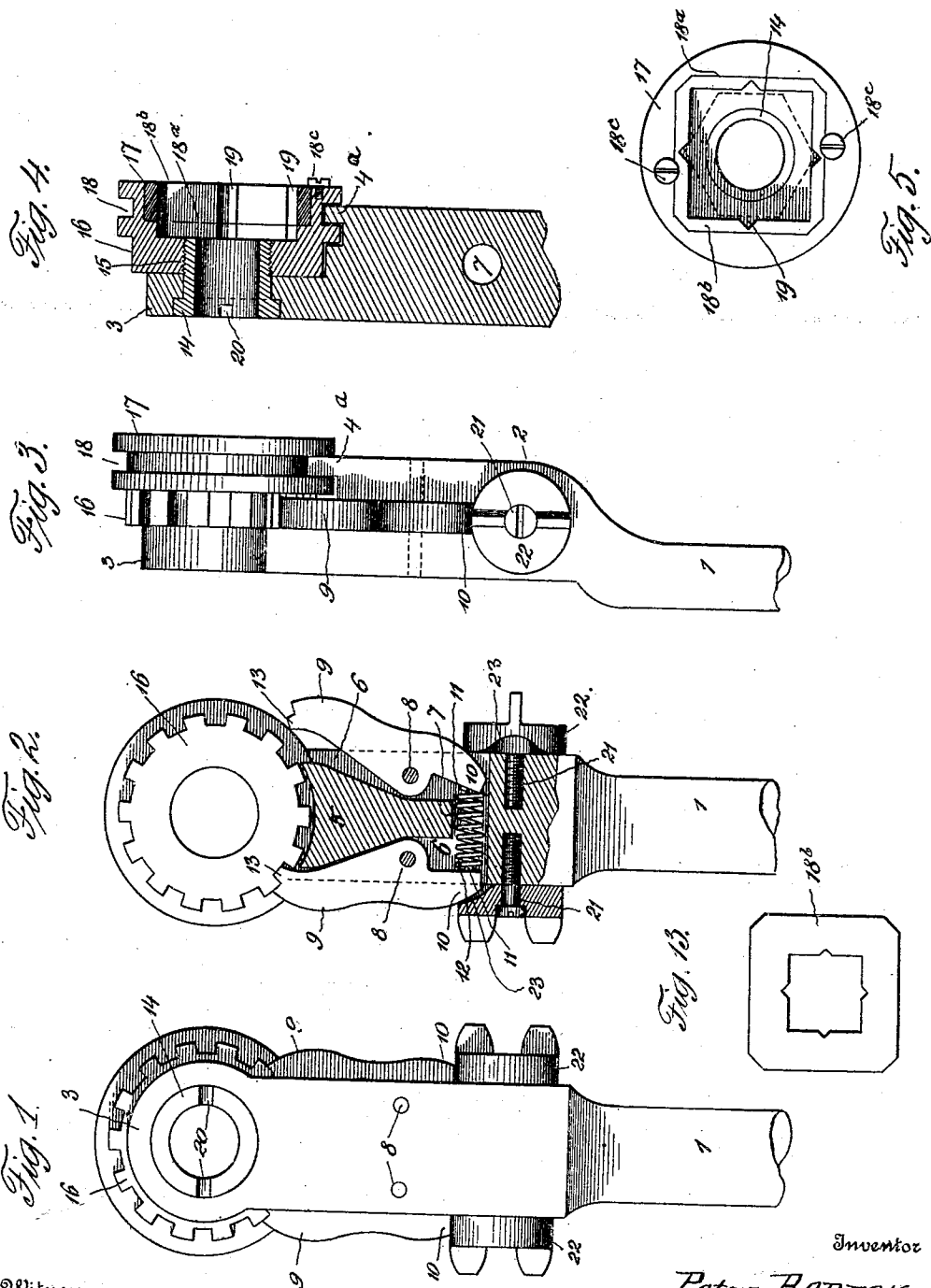


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WRENCH.

