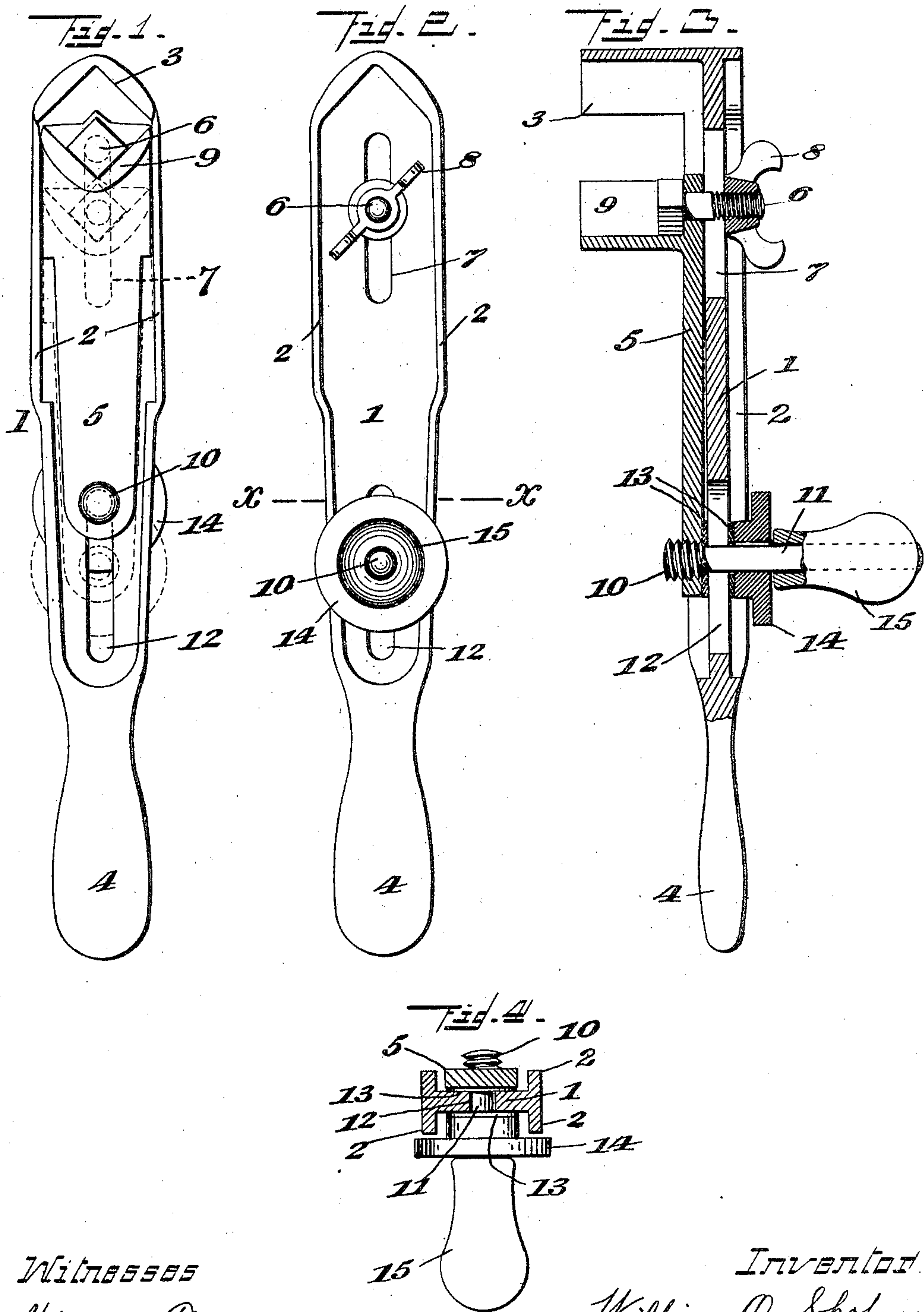


No. 797,981.

PATENTED AUG. 22, 1905.

W. O. SHOBROOK.
SLIDING JAW WRENCH.
APPLICATION FILED AUG. 20, 1904.



Witnesses
William Schuchardt
John Z. Ward

Inventor
William O. Shobrook
 by *John Elias Jones*,
 his Attorney

UNITED STATES PATENT OFFICE.

WILLIAM OWENS SHOBROOK, OF CINCINNATI, OHIO.

SLIDING-JAW WRENCH.

No. 797,981.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed August 20, 1904. Serial No. 221,510.

To all whom it may concern:

Be it known that I, WILLIAM OWENS SHOBROOK, a citizen of the United States of America, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Sliding-Jaw Wrenches, of which the following is a specification.

