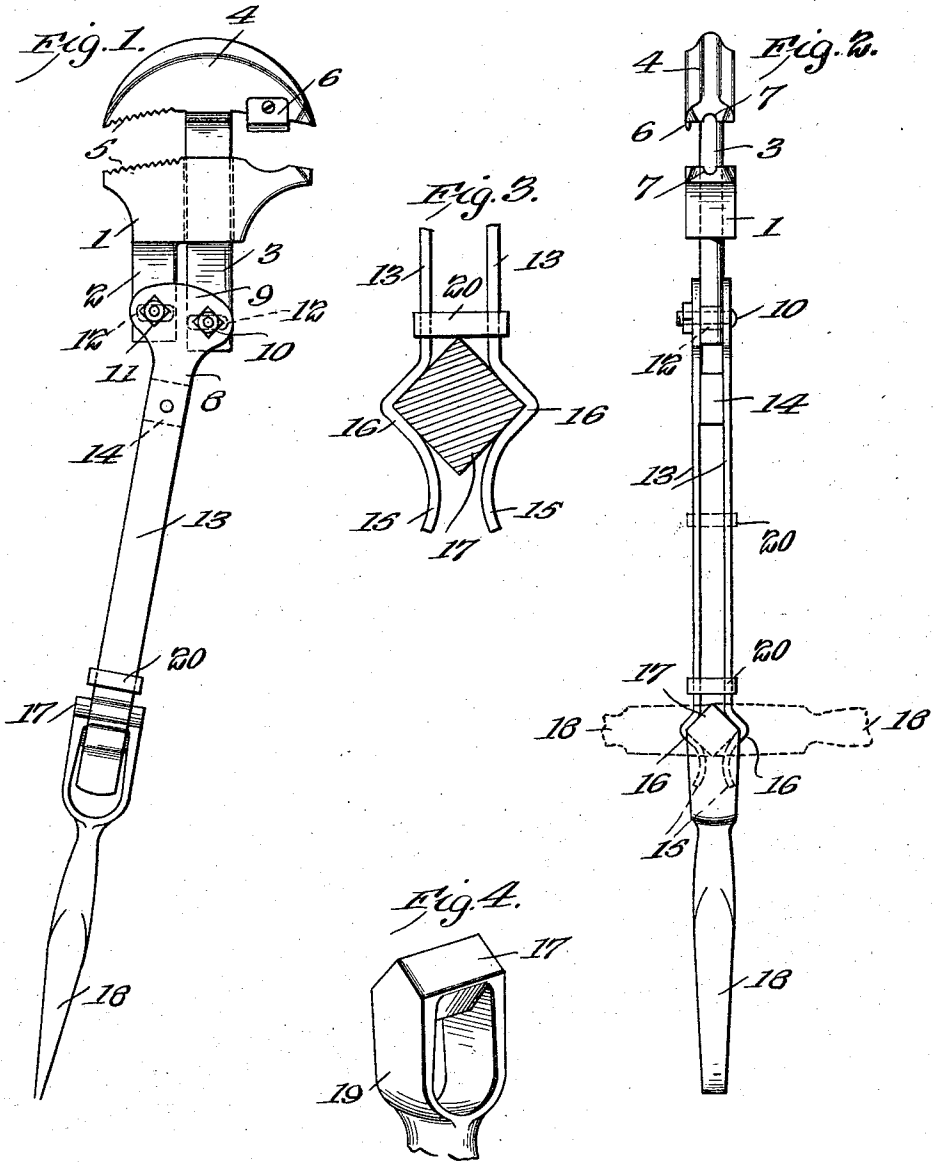


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WRENCH.

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WRENCH.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE M. CUSTER, a citizen of the United States, residing at Mattoon, in the county of Coles and State of Illinois, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to certain new and useful improvements in wrenches of that type having rigid and movable jaws and it has for its objects among others to provide simple and efficient means constituting a handle for actuating the movable jaw and for holding an additional tool, such as a screw driver or the like, with provision whereby the latter serves also as efficient means for giving a rotary or turning movement to the wrench as a whole for the purpose of screwing up or unscrewing the nut or other device held between the jaws of the wrench.