APPLICATION FILED JAN. 14, 1909.

939,788.

Patented Nov. 9, 1909.
2 SHEETS—SHEET 1.



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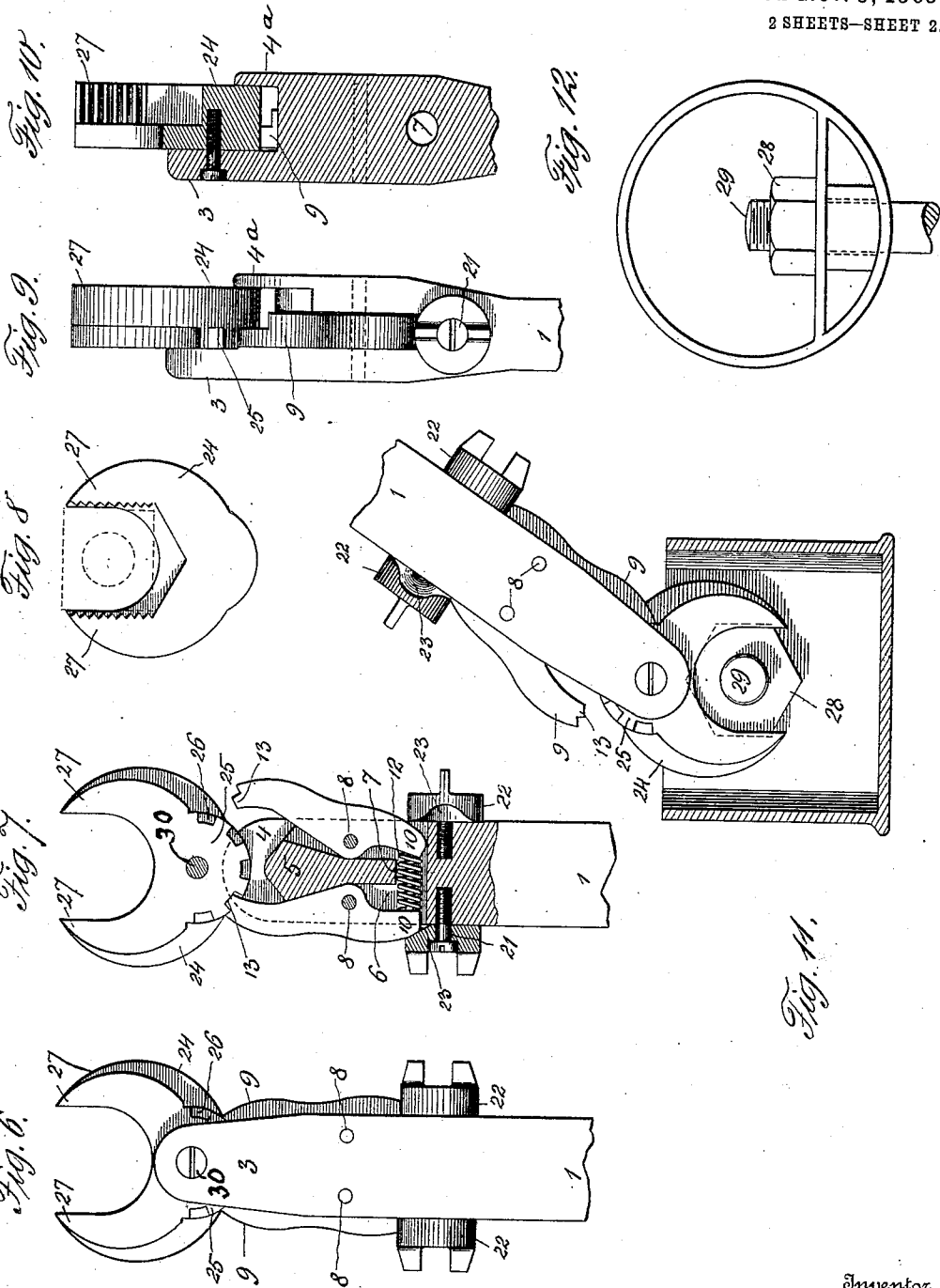
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UNITED STATES PATENT OFFICE.

