

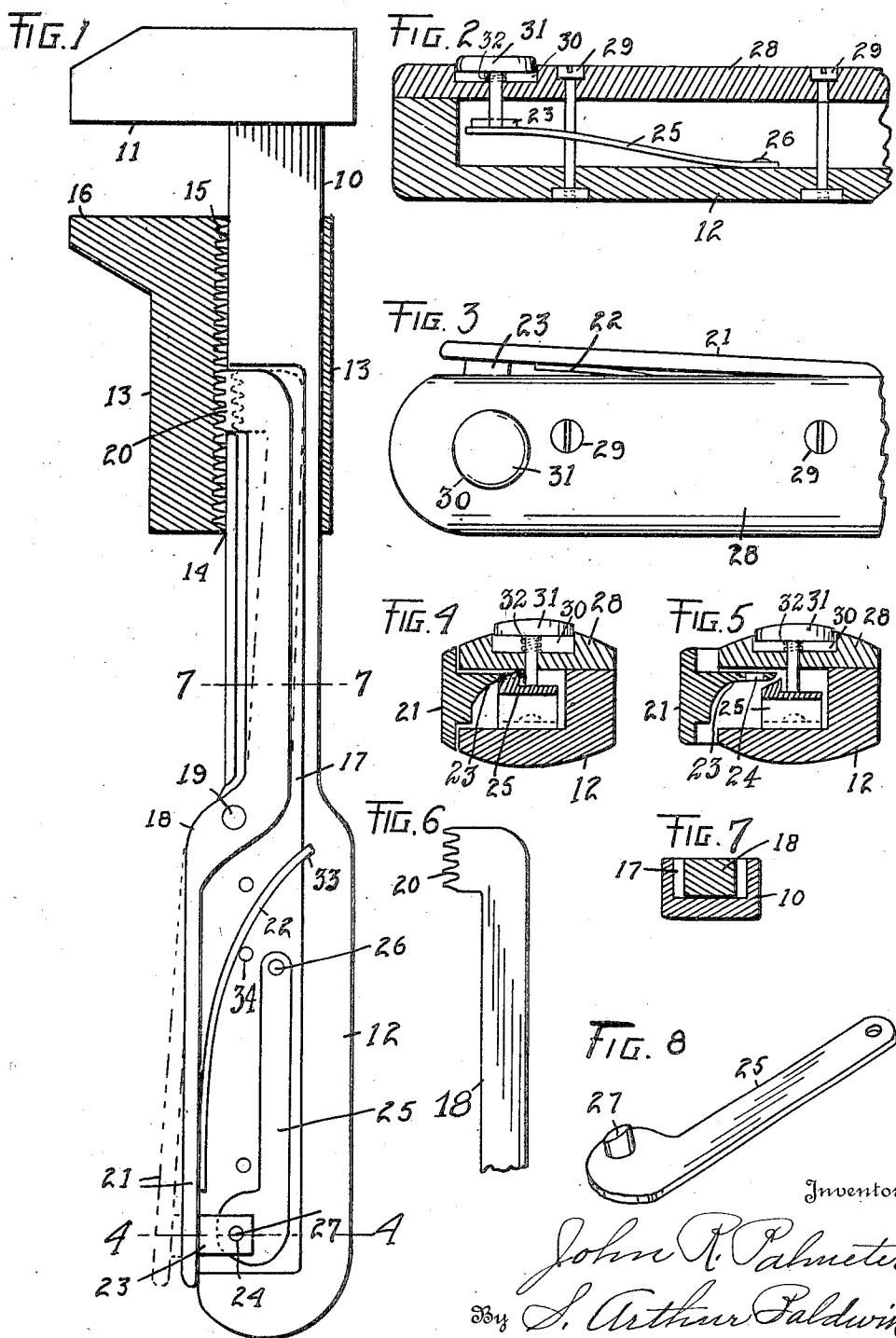
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J. R. PALMETER

WRENCH

Filed Jan. 3, 1922



## UNITED STATES PATENT OFFICE.

JOHN R. PALMETER, OF JAMESTOWN, NEW YORK.

## WRENCH.

Application filed January 3, 1922. Serial No. 526,559.

*To all whom it may concern:*

Be it known that I, JOHN R. PALMETER, a citizen of the United States, residing at the city of Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Wrenches, of which the following, taken in connection with the accompanying drawings, is a specification.

The invention relates to wrenches, and particularly to the so-called "monkey-wrench" type; and the object of the improvement is to provide a wrench in which the inner jaw is freely slidable on the shank of the wrench handle, a gripping lever being provided on said handle having toothed engagement with said sliding jaw and a spring latch to hold said lever and sliding jaw rigidly in the adjusted position, a pressure actuable spring release for said spring latch being provided in said handle so that said jaw may be released by manual pressure on said spring release; and the invention consists in the novel features and combinations hereinafter set forth and claimed.

