

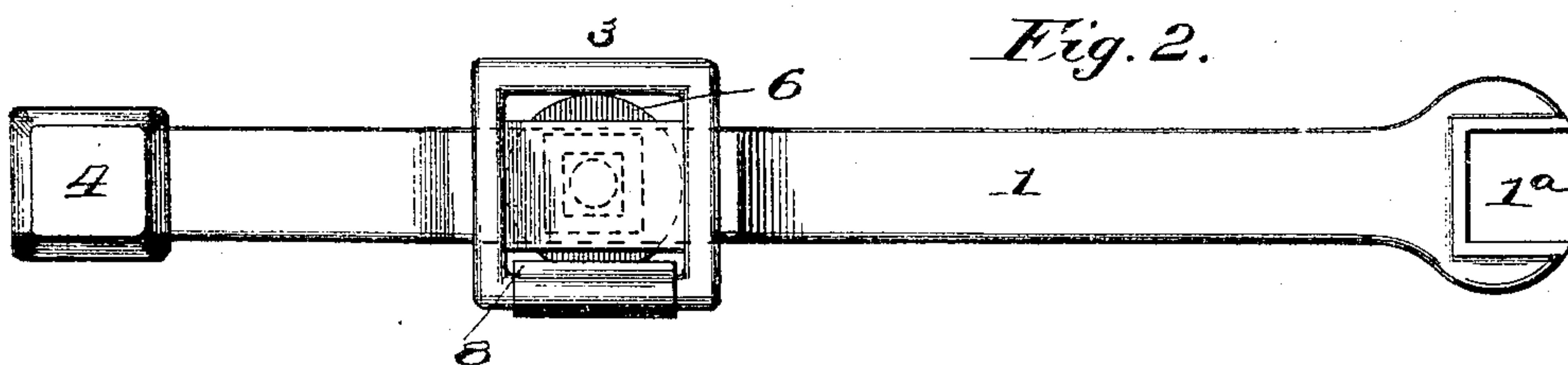
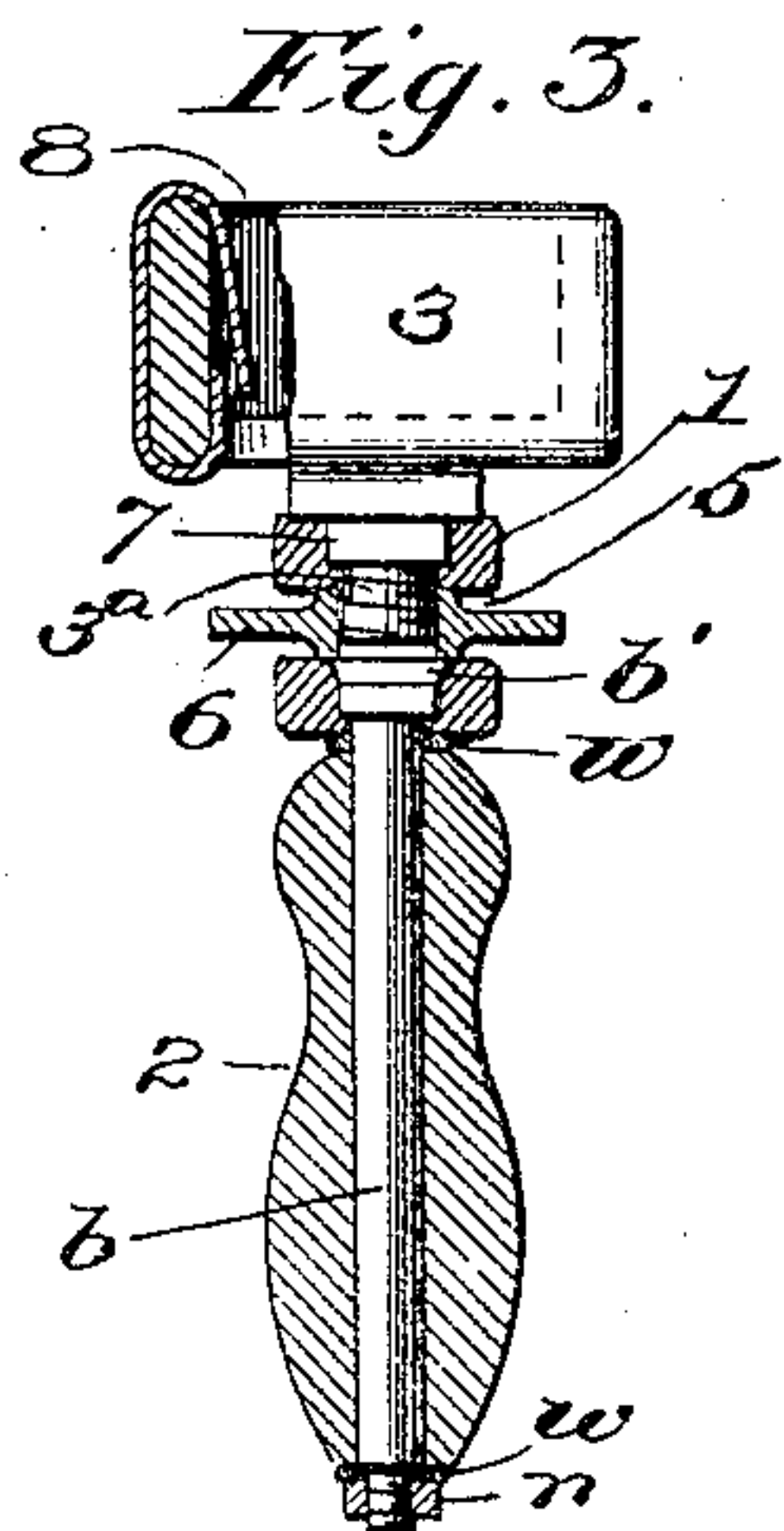