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WRENCH.

939,788.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PETER BARTOK, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to wrenches, and more particularly to that type of wrench commonly styled, a "ratchet" wrench, and the invention has for its object to provide a reversible ratchet wrench that can be used for rotating nuts, inaccessible to other types of wrenches.

A further object of this invention is to provide a strong and durable wrench having two actuating pawls and novel means for locking either of said pawls in an inoperative position.

With the above and other objects in view which will more readily appear as the invention is better understood, the same consists in the novel construction, combination and arrangement of parts to be described and then claimed.

In the drawings, Figure 1 is a front elevation of a portion of the wrench constructed in accordance with my invention, Fig. 2 is a vertical transverse sectional view of the same, Fig. 3 is a side elevation of the wrench, Fig. 4 is a vertical cross sectional view of a portion of the same, Fig. 5 is a rear elevation of the nut gripping member, Fig. 6 is a front elevation of a portion of a wrench, illustrating a modified form of construction, Fig. 7 is a vertical transverse sectional view of the same, Fig. 8 is a rear elevation of a nut gripping member of a modified form of wrench, Fig. 9 is a side elevation of the same wrench, Fig. 10 is a vertical sectional view of the same, Fig. 11 is a rear elevation of a portion of the wrench, illustrating the same gripping a nut, inaccessible to an ordinary monkey wrench, Fig. 12 is a plan of a structure containing the nut, and Fig. 13 is an elevation of a nut die.

Referring to drawings detailed, 1 denotes a handle having one end offset and enlarged with respect to the remaining portion of the handle as at 2. The offset end 2 of the handle is bifurcated to provide the arms 3 and 4, the arm 3 being of greater length than the arm 4. The arms 3 and 4 are connected together by a web 5, which is substantially

Y-shape and of a length as to terminate at a point removed from the upper ends of the arms and from a point removed from the bottom of the furcation. The web 5 in connection with the arms 3 and 4 provides two oppositely disposed recesses 6, in each of which is pivotally mounted a pawl 9. The pivots of the pawls are formed by the pins 8, which extend through the arms 3 and 4. The lower end of the web 5 in connection with the bottom of the furcation provides an opening 7 through which extends a coil spring 12 having its ends abutting against the lower ends 10 of the pawls 9. The lower ends of the pawls 9 are provided with the lugs 11, which extend in the ends of the spring 12. The upper end of each pawl 9 is provided with a tooth 13, the function of which will be hereinafter referred to and the upper end of the arm 4 is provided with a tongue 4^a, the function of which will be hereinafter referred to.

Revolubly mounted in the long arm 3 of the wrench is a flanged collar 14 provided with exterior screw threads 15. Detachably mounted upon the threads 15 of the collar is a ratchet wheel 16, having an integral cylindrical nut-gripping member 17, the periphery of said member having a groove 18 formed therein to receive the tongue 4^a of the arm 4 of the wrench, said tongue 4^a guiding the nut gripping member and preventing the same from wobbling relative to the long arm 3. The member 17 is formed with a rectangular socket 18^a for a nut die 18^b, said nut die being held within the member by screws 18^c. The die 18^b can be removed and a different sized die, as shown in Fig. 13 placed in position for use in connection with a nut of a different size than the nut shown in dotted lines of Fig. 5. The inner side walls of the dies 18^b are provided with V-shaped notches 19, whereby said dies can be fitted upon a square or hexagonal shaped nut.

It will of course, be understood that the ratchet wheel 16 is placed in position, and then the collar 14 threaded into said wheel, and in order that the collar can be easily rotated, the outer end of said collar is provided with diametrically opposed notches 20 for the end of a screw driver or spanner wrench (not shown).

