

No. 666,433.

Patented Jan. 22, 1901.

N. ODEGAARD.
MONKEY WRENCH.

(Application filed May 2, 1900.)

(No Model.)

Fig. 2.

Fig. 1.

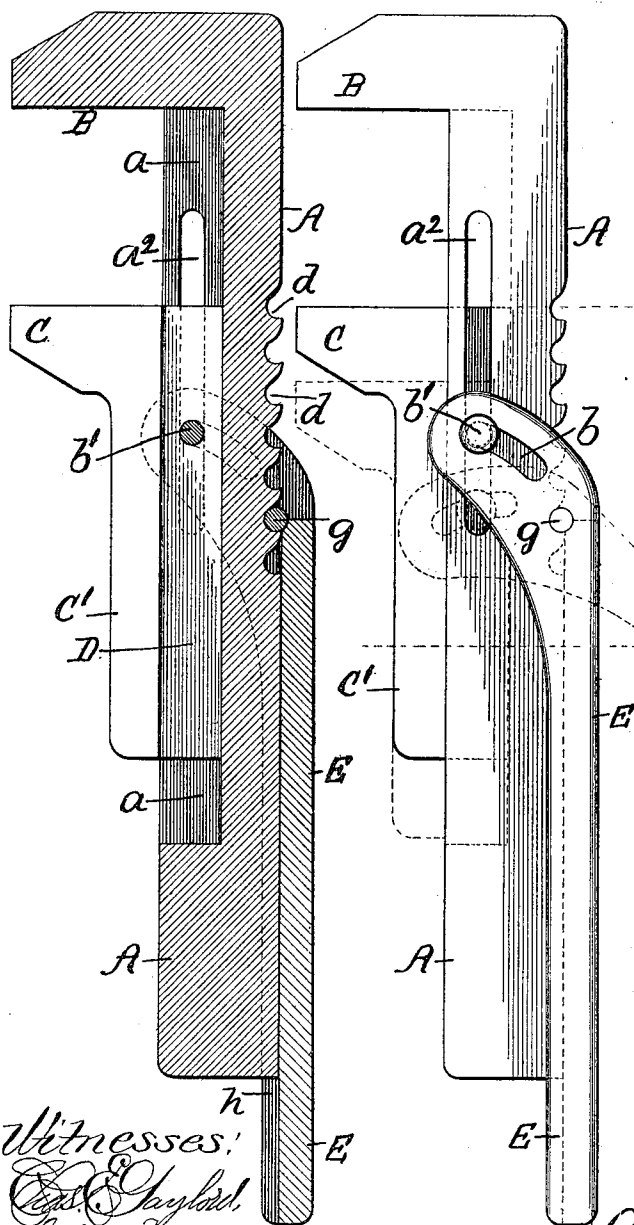


Fig. 3.

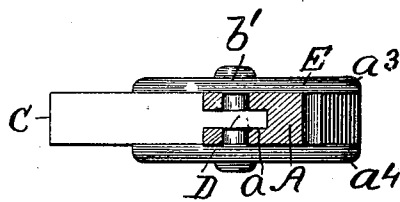
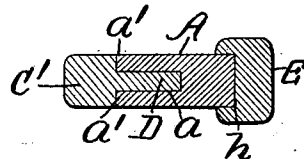


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

NELS ODEGAARD, OF CHICAGO, ILLINOIS.

MONKEY-WRENCH.

SPECIFICATION forming part of Letters Patent No. 666,433, dated January 22, 1901.

Application filed May 2, 1900. Serial No. 15,176. (No model.)

To all whom it may concern:

Be it known that I, NELS ODEGAARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, 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 improvements in wrenches, and has for its object to provide a simple and convenient device of this character, as will be hereinafter set forth. The adjustment to embrace objects of different diameters is positive and direct. The greater the force or leverage applied to the handle increases the grip of the jaws proportionately. All screw-threaded adjustments are dispensed with, the movable jaw having a sliding movement.

In the accompanying drawings, Figure 1 is an elevation of a device embodying the improved features. Fig. 2 is a part elevation and longitudinal section. Fig. 3 is a transverse section on line 3, Fig. 1, looking in the direction indicated by the arrow; and Fig. 4 is a transverse section on line 4, Fig. 1.

