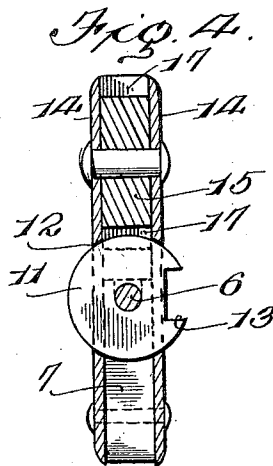
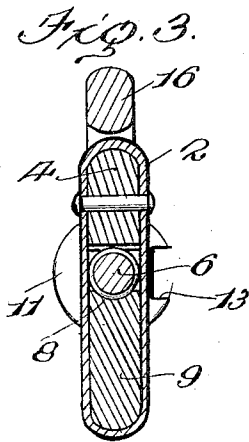
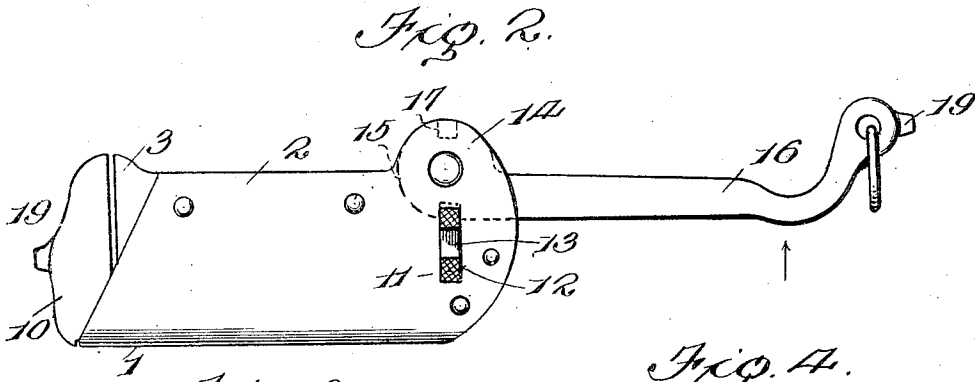
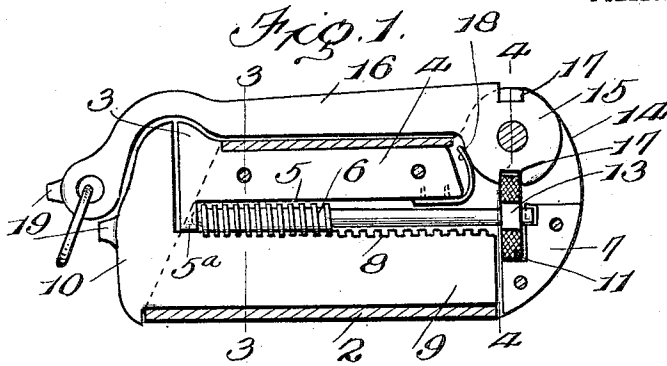


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 FOLDING MONKEY WRENCH.  
 APPLICATION FILED OCT. 20, 1908.

909,205.

Patented Jan. 12, 1909.

2 SHEETS—SHEET 1.



Inventor

J. P. Nikonow

Witnesses

*[Signature]*  
*[Signature]*

By

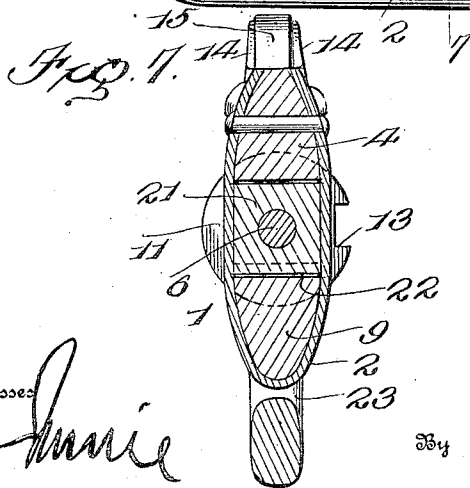
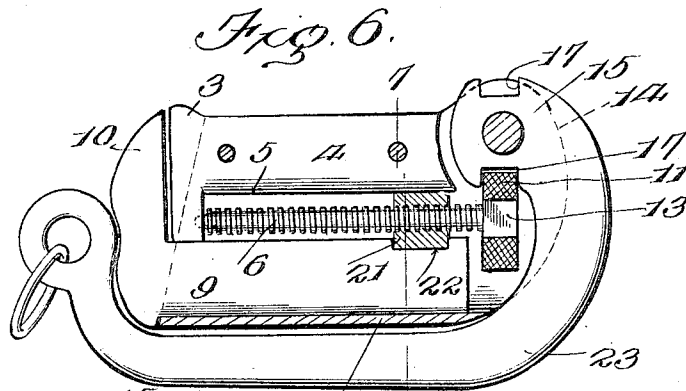
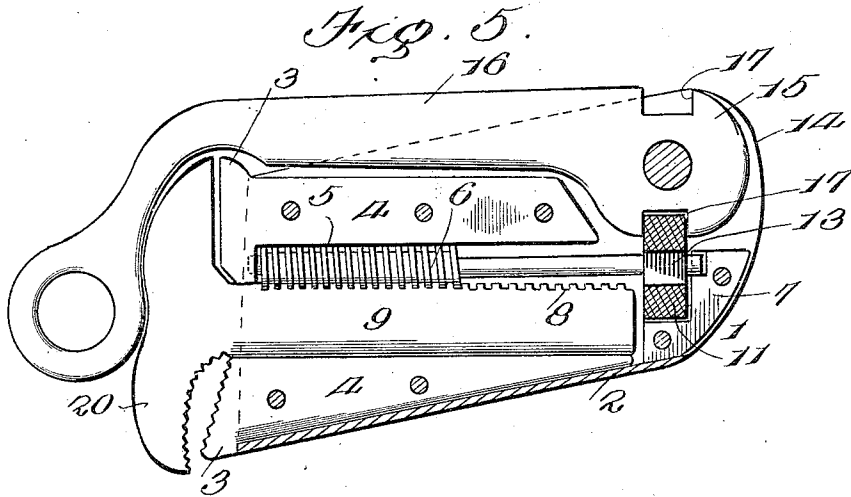
*[Signature]* Attorneys