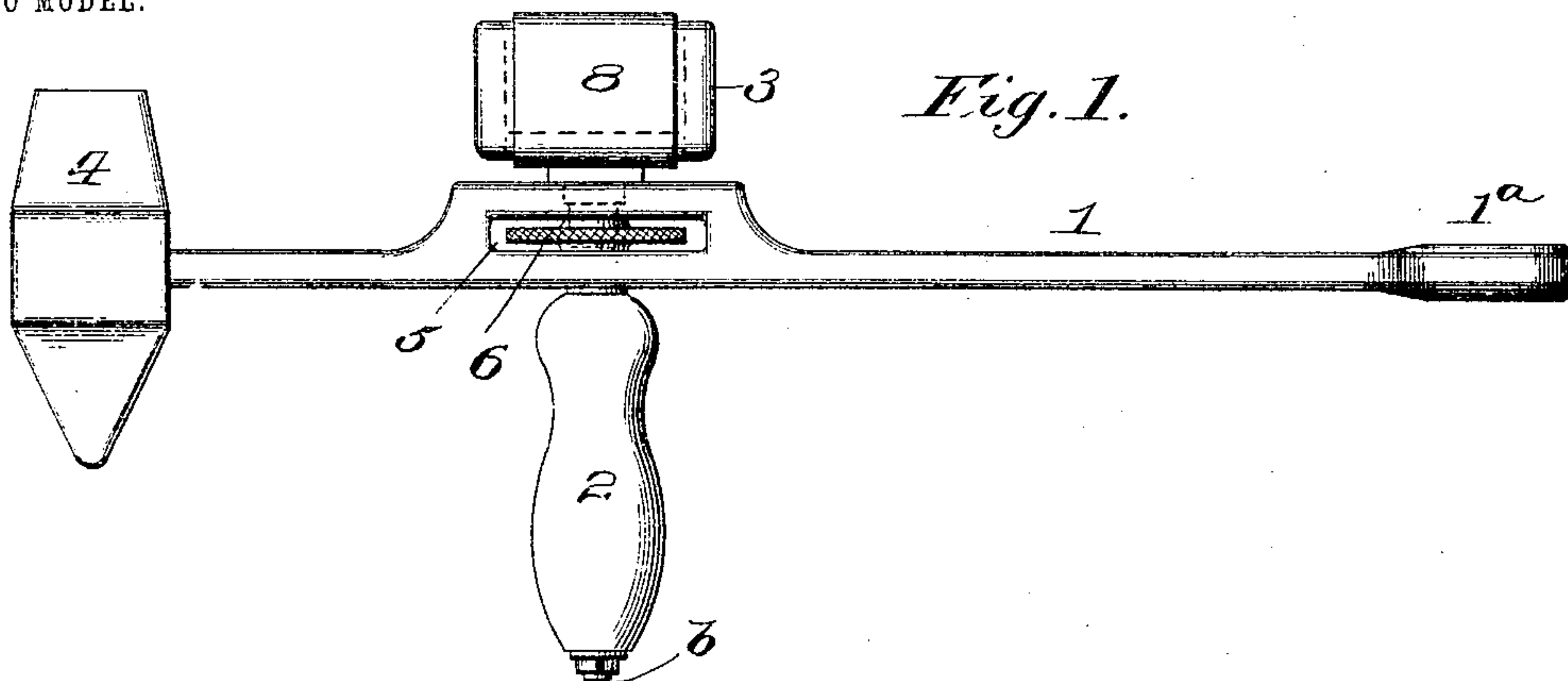
No. 774,214.