The handle A and the stationary jaw B, embraced thereby, are formed integral. The movable jaw C is provided with the extended shank C' and the guide-plate D, which is adapted to loosely engage with a longitudinal recess *a*, starting inwardly from the inner edge of the wrench-handle and stopping short therein, as shown in Fig. 2. The depth of this recess is approximately about one-half of the width of the handle part, so as to give the guide-plate a good holding-surface, the plate being of a width corresponding to the depth of the recess, the inner edge bearing on the bottom of the recess, as shown in Figs. 2, 3, and 4.

The guide-plate D is of a less thickness than the movable jaw and its shank, of which it forms an integral part, the stock being cut away to provide shoulders *a'* on each side, which bear against the adjacent edges of the handle part on the respective sides of the recess. By this means the movable jaw has a close-fitting alinement with reference to the

other parts, so that the jaw cannot spread or spring apart in practical working.

The elongated slot *a*² opens through the handle and the recess *a* from side to side. The inner head end of an adjusting and clamping lever E is bifurcated to form jaws *a*³ *a*⁴, which embrace both sides of the handle from the back edge and overlap a part of the surface of the movable jaw part. The bifurcated parts are provided with an eccentric slot *b*. A fixed pivot-pin *b'* is inserted through the guide-plate of the movable jaw, the respective ends extending loosely through the eccentric slot in the head end of the clamping-lever and are provided with flanged heads for loosely retaining the lever in its proper working position, and provides for the lateral swinging movement of the same away from and toward the handle part. The lever E possesses the dual functions of a handle for manipulating the movable jaw and clamping or gripping the object between the companion jaws.

The back of the handle part of the wrench is provided with a number of notches or serrations *d*. A fulcrum-pin *g* is inserted through the lever E, back of the eccentric slot in the head end thereof, and is adapted to loosely engage with any of the notches *d* and provide a shifting fulcrum-bearing for the manipulating-lever in accordance with the spread of the wrench-jaws in practical working. The inner side of the lever is troughed out, as at *h*, so as to close down compactly over the back of the handle for packing and shipping. The dotted lines in Fig. 1 show the lever E in another position and indicate the movement or sweep of the same from the closed to the wide-open limit.

In operation the handle should be held in the left hand and the clamping-lever grasped with the right hand and thrown back far enough to disengage the fulcrum-pin from its retaining-notches, when the movable jaw may be moved in the direction of or away from the stationary jaw through the medium of said lever, in accordance with the diameter of the nut or object it is intended to clamp between the jaws. Then grasp the wrench-handle and lever in one hand, so as to firmly draw them together, and apply the necessary force.

The greater the force applied the greater will be the grip or pressure on the object held between the jaws, so that it is not possible for the wrench to slip off and round or mar the finish
 5 and appearance of screw-nuts and other parts of fine machinery. The adjustment is easily and quickly accomplished and all threaded parts are dispensed with, thus saving much time and annoyance.

10 The jaws may be curved out or serrated for the purpose of adapting the device to be used as a pipe-wrench or for grasping and holding round objects.

15 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A wrench of the class described, comprising a handle part, having a stationary jaw formed on one end thereof and provided, longitudinally, with a recess, a movable jaw,
 20 provided with a guide-plate, loosely engaging said recess, and a manipulating-lever, eccentrically pivoted to said guide-plate and having a shifting fulcrum-bearing, substantially as described.

2. In a wrench of the class described, the combination with the handle, supporting a

jaw part and provided in the inner edge with a recess, and a slot, opening through from side to side at right angles to the recess therein, a movable jaw, provided with a guide-plate having an adjustable sliding movement in said recess, and a manipulating-lever, having an eccentric slot in its head end and pivotally connected with said guide-plate, substantially as described. 35

3. In a wrench of the class described, the combination with the handle part, having a slot opening therethrough from side to side, of a movable jaw, provided with a guide-plate, loosely recessed in said handle part, a manipulating-lever, having its head end provided with an eccentric slot, a pivot-pin, rigidly fixed in said guide-plate and loosely engaging said eccentric slot, the fulcrum-pin,
 40 and the notches in the back of the handle part, substantially as described. 45

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

NELS ODEGAARD.

Witnesses:

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