

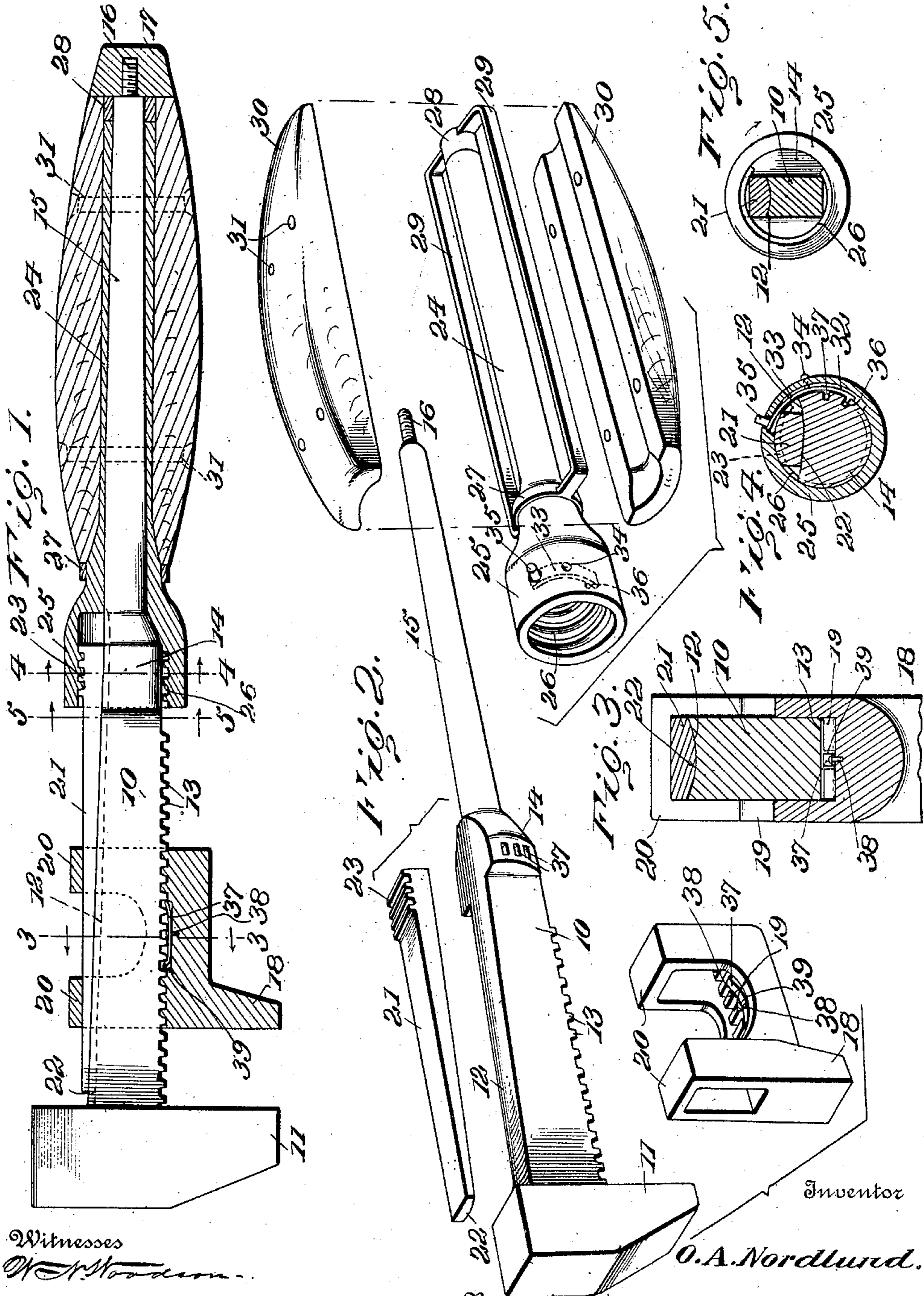
O. A. NORDLUND.

WRENCH.

APPLICATION FILED JULY 22, 1910.

991,529.

Patented May 9, 1911.



Witnesses  
W. H. Nordlund.

Juana M. Fallin.

By

O. A. Nordlund.  
Attorneys.

# UNITED STATES PATENT OFFICE.

OSCAR A. NORDLUND OF LINDSBORG, KANSAS.

## WRENCH.

991,529.

Specification of Letters Patent.

Patented May 9, 1911.

Application filed July 22, 1910. Serial No. 573,227.

*To all whom it may concern:*

Be it known that I, OSCAR A. NORDLUND, citizen of the United States, residing at Lindsborg, in the county of McPherson and State of Kansas, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to wrenches, and has for an object to provide a wrench having a traveling jaw with means for rigidly locking the jaw in position when adjusted, so that the jaw will not yield under stress when the wrench is employed. This feature contemplates a wrench which does not destroy the angular faces of the nuts and taps commonly used and to which the wrench is applicable.

The invention has for another object a wrench having a locking and releasing means for the movable jaw which can be quickly operated by partially rotating the handle of the wrench.

