

C. A. DE VAUL.
WRENCH.

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972,604.

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Fig. 1.

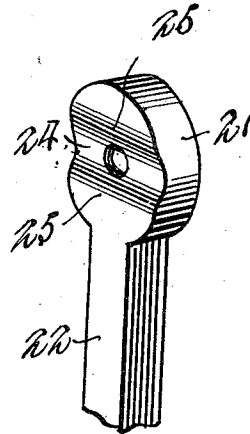
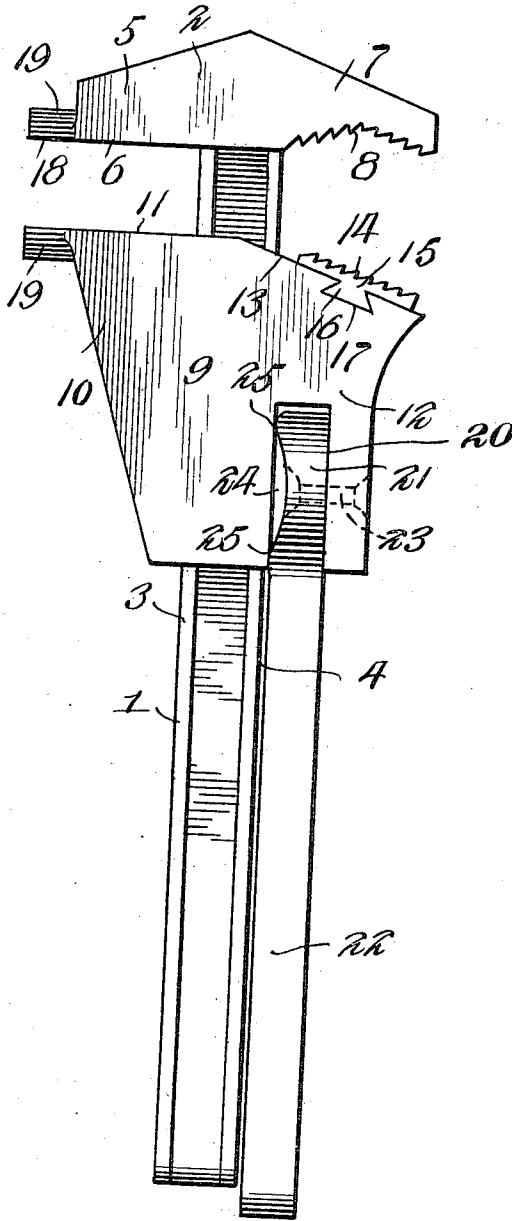


Fig. 2.

Witnesses

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WRENCH.

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To all whom it may concern:

Be it known that I, CHESTER A. DE VAUL, a citizen of the United States, residing at Laings, in the county of Monroe and State of Ohio, have invented new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to a quick-acting wrench, one object of the invention being to provide means whereby the movable jaw may be rapidly adjusted toward and from the fixed jaw to operate upon objects of different sizes.

Another object of the invention is to provide a combined adjusting and locking device for the movable jaw, whereby the latter may be conveniently manipulated and locked and unlocked in a practically instantaneous manner.

A still further object of the invention is to provide a wrench which may be used with equal efficiency for gripping rods, pipes, nuts, nipples and similar objects.

With these and other objects in view the invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawing, in which:—

Figure 1 is a side view of a wrench embodying my invention. Fig. 2 is a perspective view of the combined adjusting and locking device thereof.

Referring to the drawing, 1 designates the metallic shank or handle-bar of the wrench, which is preferably I-shaped in cross-section to secure rigidity and strength. On the forward end of this handle-bar is mounted a rigid jaw 2, which projects beyond both longitudinal edges 3 and 4 of the bar. One of the projecting portions 5 of said jaw is provided with a plane clamping face 6, while the other projecting portion 7 of the jaw is provided with a toothed arcuate or V-shaped gripping surface 8.

The movable jaw 9 is slidably mounted on the bar 1 for adjustment toward and from the fixed jaw and also projects beyond both longitudinal edges 3 and 4 of said bar. One of the projecting portions 10 of said adjustable jaw is provided with a plane clamping face 11 for coöperation with the face 6 of the jaw 2, while the other projecting portion 12 of the adjustable jaw is formed with an oblique downwardly and rearwardly inclined face 13 having a corre-

spondingly disposed toothed gripping surface 14 for coöperation with the toothed gripping surface 8 of the jaw 2. This gripping surface 8 is preferably formed upon a transverse plate 15 having a dovetailed tongue 16 to engage a dovetailed transverse groove 17 in the movable jaw, by which the plate is rendered removable for the convenient substitution of a new plate therefor when worn or the application of plates having different shapes of toothed surfaces to coact with the surface 8 in clamping variously formed objects. The two clamping surfaces 8 and 15 are adapted for gripping and holding or turning pipes, rods, refractory nuts and other objects which must be clamped with force and slippage of the wrench thereon prevented, while the clamping surfaces 6 and 11 are adapted to engage nuts and other angular objects on which a firm grip may be obtained without the use of toothed surfaces. Semi-circular projections 18 are provided on the portions 5 and 10 of the two jaws and have their convex faces formed with teeth or serrations 19. These projections are designed to fit within a nipple or other hollow object and are adjusted by the movement of the jaw 9 to grip said nipple or object in an obvious manner to enable the same to be firmly held or turned with facility.

The rear of the portion 12 of the jaw 9 is formed with a transverse slot 20 receiving the disk-shaped forward end or head 21 of an adjusting and locking device or lever 22. This device or lever consists of a bar having the expanded head 21 which is pivotally mounted in the slot on a pin or rivet 23. The slot 20 communicates with the passage in the jaw 9 through which the bar 1 extends, so that the edge 4 of the latter is exposed for frictional engagement with the inner face of the head 21. The said inner face of the head 21 is formed with a central groove or recess 24 and front and rear transverse cam ribs 25, which latter are adapted to bind against the edge 4 of the handle bar when the lever 22 is arranged parallel with and beneath the bar 1 to lock the jaw 9 firmly in adjusted position. The lever 22 is adapted to be swung outwardly at an angle of 90°, more or less, to the bar 1 on the pivot pin 23 to seat the edge 4 of said bar 1 in the recess 24 and dispose the cam ribs 25 on opposite sides of said bar, whereby the jaw 9 will be unlocked so that it may

be adjusted back and forth by means of the lever 22 which is used in this connection as a handle.

From the foregoing description, taken in connection with the drawing, the construction and mode of use of my improved wrench will be readily understood, and it will be understood, that the jaw 9 may be quickly and conveniently adjusted and locked in adjusted position. It will also be seen that the construction described enables different forms of objects to be securely grasped, thus increasing the range of usefulness of the tool.

Having thus described the invention, what is claimed as new is:—

A wrench comprising a shank, a fixed jaw,

a sliding jaw provided with a longitudinal transverse slot opening through both sides and the rear end of said jaw, and a laterally swinging adjusting lever movable to a position parallel with the shank and having a cam head pivoted in said slot, said cam head consisting of a disk having a central transverse cavity and ribs at opposite sides thereof, said ribs forming cam faces to bind against the shank.

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

CHESTER A. DE VAUL.

Witnesses:

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