PATENTED NOV. 8, 1904.

N. F. TURNER.
WRENCH.

APPLICATION FILED JUNE 19, 1903.

NO MODEL.



Witnesses:
J. M. Fowler Jr.
J. H. Burgess.

Inventor:
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UNITED STATES PATENT OFFICE.

NORMAN F. TURNER, OF WASHINGTON, DISTRICT OF COLUMBIA, AS-
SIGNOR OF ONE-HALF TO HARRIET B. TURNER, OF WASHINGTON,
DISTRICT OF COLUMBIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 774,214, dated November 8, 1904.

Application filed June 19, 1903. Serial No. 162,248. (No model.)

To all whom it may concern:

Be it known that I, NORMAN F. TURNER, a citizen of the United States, residing in the city of Washington, District of Columbia, have
5 invented certain new and useful Improvements in Wrenches; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

10 Figure 1 is a side elevation of a wrench embodying my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a sectional view of the lever and spindle, the nut-cup being partly broken away.

15 Like symbols refer to like parts wherever they occur.

My invention relates generally to rigid-jaw combination-wrenches, but has been especially designed for service as a carriage-wrench or
20 for like use where space permits of the rotation or revolution of the wrench-handle for the rapid removal and replacement of the nut.

To this end my invention, generally stated, embraces the combination, with a wrench-lever
25 having a nut-pocket, of a detachable nut-cup, having a stem which enters the nut-pocket of the lever, a means within the nut-pocket of the lever which engages the stem of the detachable nut-cup, and a spindle on the lever
30 in the axis of the nut-cup, all as will hereinafter more fully appear.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

35 In the drawings, 1 indicates the wrench-lever provided at some point intermediate of its length with spindle 2 at right angles to the lever 1 and on its opposite side and in line with the spindle 2 with a nut-cup (or jaw) 3,
40 adapted to receive a nut.

One end of the lever 1 may be provided with the nut-jaw 1^a of any form common to combination-wrenches, and at the other it may be weighted to assist its rotation, and the weight
45 may, if desired, have the form of a hammer, as at 4, and thus to some extent add to the utility of the tool.

The spindle 2 may be secured to the lever 1 by a through-bolt *b* and nut *n*, in which case, if desired, by simply tightening the nut *n* the
50 spindle 2 may be rigidly connected with the lever 1, and the spindle will then be allowed to turn in the hand when the lever 1 is rotated, or, as is preferred, the spindle 2 may turn loosely on the through-bolt *b*, as shown
55 in Fig. 3 of the drawings, in which latter case the bolt *b* is preferably formed with a beveled head *b'*, which is countersunk in the lever 1, the nut *n* being applied to the outer end of the bolt *b*, where it is more accessible, and
60 suitable washers *w w* may be inserted between the spindle 2, the lever 1, and the nut *n* to allow of the free rotation of the spindle, in which case the spindle 2 may be held firmly in the hand, and the through-bolt will rotate
65 within the same as in a bearing.

I form the lever 1 with a slot or nut-pocket 5 for the reception of a nut 6 and a polygonal opening 7 for the reception of a polygonal shoulder on the under side of the nut-cup 3.
70 The nut-cup 3 I then form separate from the lever 1 and with a threaded lug 3^a, which extends through the opening 7 and engages the nut 6 in the nut-pocket 5 of the lever. The nut 6 is preferably of circular form with a
75 milled edge. Any other known means of detachably and rigidly securing the nut-cup 3 to the lever 1 may be adopted in place of the threaded lug 3^a and nut 6, if desired. 8 indicates a spring-tongue secured to one side of
80 the nut-cup 3 and extending within the same in order to retain the nut securely within the nut-cup when the nut has been removed from its spindle or bolt, as the case may be. This
85 spring-tongue 8 also serves to enable the nut-cup to be used to remove different nuts which vary somewhat in diameter.

The construction of the device being substantially such as hereinbefore pointed out, it will operate as follows: In removing a nut
90 from its bolt or spindle the nut-cup 3 is applied to the nut and the spindle 2 is held in one hand of the operator, while the lever 1 is given a rapid rotation or spinning movement,

which causes the nut-cup 3 to rotate on its axis, which is the axis of the spindle 2 and is coincident with the axis of the axle or bolt which carries the nut, and the rotation of the cup 3 will thus carry with it the nut, which latter on its escape from the bolt or axle will remain in the nut-cup 3. When it is desired to replace the nut on its axle or bolt, the spindle 2 serves to center the nut-cup 3 and the contained nut with the axle or bolt, so that there shall be a proper engagement of the threads of the nut with those of its bolt, and at the same time serves as the axis on which the lever 1 and nut-cup 3 is rotated to screw the nut home.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

In a wrench, the combination of a lever having a nut-pocket, a nut within the nut-pocket of the lever, a detachable nut-cup having a stem with which the nut in the nut-pocket engages, and a spindle in the axial line of the nut-cup, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 19th day of June, 1903.

NORMAN F. TURNER.

Witnesses:

WM. E. DYRE,

ALEXANDER S. STEUART.