For a full understanding of the invention reference is to be had to the following description and accompanying drawing, in which:—

Figure 1 is a longitudinal section through the improved wrench. Fig. 2 is a perspective view of the wrench, showing the parts detached from one another. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a section on the line 4—4 of Fig. 1. Fig. 5 is a transverse section on the line 5—5 of Fig. 1.

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

Referring to the drawing the numeral 10 designates the shank of the wrench which is substantially rectangular in cross-section and carrying upon its outer end a fixed jaw 11. A groove 12 is formed longitudinally in the upper edge of the shank 10, while the rack-teeth 13 depend from the lower edge of the shank. The inner end of the shank is enlarged and rounded as at 14, the enlarged portion 14 tapering inwardly and merging into a spindle 15. The spindle 15 is provided upon its inner end with a threaded stud 16 for the reception of a binding nut 17.

The shank 10 carries a movable or traveling jaw 18 which is provided with an inwardly extending rack-bar 19 registering against the under edge of the shank 10,

and held in such position by yokes 20 carried upon the jaw 18 and the inner end of the rack 19. The yokes 20 engage over the shank 10 and are spaced a slight distance above the shank and over the groove 12. A wedge-shaped key 21 is employed which is provided with a lower rounded surface 22 seating within the groove 12 and engages through the yokes 20. The inner enlarged end of the wedge 21 carries upwardly extending rack-teeth 23.

The wrench is provided with a handle in the form of a sleeve 24 loosely engaging over the spindle 15 and having an enlarged and internally threaded portion 25 at its forward end to snugly engage over the enlarged portion 14. The threads 26 within the enlarged sleeve 25 mesh with the rack-teeth 23 upon the wedge 21. The threads 26 are interrupted at one side of the sleeve 25 to accommodate a locking mechanism hereinafter set forth. The sleeve 24 carries at its opposite ends collars 27 and 28 which are connected to one another by diametrically extending bails 29. Handle sections 30, formed from wood or other desirable substance, engage against the opposite sides of the sleeve 24 and against the edges of the bails 29. Rivets 31 pass through the handle sections 30 inwardly of the bails 29.

The enlarged sleeve 25 is provided in its inner face with a pocket 32 formed in the interrupted portion of the threads. A leaf-spring 33 engages within the pocket 32 and is given a curvature sufficient to space the ends of the same from the inner wall of the pocket. The leaf-spring 33 carries a pivot pin 34 which loosely passes through the sleeve 25 and hingedly supports the spring 33. A stud 35 is mounted upon the upper end of the spring 33 and passes through a corresponding opening formed in the sleeve 25. The opposite or lower end of the spring 33 carries an inwardly extending projection 36 seating within a series of recesses 37 formed in one side of the enlarged portion 14.

The rack 19 carries a leaf-spring 37 which is secured midway of its ends to the rack by a rivet 38 in a depression 39 formed centrally in the rack. The extremities of the spring 39 are adapted for engagement between the teeth of the rack 13.

In the employment of the wrench, when it is desired to adjust the movable jaw 18 the handle is rotated to turn the enlarged sleeve

through one-half of a revolution. Before the sleeve 24 can be rotated the operator presses the stud 35 to raise the projection 36 from the notches 37 of the shank. The sleeve 25 is turned to the left in order to bring the lower end thereof into engagement with the rack-teeth 23 of the key to retract the key from the yokes 20. As soon as the yokes 20 are released the spring 37 forces the movable jaw 18 and the rack 19 away from the teeth 13 of the shank. The movable jaw is now adjusted along the shank 10 to accommodate the tap or nut to which the wrench is to be applied. The handle is now rotated to the right to force the key 21 through the yokes 20 and to thereby raise the rack 19 against the teeth 13. The stud 35 is released to admit of the dropping of the projection 36 into one of the recesses 37 to hold the sleeve 25 from movement. Since the movable jaw 18 is carried upon the rack 19, and the rack 19 meshes with the teeth 13 of the shank, it is readily seen that the jaw 18 is held rigidly when once adjusted and that the application of force to the wrench will not permit the yielding of the jaw 18 to injure the angular faces of the tap.

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

1. A wrench including a shank having a fixed jaw and a rack-bar, said shank also having an enlarged conical portion and an inwardly extending spindle, a movable jaw

mounted upon the shank and having a corresponding rack-bar and yokes engaging loosely over the shank, a key slidably engaging against the shank and through the yokes for binding the movable jaw upon the shank, said key having rack-teeth upon its inner end, a sleeve mounted for rotation upon the spindle and having an enlarged portion with internal threads engaging over the rack-teeth of the key, and handle sections secured against the opposite sides of the sleeve for the reception of the hand to turn the enlarged sleeve portion.

2. A wrench including a shank having a fixed jaw and a rack-bar, a movable jaw mounted on the shank and having inwardly extending rack-teeth to mesh with said rack-bar, and yokes engaging over said shank, a wedging key slidably engaging against the shank and through the yokes, a handle mounted for rotation upon the inner end of the shank and having an internally threaded sleeve at its forward end, said key having teeth formed upon its inner end to engage within the sleeve, and means carried by the handle for engagement with the shank to lock the handle in adjusted position.

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

OSCAR A. NORDLUND. [L. s.]

Witnesses:

LUTHER SWENSSON,  
MARK GUMERSEN.