

(No Model.)

2 Sheets—Sheet 1

D. J. QUIN.
RATCHET WRENCH.

No. 585,533.

Patented June 29, 1897.

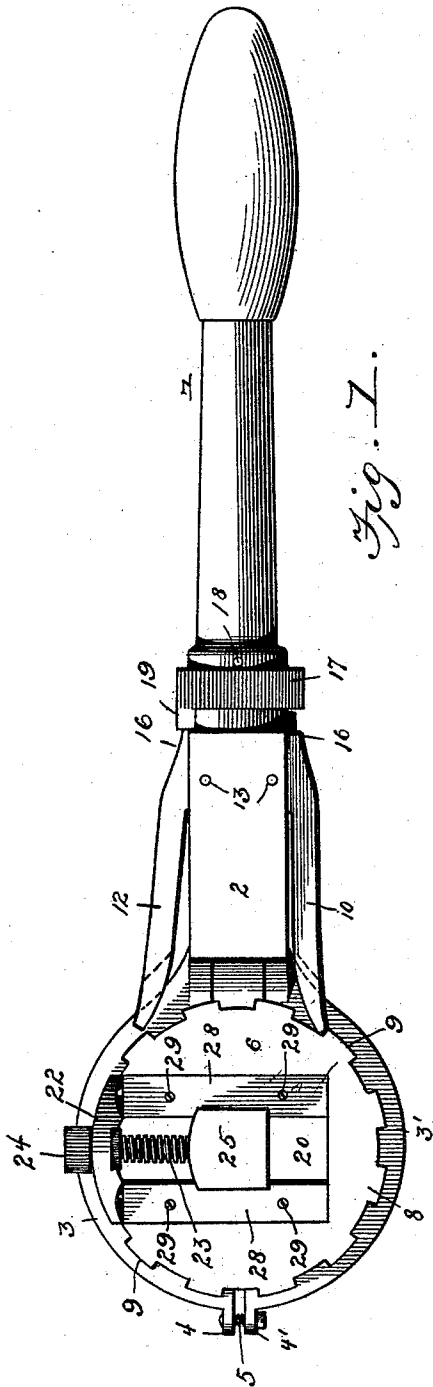


Fig. 1.

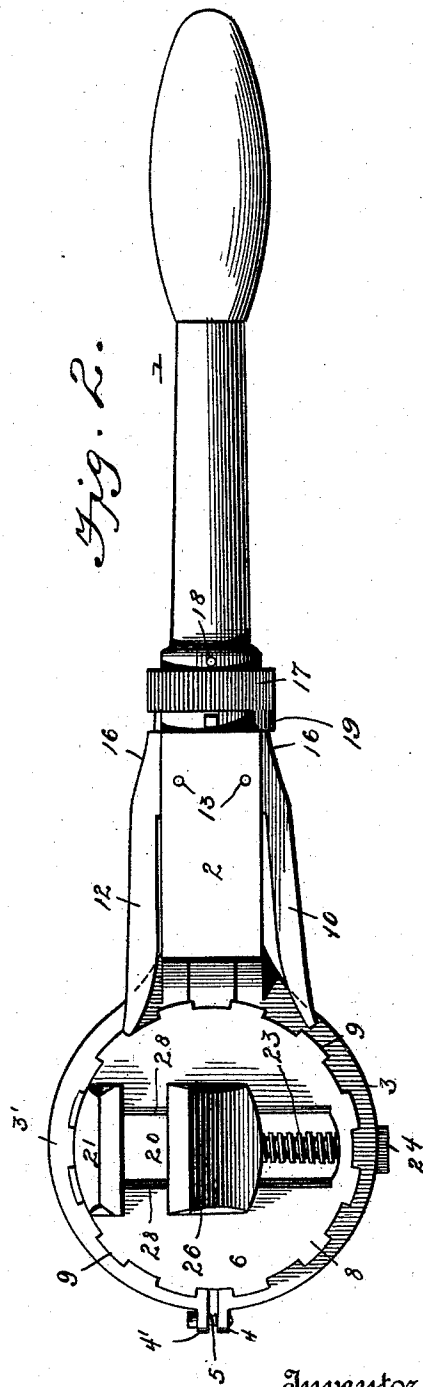


Fig. 2.

