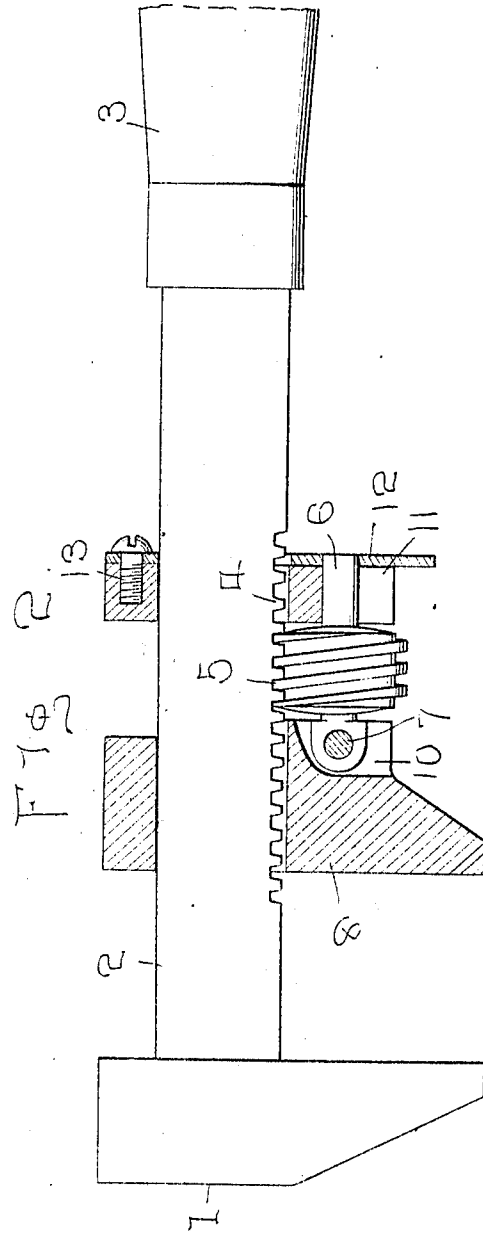
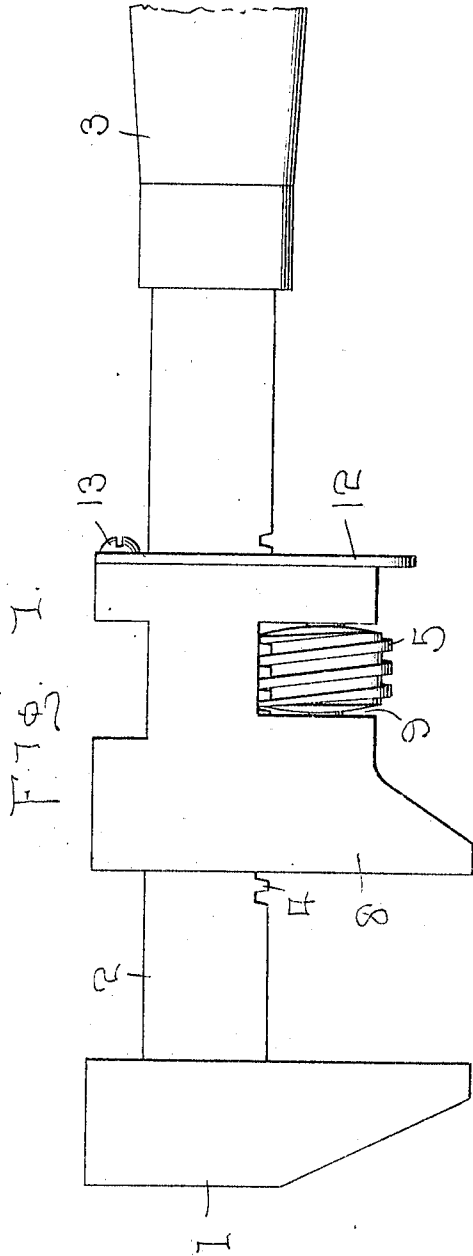


G. C. PANGRATZ.
WRENCH.

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1,026,174.

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WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE C. PANGRATZ, OF ATHENS, OHIO, ASSIGNOR OF ONE-HALF TO JAMES T. BANAHAN, OF ATHENS, OHIO.

WRENCH.

1,026,174.

Specification of Letters Patent.

Patented May 14, 1912.

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To all whom it may concern:

Be it known that I, GEORGE C. PANGRATZ, a citizen of the United States, residing at Athens, in the county of Athens and State of Ohio, have invented certain new and useful Improvements in Wrenches; and I do hereby 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.

