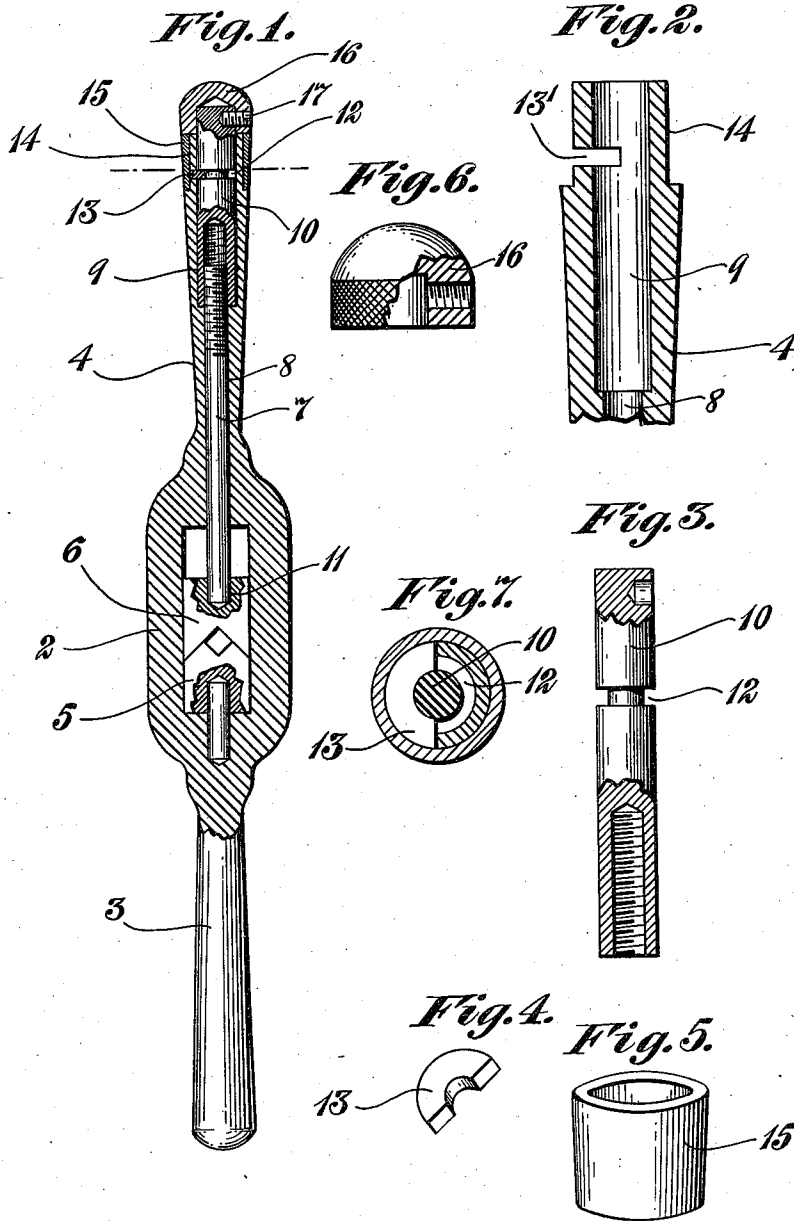


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TAPPING WRENCH.
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Patented Dec. 26, 1911.



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UNITED STATES PATENT OFFICE.

ROBERT WOLF AND JOHN B. GOETZ, OF HARTFORD, CONNECTICUT.

TAPPING-WRENCH.

1,012,783.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, ROBERT WOLF and JOHN B. GOETZ, citizens of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented new and useful Improvements in Tapping-Wrenches, of which the following is a specification.

This invention relates to tapping wrenches, the object of the invention being to provide a tool of this character having simple and effective means by which the movable jaw or equivalent part of the device can be easily adjusted and wherein the parts can be quickly and readily assembled.

In the drawings accompanying and forming part of the present specification we have shown in detail one convenient form of embodiment of the invention, which to enable those skilled in the art to practice the same will be set forth fully in the following description, while the novelty of the invention will be included in the claims succeeding said description. From this statement it will be evident that we do not limit ourselves to the showing made by said drawings and description; we may depart therefrom in several respects within the scope of the invention included in said claims.

Referring to said drawings, Figure 1 is an elevation partly in section of a wrench involving our invention. Fig. 2 is a sectional view of the outer portion of one of the handles. Fig. 3 is a sectional view partly in elevation of a plug. Fig. 4 is a perspective view of a key. Fig. 5 is a like view of a sleeve. Fig. 6 is an elevation in section of a thimble. Fig. 7 is a cross section on the line 7-7 of Fig. 1.

The views as will be observed are on different scales and throughout the same like characters refer to like parts.

The device comprises in its construction a body portion carrying the jaw or equivalent mechanism, and in the present case this body portion consists of the stock 2 familiar in various kinds of tap and die wrenches. Said stock is provided with oppositely extending handles 3 and 4 serving their usual functions. In the stock 2 are the jaws 5 and 6.

The foregoing parts are well-known in the art and for this reason need not further be specifically described, although we might state that, in the present case, the jaw 5 is relatively fixed, while the jaw 6 is mov-

able, the invention residing particularly in the means for effecting the adjustment of said movable jaw. We might also indicate that we use the term "jaws" in a generic sense, intending by this to cover devices generally employed in screw-threading operations; that is to say the jaws instead of being adapted, for holding a tap as they are illustrated, might be utilized for holding a die or for some like purpose.