Witnesses
E. V. Monroe
H. F. Eunis

Inventor
David J. Quin.
By H. B. Wilson.
Attorney

(No Model.)

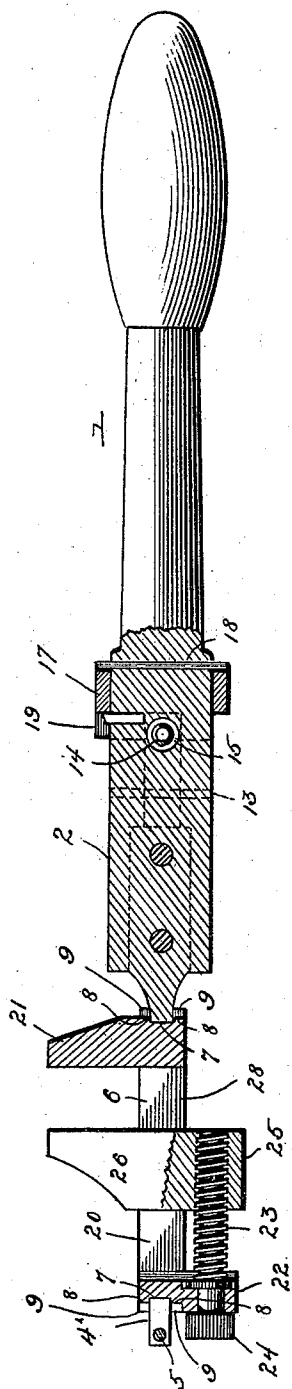
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Fig. 3.



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E. F. Munroe
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Fig. 5.

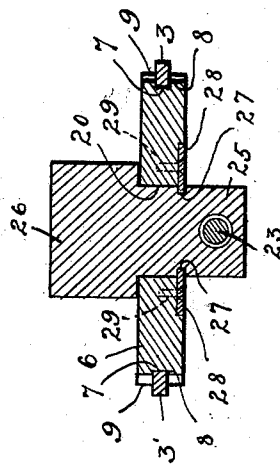
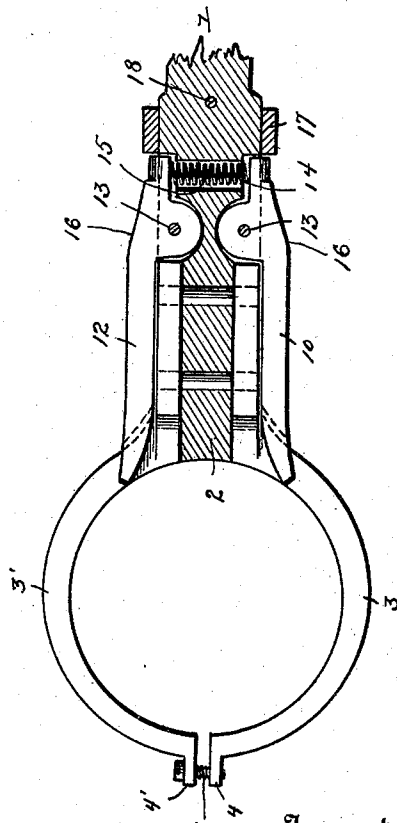


Fig. 4.



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UNITED STATES PATENT OFFICE.

DAVID J. QUIN, OF ANTRIM, OHIO.

RATCHET-WRENCH.

SPECIFICATION forming part of Letters Patent No. 585,533, dated June 29, 1897.

Application filed October 21, 1896. Serial No. 609,598. (No model.)

To all whom it may concern:

Be it known that I, DAVID J. QUIN, a citizen of the United States, residing at Antrim, in the county of Guernsey and State of Ohio, have invented certain new and useful Improvements in Ratchet-Wrenches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to improvements in adjustable ratchet-wrenches; and the object of the invention is to provide a simple, durable, and powerful device of this kind for general use.

To this end the novelty consists in the construction, combination, and arrangement of the several parts of the same, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings the same reference-numerals indicate the same parts of the invention.

Figure 1 is a top plan view of a wrench embodying my invention. Fig. 2 is a bottom plan view of the same. Fig. 3 is a vertical longitudinal section. Fig. 4 is a horizontal section of the head, and Fig. 5 is a transverse view of the same.