This invention relates to wrenches and more particularly to that class of wrenches known as monkey wrenches.

15 An object of the invention is to provide a monkey wrench which may be quickly and easily adjusted.

Another object is to provide a wrench of the above stated character, which will be 20 of simple construction and positive in operation.

Another object is to provide a wrench of the rack and worm wheel type, which may be 25 instantaneously adjusted to regulate the distance between the jaws of the wrench, and, another object is to provide a wrench of this nature in which the worm wheel may be rotated while in engagement with the rack to adjust the traveling jaw in relation 30 to the stationary jaw and in which the worm wheel may be temporarily disengaged from said rack and the traveling jaw instantaneously adjusted along the shank of the wrench.

35 Other objects and advantages will be hereinafter set forth and pointed out in the specification and claim.

In the accompanying drawings which are made a part of this application, Figure 1 is 40 a side view of the wrench, the handle being broken away, and, Fig. 2 is a view similar to Fig. 1 the movable jaw being shown in section to more clearly illustrate the parts.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates the stationary jaw upon the outer end of the shank 2, which has an ordinary handle 3 connected to its opposite end. The 50 shank is provided along its inner edge with the usual rack 4, which is adapted to be engaged by the worm wheel 5, which has its ends suitably curved to allow the worm wheel shaft 6, upon which the worm wheel

is mounted, to swing upon its pivot pin 7. 55 The pivot pin 7 is secured transversely through the movable jaw 8 adjacent the worm wheel opening 9 within the front face of said jaw. It will be understood that the jaw 8 surrounds the shank 2 and is moved 60 longitudinally thereon to adjust the movable jaw in relation to the stationary jaw 1.

At the point at which the pin 7 is secured through the jaw 8, the latter is provided with a recess 10 to accommodate the en- 65 larged end of the worm wheel shaft 6. The jaw 8 is also provided with a recess 11 to the opposite side of the worm wheel opening 9, to accommodate the free end of the worm wheel shaft 6. The shaft 6 is normally held 70 in such position that the worm wheel 5 is engaged with the rack 4, the extremity of the free end of the shaft resting within a suitable opening in the leaf spring 12, the adjacent end of said leaf spring being forced 75 outwardly by the extremity of the shaft, while the latter is being forced into the recess 11, said spring flying back against the adjacent face of the jaw 8 as the free end of the shaft is seated and the extremity 80 thereof assumes a position opposite the opening of the spring, at which moment said extremity will be received within the opening. The leaf spring 12 is secured at its opposite end to the back portion of the 85 jaw 8 by the screw 13 or other suitable means, said spring having an opening there-through to accommodate the shaft 2. This movable jaw 8 may be instantaneously ad- 90 justed along the shank 2 by pulling the free end of the spring 12 away from said jaw and raising the free end of the worm wheel shaft 6 out of the recess 11 sufficiently to disengage the worm wheel 5 from the rack 4, after which the jaw may be freely moved 95 in either direction. When the jaw 8 is in the desired position, the worm wheel 5 and its shaft 6 are pressed inwardly, said shaft swinging on the pivot pin 7 until the free end of said shaft is seated in the recess, 11, 100 at which moment the spring 12 will automatically return to its position against the adjacent face of the jaw 8, the extremity of the free end of the shaft 6 being caught in the shaft opening through the spring 105 and thus held against casual release from the recess 11. It will be understood that the worm wheel 5, on account of its curved ends,

said ends being bulged adjacent the shaft 6 and sloped outwardly toward the circumference of the worm wheel, will freely pass the corners produced by providing the pinion opening 9 through the jaw 8, making it possible for the shaft 6 to freely swing upon its pivot pin 7. It will be understood that the worm wheel 5 may be rotated on the shaft 6 for any small adjustment, which is specially desirable when making slight adjustments of the movable jaw 8.

It will be seen that this wrench is extremely simple in construction and operation and will be highly efficient in use. It will also be seen that either small or large adjustments of the movable jaw 8 along the shank 2 may be made instantaneously.

Owing to the extremely small number of parts and the simple formation of these parts, it will be readily apparent that the

same may be manufactured and sold at an extremely low figure.

What I claim is:

A wrench having a toothed shank carrying a fixed jaw, a jaw movable thereon having open intersecting transverse and longitudinal slots, an adjusting worm wheel having a shaft, said worm wheel engaging the shank and seated in the transverse slot and a leaf spring carried by the movable jaw and engaging the shaft of the worm wheel to hold it in the longitudinal slot as set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE C. PANGRATZ.

Witnesses:

JOHN A. ROWAN,
EDWIN D. SAYRE.