In the drawings, Figure 1 is a plan view of the wrench with the slidably mounted jaw in section and the side plate of the handle removed so as to show the construction and arrangement of the spring locking lever and the release for the same, said lever being shown in the locked position, the released position being shown in dotted outline. Fig. 2 is a lengthwise sectional view of the handle portion of the wrench showing the spring release. Fig. 3 is a side elevation of the handle portion shown in Fig. 2 showing the spring release and the latching lever in the released or unlocked position. Fig. 4 is a crosswise sectional view of said handle portion at line 4—4 in Fig. 1 showing the spring latch in the latched position; and Fig. 5 is a similar sectional view showing said spring latch in the unlatched or released position. Fig. 6 is a detail plan view of the jaw engaging toothed end of the locking lever. Fig. 7 is a crosswise view of the shank and locking lever at line 7—7 in Fig. 1. Fig. 8 is a perspective view of the spring latch for the locking lever removed from the handle of the wrench.

Like characters of reference refer to corresponding parts in the several views.

The numeral 10 designates the shank of the wrench which has the outer jaw or head 11 attached thereon at one end and extends

down into the preferably enlarged handle portion 12 at the other end, said shank and handle portion being channeled as shown at 17 to receive the working portions of the wrench.

The jaw portion 13 is slidably mounted upon the shank 10 to freely move up and down said shank when not engaged, being provided with a hole 14 therethrough which fits around said shank 10 and which has the interlocking teeth 15 in the side wall of the opening 14, preferably toward the side having the jaws 11 and 16.

The slidable portion 13 with its jaw 16 is held rigidly in the adjusted or predetermined position against a nut or other article by means of a locking lever 18 which is pivotally mounted in the channel opening 17 on the pin or stud 19, and has the side-wise extending teeth 20 in one end which inter-mesh in the teeth 15, holding the part 13 firmly in the adjusted position. The handle or gripping portion 21 of the lever 18 extends alongside the edge of the handle portion 12 and has a strong spring leverage, a strong leaf spring 22 being preferably mounted within the channel portion 17 of the handle part 12 in the following manner: The end of the spring 22 is inserted side-wise into a slot 33 in the side wall of the channel opening 17 and extends out over a pin 34 so that the end of the spring 22 is thereby given a strong tension against the inner side of the handle part 21 of the lever 18. This arrangement normally holds the lever 18 in the unlatched position shown in dotted outline in Fig. 1.

In order to latch the locking lever 18 in the adjusted position, an inward projection 23 is provided near the lower end of the handle part 21 of said lever, which inward projection 23 has a hole 24 therein near its inner end. A spring latch 25, made in the form of a leaf spring and attached at 26 within the channel opening 17 in part 12, is given an upward bend as shown in Fig. 2 toward said latching projection 23. The leaf spring 25 has the bevel ended latching pin or stud 27 on its raised end portion which is so positioned as to be in line with and engage in said opening 24 when the handle portion 21 of the lever 18 is pressed inward, snapping into latching engagement and holding the toothed end 20 of said lever 18 firmly in the teeth 15 of the sliding jaw portion 13, thereby holding said sliding

jaw portion 13 with its projecting jaw 16 firmly against the nut or article to be held or turned by the wrench.

The handle portion 12 is closed as to the channel opening 17 by means of the side plate 28 which is held in place by the screw bolts 29 which extend through said handle. A releasing spring pin 31 is mounted in the opening 30 in the side of the closure plate 28 of the handle portion 12. A coil spring 32 is provided around the spring pin 31 between its head and the plate 28 within the opening 30 to normally hold said pin 31 in the released position. The head of the pin 31 extends sufficiently above the side of the plate 28 so that a manual gripping pressure on the handle will press upon the head of said pin 31, pressing the leaf spring 25 downward and disengaging the bevel ended stud 27 from the latching opening 24, thereby permitting the leaf spring 22 to move the toothed locking end 20 of the lever 18 out of engagement with the teeth 15 of the slidable jaw portion 13, releasing the said jaw.

All that is necessary to re-engage said latch is to press inward on the handle portion 21 of the spring lever 18 and automatically engage the stud 27 in the opening 24 over the beveled end of said stud.

What is claimed as new is:

1. A wrench comprising a channel shank and handle, a fixed jaw on the opposite end of said shank from said handle, a slidably mounted jaw portion on said shank having teeth therein adjacent said shank, a spring lever pivotally mounted midway of its

length in said channel and extending alongside said handle to be manually gripped, a sidewise toothed end on said spring lever adapted to engage said teeth in said slidable jaw to adjustably hold the same, a projection on the handle portion of said spring lever having an opening therein, a spring latch in said handle to engage in said opening and hold said lever and jaw in an adjusted position, and a release for said spring latch.

2. A wrench comprising a channeled shank and handle, a fixed jaw on the opposite end of said shank from said handle, a slidably mounted jaw portion on said shank having teeth therein adjacent said shank, a spring lever pivotally mounted midway of its length in said channel and extending alongside said handle to be manually gripped, a sidewise toothed end on said spring lever adapted to engage said teeth in said slidable jaw to adjustably hold the same, a projection on the handle portion of said spring lever having an opening therein, a spring latch in said handle to engage in said opening and hold said lever and jaw in an adjusted position, a release for said spring latch, and a manually compressible spring pin to press said spring latch out of engagement with said spring lever to release the same.

In testimony whereof I have affixed my signature in the presence of two witnesses.

JOHN R. PALMETER.

Witnesses:

CORINNE V. SWANSON,  
THEO. THOMAS HAAG.