I provide a handle having more or less resiliency, and a bail or clamping device adapted to compress the side members thereof against the shank or other portion of a tool, such as a screw driver, so as to firmly hold the same in place and yet allowing of ready shifting thereof when desired.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be particularly pointed out in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation of a wrench embodying my present invention. Fig. 2 is a view at right angles to Fig. 1. Fig. 3 is an enlarged cross sectional view through the shank of the tool which constitutes the grasping portion whereby the wrench may be turned. Fig. 4 is an enlarged perspective detail showing the head or shank of the screw driver or other tool employed in connection with the handle.

Like numerals of reference indicate like parts throughout the several views.

Referring to the drawings, 1 designates the fixed jaw having a shank 2, while 3 is the shank of the movable jaw 4, which shank is mounted for free movement through a suitable opening in the jaw 1. These jaws may be of any of the well-known or approved forms of construction, being shown in the present instance upon

the left of Fig. 1, as having their adjacent faces serrated, as shown at 5, while upon the movable jaw 4 upon the opposite side of its shank is a wire or rod cutter attachment 6.

In order to adapt the wrench for service as a nail puller, the outer face of the jaw 4 is formed upon a curve, so as to form a fulcrum for extracting the nail after it has been engaged in the jaws of the wrench. For this purpose, the adjacent faces of the jaws are provided with suitable recesses or the like 7, as seen in Fig. 2, for grasping the nail or other device to be extracted.

The movable jaw is designed to be actuated by rocking movement of the handle. In this instance, the handle 8 has an enlargement 9 through which passes a bolt or the like 10 by which it is connected with the shank 3 of the movable jaw and a corresponding bolt or the like 11 which attaches the other end of the enlargement to the shank 2 of the rigid or fixed jaw. Suitable slots 12 are provided in the respective shanks, so as to allow of the necessary back and forth movement of the handle. The handle in the present instance is formed of two parallel members 13 and 13 between which, near their point of attachment to the shanks of the jaws, is a spacing block or the like 14 for an obvious purpose. The free ends of the members 13, 13 of this handle are turned or deflected outwardly, as seen at 15, in order that the shank of the screw driver or other implement may be more readily inserted therebetween. Adjacent these terminals 15, 15, the side members of the handle are provided with the oppositely disposed outward bends 16, 16 having their walls at substantially right angles, as seen clearly in Fig. 3, and adapted to receive and hold the shank 17 of a screw driver 18 or any other suitable instrument. The form of this shank is best illustrated in Fig. 4, it being understood that the terminals 15 of the side members 13 of the handle are receivable within the arms of the yoke 19 and are free for movement therein.

20 is a sliding clasp or bail embracing the side members 13 and slidable thereon. When it is desired to apply or remove the shank of the tool 18, the bail or sliding clamp is moved along the side members 13 toward the attached end thereof, as indicated in dotted lines in Fig. 2, when the shank or squared portion 17 thereof may be readily inserted

between the outturned ends 15 and then the bail or slide 20 is moved into the position seen in full lines in Fig. 2, when the tool is firmly held therein. This allows of ready
5 change from screw driver to chisel or other tool, as may be desired, and yet forms a firm mode of attachment for the handle of such tool.

In order that the tool 18 may be used as a
10 means for rotating or turning the wrench after it has been applied to the nut, the bail 20 may be moved along the side members 13 sufficiently to allow of the turning of the tool 18 from its full line position in Fig. 2 to
15 either of its dotted line positions in said figure, yet without disengaging the shank from the outwardly bent ends of the handle. After the tool 18 has been adjusted to the desired position, the bail 20 is again moved
20 back into its full line position in Fig. 2 and then the tool 18 serves as a handle or crank by which the wrench may be turned to screw up or loosen the nut engaged between the jaws of the wrench.

Modifications in details may be resorted to 25 without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed as new is:—

A wrench having a handle embodying substantially parallel spring sections termi- 30 nating in angular bends outwardly disposed in the plane of movement of the wrench jaws forming grasping jaws, means sliding on the handle for clamping the members upon an interposed tool, and a tool having a 35 yoke-shaped end with angular cross bar, adapted to be grasped by the angular bends of the handle, whereby said tool may be used either in its normal position or serve as a crank handle for rotating the wrench with 40 its engaged nut.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE M. CUSTER.

Witnesses:

N. CURTIS LAMMOND,
GEORGE H. SNYDER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."