The handle or lever 4 is shown as hollow or tubular and as inclosing the longitudinally slidable rod 7. The interior of the handle 4 is of two diameters, the respective portions being designated by 8 and 9. In the larger diametrical portion 9 the approximately cylindrical plug 10 is fitted, the lower end of the said plug having a bearing upon or against the shoulder located at the junction of the two portions 8 and 9. The cylindrical plug 10 is shown as interiorly screw threaded for engagement by the outer end of the rod 7 which, as will be seen extends entirely through the portion 8. This rod 7 preferably has a rigid connection with the jaw 6 so that when the rod is moved in an endwise direction, said jaw 6 will be moved toward or from the companion jaw 5. In the present case the jaw 6 has a socket 11 into which the inner end of said rod 7 is driven. As will hereinafter appear, the rotary plug 10 is incapable of movement in the direction of its axis of rotation, and it, therefore, follows that when said plug 10 is turned it will act like a nut to feed the rod 7 inward or outward according to the direction in which said plug is turned.

The plug 10 has a circumferential channel or groove 12 between its ends constituting in the present instance a keyway for receiving the key 13 which as shown consists of a segment fitting the slot 13' in the handle 4 and adapted to partially embrace the bottom of the groove 12. The outer end of the handle 4 is circumferentially reduced as at 14 and preferably tightly surrounding this reduced portion is a sleeve 15. In the present instance the outer surface of the segmental key is substantially flush with the reduced portion 14, while the outer face of the sleeve 15 is practically flush with the outer surface of the handle 4. This sleeve 15, as will be clear, holds the key in place and the key in turn prevents movement of the plug or feed member 10 in the direction

of its axis of rotation. We desire to call attention to the fact that the key receiving slot or hole 13' is plain, by which we mean to convey the fact that said slot or hole is not screw-threaded, by reason of which the key 13 can be readily and quickly applied.

Fitted to the outer end of the plug 10 is a cap or thimble 16 constituting a suitable means for finishing the tool and for also facilitating the rotation of the said plug or feed member. To render easy the action of the thimble the side portion may as shown in Fig. 6, be knurled or roughened. The thimble may be connected to the plug in various ways; for example by means of a pin as 17 which is shown consisting of a screw extending through a tapped hole in the side of the thimble and also tapped into the outer portion or head of the plug.

The action of the device can be readily understood from an inspection of Fig. 1, although it might be added that it will be apparent that when the thimble 6 is turned by the fingers, the jaw 6, through the intermediate described parts, will be moved toward or from the companion jaw 5 in accordance with the direction in which said thimble is turned. There is considerable adjustment of the movable jaw, and the jaws are so shaped as to accommodate taps, the shanks of which vary in size.

What we claim is:

1. A device of the class described comprising a stock provided with an adjustable jaw and with a hollow handle, a rod in said handle connected with said jaw, a rotary member also in the handle, having a screw threaded feed connection with the rod, a key the handle having a plain slot in which said key is fitted and said rotary member having an annular groove in which said key is disposed to thereby prevent movement of said rotary member in the direction of its axis of movement, and a sleeve surrounding the handle and the key for holding said key in place.

2. A device of the class described comprising a stock provided with an adjustable jaw and with a hollow handle, a rod in said hollow handle, connected with said adjustable jaw, a rotary member also in said hollow handle having a screw threaded feed connection with said rod and having an annular keyway, a key carried by the handle, the handle being circumferentially re-

duced, and a sleeve surrounding the circumferentially reduced portion of the handle and inclosing said key to hold the latter in place.

3. A device of the class described comprising a stock provided with an adjustable jaw and with a hollow handle having two portions of different diameters, a plug rotative in the portion of greater diameter and having a bearing against the shoulder formed by the junction of the two portions, a rod having a screw threaded feed connection with said plug, extending through the portion of less diameter, and connected with said jaw, and a key to prevent movement of said plug in the direction of its axis of motion.

4. A device of the class described comprising a stock provided with an adjustable jaw and with a hollow handle, a rod in said handle connected with said jaw, a rotary member also in the handle, having a screw threaded feed connection with said rod, a segmental key, the handle having a segmental slot to receive said key and said rotary member having an annular keyway to receive said key to thereby prevent movement of the rotary member in the direction of its axis of rotation, and a sleeve surrounding the handle and the key, for holding said key in place.

5. A device of the class described comprising a stock provided with an adjustable jaw and with a hollow handle, a rod in said hollow handle connected with said adjustable jaw, a rotary member also in said hollow handle, having a screw threaded feed connection with said rod and also having an annular keyway, a key to fit said keyway, the handle having a plain slot to receive said key, the slotted portion of the handle being circumferentially reduced to thereby form an external shoulder on said handle, a cap pinned to the outer end of said rotary member, and a sleeve surrounding the circumferentially reduced portion of the handle, between said cap and shoulder, and inclosing said key to hold the latter in place.

In testimony whereof we affix our signatures in presence of two witnesses.

ROBERT WOLF.
JOHN B. GOETZ.

Witnesses:

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