In diametrically opposed sides of the enlarged end 2 are mounted screws 21 and revolubly mounted upon said screws are winged buttons 22 having the faces thereof

confronting the wrench provided with beveled recesses 23 adapted to provide clearance for the ends 10 of the pawls 9 and allow said pawls to engage the ratchet wheel 16.

5 By rotating the buttons 22 a quarter of a revolution, either of the pawls 9 can be locked out of engagement with the ratchet wheel 16, whereby the other pawl can be used to rotate the ratchet wheel and the nut gripping member in a desired direction.

10 It will be observed that the spring 12 will normally maintain the pawls 9 in engagement with the ratchet wheel, holding said wheel stationary relative to the handle 1, whereby the wrench can be used similar to an ordinary spanner wrench, but to operate the wrench as a ratchet wrench, it is necessary that one of the pawls be locked out of engagement with the wheel 16.

20 Reference will now be had to Figs. 6 to 12 inclusive, wherein I have illustrated a wrench particularly designed for small work. In lieu of the ratchet wheel 16, I use a nut-gripping member 24 which is revolvably mounted between the long and short arms 3 and 4 of the wrench on a pivot screw 30 in the arm 3. This member is provided with a depending semi-circular portion 25 having one side thereof provided with notches 26 forming a rack adapted to be engaged by the pawls 9 of the wrench. The member 24 is cut away, to provide serrated gripping jaws 27 for engaging a square or hexagonal shaped nut. This type of wrench can be advantageously used for removing nuts 28 from bolts 29 located in structures in which it would be impossible to place an ordinary type of monkey wrench for rotating the nut 28 upon the bolt 29.

40 It is thought that the operation and utility of the wrench is apparent from the foregoing description, and while in the drawings forming a part of this application, there is illustrated the preferred embodiments of my invention, I would have it understood that the details of construction can be varied or changed as to the shape, proportion and manner of assemblage without departing from the spirit of the invention.

50 Having now described my invention, what I claim as new, is;—

1. A wrench comprising a handle having one end bifurcated to provide a pair of arms, one of said arms being longer than the other, a web arranged between and connected to said arms and forming in connection with said arms a pair of oppositely disposed recesses and said web in connection with the bottom of the furcation forming a transversely extending opening, a grooved and a toothed nut gripping member shift-

ably mounted in said elongated arm and extending in the upper end of the furcation, said short arm having a tongue at its upper end extending in the groove of said member, pawls arranged in said recesses, pivots for said pawls, said pawls adapted to engage in said teeth for coupling and shifting said nut gripping member when the handle is oscillated, a transversely extending spring mounted in said opening and engaging the lower ends of the pawls for maintaining them in engagement with the teeth, and winged buttons pivotally connected to the handle at a point below said furcation and each provided with a cut-away portion adapted when positioned in the plane of the lower end of the pawl to maintain it in engagement with one of the teeth, said buttons further constituting means for holding the pawl out of engagement with the teeth when a button is shifted to engage the lower end of a pawl.

2. A wrench comprising a handle having one end bifurcated to provide a pair of arms, one of said arms being longer than the other, a web arranged between and connected to said arms and forming in connection with said arms a pair of oppositely disposed recesses and said web in connection with the bottom of the furcation forming a transversely extending opening, a nut gripping member shiftably mounted in the upper end of said elongated arm and extending in the upper end of the furcation, said nut gripping member furthermore provided with a plurality of teeth, pawls arranged in said recesses, pivots for said pawls, and adapted to engage in said teeth for coupling and shifting said nut gripping member when the handle is oscillated, a transversely extending spring mounted in said opening and engaging the lower ends of the pawls for maintaining them in engagement with the teeth, and winged buttons pivotally connected to the handle at a point below said furcation and each provided with a cut-away portion on its inner face adapted when positioned in the plane of the lower end of a pawl to maintain said pawl in engagement with one of the teeth, said buttons further constituting means for holding the pawl out of engagement with the teeth when a button is shifted to engage the lower end of a pawl.

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

PETER BARTOK.

Witnesses:

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