This invention relates to certain improvements in wrenches, and has for its object to provide a wrench of a simple and inexpensive nature and of a light and strong construction, which shall be adapted for better and more secure engagement with a nut or similar part for the removal or application of which the wrench is employed, whereby the liability of the device slipping off from the nut when in use is avoided and the application and removal of nuts and similar parts are greatly facilitated.

The invention consists in certain novel features of the construction, combination, and arrangement of the several parts of the improved wrench whereby certain important advantages are attained and the device is made simpler, cheaper, and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is a face view of a wrench constructed according to my invention, and Fig. 2 is a reverse elevation of the same. Fig. 3 is a sectional side elevation of the improved wrench, the plane of the section being extended in the axis of the shank and jaws of the device. Fig. 4 is a transverse section taken through the shank of the improved wrench in the plane indicated by line *xx* in Fig. 2 of the drawings.

As shown in these views, 1 indicates the main member or body portion of the wrench, the opposite sides of which are provided with flanges, as indicated at 2 2, for additional strength. The member 1 has an angular jaw 3 extended from its front face and adapted for engagement over an angle of the nut or other part in connection with which the improved wrench is employed, and the opposite end of the member 1 is extended to produce a shank, the extremity of which has a handle 4 formed upon it in a well-known way.

5 indicates the movable or adjustable member of the wrench, which is constructed in elongated form and is adapted for movement along the front surface of the member 1 and

of its shank between the flanges 2 2 at opposite sides thereof. The movable member 5 is provided at that end which is adjacent to the jaw 3 of member 1 with a perforation through which is passed a screw-bolt 6, the threaded end of which is passed through and is adapted for play lengthwise along a slotted opening 7 provided in the body portion or member 1, said screw-bolt 6 having a head engaged outside of the movable member 5 and having a wing-nut 8 upon its screw-threaded end, adapted, when turned, for engagement upon the reverse side of the body portion or member 1 of the device.

9 indicates an angular jaw produced upon the movable or adjustable member 5 and of a nature similar to, but reversely formed with respect to, the jaw 3 of the main member or body portion 1 of the wrench, being adapted for engagement with an angular portion of a nut or equivalent part opposite to the point of engagement of said jaw 3.

The end of the movable or adjustable member 5 is extended down along the shank of the main member or body portion 1 of the improved wrench and has at its extremity a screw-threaded opening in which is engaged the threaded extremity 10 of a pin or part 11, which, like the screw-bolt 6, is extended through a slotted opening 12, produced in the shank of the member 1, and carries on opposite sides of the web of said shank or member 1 washers 13 13, one of which is interposed between the front surface of the shank and the under side of the extension of the movable or adjustable wrench member 5 and the other of which is similarly interposed between the rear or reverse surface of the shank and an enlargement or thumb-piece 14, keyed or otherwise securely held upon the pin or part 11 at that side of the wrench.

Beyond the enlargement or thumb-piece 14, which, as seen in the drawings, is made circular in form and of a diameter greater than the width of the wrench-shank, whereby its opposite sides are caused to project beyond the sides of said shank for convenient engagement by the fingers of the operator, the pin or part 11 is extended outward and is provided with a handle 15, loosely held thereon, the extremity of the pin or part 11 being enlarged in any desired way for retaining said handle 15 in position. By this construction it will be seen that the handle 15 is caused to project at right angles from the side of the wrench-shank, so that when the jaws 3 and 9 are engaged over

a nut or equivalent part the said handle 15 may be employed after the fashion of a crank-handle for rapidly turning the nut to screw it home or to unscrew it, the loose arrangement of the handle 15 on pin or part 11 serving to aid in the operation by permitting a tight grasp upon the handle during the operation of tightening or loosening the nut. By this arrangement of the handle 15 it will be evident that a nut or like part may be quickly screwed in position or unscrewed, and when the nut is being applied in place it may be turned, by means of the handle 15, until it commences to bind, after which the hand may be conveniently applied to the handle 4 on the wrench-shank, so that the wrench may be used as a lever in the ordinary way, whereby the nut may be tightly set without danger of straining the parts of the improved wrench.

In the operation of the device it will be seen that when the pin or part 11 is turned in one direction by engagement of the fingers upon the enlargement 14 the screw-threaded end 10 of said pin or part will traverse the extension of the adjustable wrench member 5 and will serve to draw the same toward the surface of the wrench-shank, so that the wing-nut 8 being slightly loosened the member 5 may be moved or adjusted lengthwise on the body portion or member 1 to separate the jaws 3 and 9 or to approach them toward each other, whereby the wrench may be adapted for application to nuts of different sizes.

When the jaws 3 and 9 have been adjusted for use in connection with nuts of a particular size, the wing-nut 8 will be tightened, said wing-nut, in connection with the screw or bolt 6, with which it has engagement, forming a clamping device adapted for employment to hold the jaws of the wrench in position for such engagement with nuts of a particular size.