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2 SHEETS—SHEET 2.



Inventor

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# UNITED STATES PATENT OFFICE.

JOHN P. NIKONOW, OF EVANSVILLE, INDIANA.

## FOLDING MONKEY-WRENCH.

No. 909,205.

Specification of Letters Patent.

Patented Jan. 12, 1909.

Application filed October 20, 1908. Serial No. 458,674.

*To all whom it may concern:*

Be it known that I, JOHN P. NIKONOW, a citizen of the United States, residing at Evansville, in the county of Vanderburg, and State of Indiana, have invented certain new and useful Improvements in Folding Monkey-Wrenches, of which the following is a specification.

This invention comprehends certain new and useful improvements in tools of that type known as wrenches, and the object of the invention is an attractive device of this character which embodies a pivoted handle that is adapted to be folded over against the body portion of the wrench to afford a more compact structure and render the same capable of being conveniently carried in the pocket or packed for storing or shipping, said handle being arranged to be sustained in a peculiar manner in folded and operative positions, and the wrench possessing certain other advantages, that will become at once apparent as the invention is hereinafter disclosed, over the ordinary devices of this character in general use.

With this and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe and then point out the novel features thereof in the appended claims.

For a full understanding of the invention and the merits thereof and to acquire a knowledge of the details of construction, reference is to be had in the following description and accompanying drawings, in which:

Figure 1 is a partial longitudinal section of a wrench embodying the improvements of my invention; Fig. 2 is a side elevation thereof, showing the handle in operative position; Fig. 3 is a transverse section on the line 3—3 of Fig. 1; Fig. 4 is a similar view, the section being taken on the line 4—4 of Fig. 1; and, Figs. 5, 6 and 7 are views illustrating modifications hereinafter specified.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates the body portion of my improved wrench which may be of any desired or approved construction or design, except as hereinafter noted, and which in the present instance embodies a case or shell 2 and two

jaws that are carried at the forward end of the same. The inner jaw, designated 3, is rigid and has its shank 4 arranged longitudinally within the case 2 and rigidly secured therein in any suitable manner, as by means of rivets or screws or similar fastening means passing therethrough. This shank 4 is formed in its inner edge with a longitudinal recess 5 which is designed to accommodate a longitudinally disposed actuating screw 6 and which terminates at one end in a shoulder 5<sup>a</sup> in which the forward end of the actuating screw is journaled, the opposite end of said screw being journaled in a bearing 7 secured at the rear end of the case, as shown. The actuating screw 6 engages a rack 8 which is formed in the inner edge of the shank 9 of the outer or movable jaw 10 so as to be rendered capable of shifting the same longitudinally and holding said last named jaw in the desired adjusted position in relation to the rigid jaw 3. As the preferred means for turning the actuating screw 6, a preferably cylindrical transversely disposed nut 11 is rigidly mounted thereupon in proximity to the bearing 7 and projects through openings 12 formed in the opposite sides of the case 2 so as to be manipulated with facility, said nut being formed in its periphery with a longitudinally extending notch 13 for a purpose to be hereinafter presently disclosed.