1 represents a handle formed with an integral rectangular shank 2 and semicircular jaws 3 3', their outer contiguous ends terminating in radial lugs 4 4', the lug 4 having a threaded orifice to receive the end of the set-screw 5.

6 represents the circular rotating head, having a rectangular groove 7 in its periphery, which receives the semicircular jaws 3 3', which latter form a guide for the head to revolve in. The shoulders 8 8 on each side of the groove 7 in the circular head are formed with a series of radial teeth 9, which engage the bifurcated ends of the pawls 10 and 12, fulcrumed on the studs 13 13 in the shank 2.

A spiral spring 14, located in a transverse orifice 15 in said shank, has its ends in contact with the short arms 16 of the pawls 10 12, and in pressing them outwardly hold the forward bifurcated ends of said pawls in contact with the teeth 9 on the head 6.

A milled collar 17 is mounted on the handle at its junction with the shank and is held

in place by a transverse pin 18. A projecting wing 19 on said collar is arranged to alternately engage the ends of the short arm 16 of the pawls and hold one or the other at will in toward the shank. This throws the outer bifurcated end of that pawl out of engagement with the teeth on the head, and consequently the head may be rotated in one direction—say to the right—by the free pawl, when an oscillating movement is given to the handle, and when it is desired to rotate the head in the opposite direction, or to the left, the milled collar 17 is turned on the handle, so that its wing 19 releases the short arm of the engaged pawl, leaving it free, and engages the corresponding arm of the other pawl, which throws it out of engagement with the teeth on the head.

When it is desired to lock the head against movement in either direction, the milled collar is turned so that its projecting wing is stationary between the shorter arms of the pawls. Consequently their bifurcated ends both engage the teeth on the head and prevent its movement in either direction, and the wrench may then be operated the same as an ordinary monkey-wrench.

The revolving head 6 is formed with a transverse slot 20, at one end of which is an integral stationary jaw 21, and on the opposite side and at the other end of said slot is an integral lug 22, in which is journaled a screw 23, having a milled head 24. This screw 23 engages a lug 25 on the movable jaw 26, sliding in the slot 20, the sides of the jaw being provided with rectangular guide-recesses 27 27, which engage the parallel guide-plates 28 28, secured to the head on each side of the slot 20 by screws 29 29.

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. A ratchet-wrench comprising the handle, integral shank and semicircular jaws 3 3',

having their outer contiguous ends connected by a set-screw, the parallel pawls 10 and 12 fulcrumed in said shank, the spring 14 mounted in the orifice 15 between the shorter arms of said pawls, the rotating milled collar mounted on said handle, and having a projecting wing to engage the short arms of said pawls, in combination with the circular rotating head 6 having a circumferential groove 7, a series of radial teeth 9, a transverse slot 20, a rigid jaw 21, and the movable jaw 26 adjustably mounted in said slot on the screw 23, journaled in an integral lug 22 on said head 6, substantially as and for the purpose set forth.

2. A ratchet-wrench comprising the handle, integral shank and semicircular jaws 3 3' connected at their outer ends by a set-screw, the parallel pawls having bifurcated ends, and fulcrumed in said shank, the spiral spring engaging the short arms of said pawls, the milled collar rotating on said handle and provided with a projecting wing adapted to engage one or the other of said pawls or release both at will, in combination with the circular rotating head having groove 7, in which it is mounted in said jaws 3 3', and provided with

a series of radial teeth on each side of the groove 7, and an integral jaw located at one end of the transverse slot 20, a movable jaw mounted in said slot and provided with an adjusting-screw 23 journaled in an integral lug on said head, substantially as and for the purpose set forth.

3. A ratchet-wrench comprising the handle, shank and integral semicircular jaws, having their contiguous ends connected by an adjusting-screw, in combination with the circular head 6 having groove 7, transverse slot, rigid jaw 21, and lug 22, parallel guide-plates 28 28, in combination with the movable jaw 26 sliding in said slot, and provided with the parallel guide-recesses 27 27 and the lug 25, the adjusting-screw 23 engaging said lug 25, and journaled in the lug 22 on said head 6, substantially as shown and described.

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

DAVID J. QUIN.

Witnesses:

S. L. JOHNSTON,
J. L. TANNEHILL.