When the jaws have been adjusted to a particular nut, the wrench is applied thereto with its jaws engaged upon opposite angular portions of the nut in a well-known way, after which the enlargement 14 is engaged by the fingers and turned sufficiently to throw the extended end of the adjustable wrench member 5 away from the wrench-shank by reason of the engagement of the threaded end 10 of the pin or part 11 with said extension. In this way a certain extent of pivotal movement is imparted to the adjustable member 5 and to its jaw 9 upon the screw-bolt 6 as a fulcrum, whereby the said jaw 9 of the movable member 5 is caused to pinch or bind tightly upon the inner portion of the nut or like part over which the wrench is applied, whereby a tight grip of the wrench-jaws upon the nut is assured, the said pivotal movement of the adjustable wrench member 5 serving also to bind said adjustable member at the screw-bolt 6 upon the main member or body portion 1,

whereby slipping of the movable member lengthwise on the main member is altogether avoided in spite of any slight looseness which may exist at the wing-nut 8.

When the nut shall have been unscrewed, a reverse movement of the enlargement 14 will serve to throw the adjustable member 5 of the wrench again in line with the main wrench member and will likewise release the nut from the pinching or clamping engagement caused by the pivotal movement of the member 5 and its jaw 9, and will at the same time set the parts in position for ready application over another nut, which may in the manner above described be pinched or clamped by the turning of enlargement 14, so that such nut may also be tightly held during removal.

Since the handle 15 is carried on the pin or part 11 beyond the enlargement 14, it will be evident that the parts are conveniently arranged for use, since the fingers may be applied to the enlargement 14 for tightening or releasing the jaw 9 while the hand is engaged with the handle 15 for employment thereof after the fashion of a crank-handle for speedy unscrewing or screwing home of the nut or like part in connection with which the wrench is used.

The improved wrench constructed as above described is of an extremely simple and inexpensive nature and is especially well adapted for use by reason of the facility with which it may be applied to nuts while the jaws are loose and of the readiness with which the jaws may be caused to tightly pinch and clamp nuts and like parts.

The construction is such as to be especially well adapted for use where a number of nuts of similar size are to be removed; but it is evident that owing to the ease and rapidity with which the sliding member 5 may be adjusted along the body portion the device is also well adapted for general use.

It will also be evident from the above description that the device is capable of some modification without material departure from the principles and spirit of the invention, and for this reason I do not wish to be understood as limiting myself to the precise form and arrangement of the several parts of the device herein set forth in carrying out my invention in practice.

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

1. A wrench comprising members having jaws and adapted for longitudinal adjustment one on the other to separate or approach said jaws, a clamping device to hold the jaws in adjusted position, one member being adapted for pivotal movement to move its jaw in or out of clamping engagement with a nut or the like independent of the adjustability of the members and a screw-threaded part held to

turn on one member and adapted for engagement with the other member to actuate said pivotally-movable member.

2. A wrench comprising members having jaws and adapted for longitudinal adjustment one upon the other to separate or approach said jaws, a clamping device to hold the jaws in adjusted position, one member being adapted for pivotal movement independent of its adjustability to move its jaw in or out of clamping engagement with a nut or the like and a part movably held on the other member and having engagement with the pivotally-movable member and adapted, when moved, to operate said pivotally-movable member and move the jaw thereof in or out of clamping engagement with a nut or the like.

3. A wrench comprising a body portion having a jaw, and provided with longitudinal slots, an adjustable member also provided with a jaw and having a bolt passed through one slot in the body portion and provided with a nut, a part mounted to turn on the body portion and passed through the other slot therein and having a threaded end portion engaged with the adjustable member, and a crank-handle loosely held upon said part and projecting at an angle to the body portion.

4. A wrench comprising relatively adjustable members having jaws, clamping means

carried by one member and comprising reciprocal screw-threaded parts one of which has slotted engagement with the other member, said clamping means being adapted, when operated, to hold the members in adjusted position while permitting pivotal movement of one member upon the other in and out of clamping engagement with a nut or the like and means for actuating said pivotally-movable member and independently of its adjustability with relation to its companion member.

5. A wrench comprising a longitudinally-slotted member having a jaw, a pivotally-movable member adjustable lengthwise of said slotted member and also provided with a jaw, a screw carried by the pivotally-movable member and passed through the slot of its companion member, a nut screwed on said screw and adapted for engagement with the slotted member to hold the members in adjusted relation and means, independent of said screw and nut for moving the pivotally-movable member into and out of clamping engagement with a nut or the like.

Signed at Cincinnati, Ohio, this 16th day of August, 1904.

WILLIAM OWENS SHOBROOK.

Witnesses:

J. F. WARD,

JOHN ELIAS JONES.