The shank 4 of the rigid jaw 3 terminates short of the rear end of the case 2, and the latter is formed in such end with two spaced ears 14 between which a segmental head 15 formed at one end of a handle 16, is centrally pivoted so as to hingedly connect the handle to the body portion 1 of the wrench and render the former susceptible of being swung over upon the latter and against the rigid jaw 3 into an inoperative position. This handle may be of any desired form, and is preferably crooked at an intermediate point to fit around the jaws, as shown, and has its free end apertured so as to be adapted for engagement with a key-ring or the like. In order to maintain the handle in operative or inoperative positions, the segmental head 15 is formed at substantially diametrically opposite points with recesses 17, any selected one of which is arranged to receive the cylindrical nut 11 that is disposed in a plane perpendicular to the plane of the head and that is thus adapted to engage the same and prevent any rotation thereof about its pivot, so as to maintain the handle in the desired posi-

tion. In the present instance, a flat spring 18 is interposed between the extremity of the shank 4 and said head, and bears against the latter to assist in sustaining the same against accidental displacement.

When it is desired to use my improved wrench when the latter is folded and the parts in the positions just described, the nut 11 is turned so as to bring the notch 13 into registry with the recess 17 with which the nut has been in engagement, thereby providing a clearance for the head and permitting the handle to be turned about its pivot and swung into an operative position with the opposite recess 17 registering with such notch in the nut. The nut is then turned to effect the desired adjustment of the jaws and to bring the notch 13 out of registry with the recess 17 so as to cause the nut to engage the head and hold the handle in operative position. The parts are preferably so arranged that sufficient play is afforded the actuating screw 6 so that when the wrench is turned by its handle in one direction, (as indicated by the arrow in Fig. 2), the actuating screw will be drawn rearwardly and the jaw 10 carried thereby will be moved slightly toward the rigid jaw to more firmly engage the work. For convenience, the outer jaw 10 and the handle are formed with outstanding lugs 19 which are adapted for engagement with the nick in the screw head and render the wrench susceptible of use as a screwdriver.

In one modification of my invention, two rigid jaws 3 are provided, and the shank of the movable jaw 20 is interposed therebetween, said jaw 20 being formed double, as illustrated in Fig. 5, and cooperating with the rigid jaws to constitute two pairs of jaws, one of which is designed for engagement with nuts or similar work, while the other pair is serrated and designed to bite a pipe.

In another modification illustrated in Figs. 7 and 8, the rack 8 is omitted and the actuating screw 6 is provided with a movable nut 21 which works thereon and fits in a groove 22 in the shank of the movable jaw so as to carry the same back and forth as desired. In this instance, the handle is shown as oppositely curved, as indicated at 23, and is designed in inoperative position to extend along the body portion in proximity to the movable jaw 10.

Having thus described the invention, what I claim is:

1. A wrench comprising a body portion embodying jaws, means for adjusting the jaws, and a swinging handle carried by the body portion and engaged by the adjusting means and adapted to be secured thereby in operative and inoperative positions.

2. A wrench comprising a body portion embodying rigid and movable jaws, an ac-

tuating screw engaging the movable jaw, a nut rigidly mounted upon the actuating screw, and a handle pivotally secured to the body portion, the nut being adapted to engage the handle to secure the same in operative and inoperative positions.

3. A wrench comprising a body portion embodying rigid and movable jaws, means for adjusting the movable jaw, and a handle pivotally secured to the body portion, said adjusting means being adapted to engage the handle to secure the same in operative and inoperative positions.

4. A wrench comprising a body portion embodying jaws, an actuating screw for adjusting the jaws, a handle pivotally connected at one end to the body portion and formed at such end with a recess, a nut mounted upon the actuating screw and received in the recess, and means for disengaging the nut from the handle.

5. A wrench comprising a body portion embodying rigid and movable jaws, an actuating screw engaging the movable jaw, a nut rigidly mounted upon the actuating screw, and a handle formed at one end with a segmental head, the nut being adapted to engage the head, as and for the purpose specified.

6. A wrench embodying rigid and movable jaws, an actuating screw engaging the movable jaw, a nut rigidly mounted upon the actuating screw, a handle formed at one end with a segmental head having recesses in its periphery, the nut being arranged to be received in any selected one of said recesses, and means for disengaging the nut from the head.

7. A wrench comprising a body portion embodying rigid and movable jaws, an actuating screw engaging the movable jaw, a nut rigidly mounted upon the actuating screw, and a handle formed at one end with a segmental head pivotally secured to the body portion so as to lie in a plane perpendicular to the plane of the nut, said head being formed in its periphery with a recess in which the nut is adapted to be received, and the nut being provided with a notch adapted in one position of the nut to constitute a clearance for the head.

8. A wrench comprising a body portion embodying rigid and movable jaws, an actuating screw for adjusting the movable jaw, a handle pivotally secured to the body portion, and means carried by the actuating screw for engaging the handle and securing the same in operative and inoperative positions.

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

JOHN P. NIKONOW. [L. s.]

Witnesses:

JOHN RAPPLER,  
W. A. WILSON.