A. L. MOORE.

WRENCH.

APPLICATION FILED FEB. 2, 1910.

1,009,168. Patented Nov. 21, 1911.

Fig. 1.

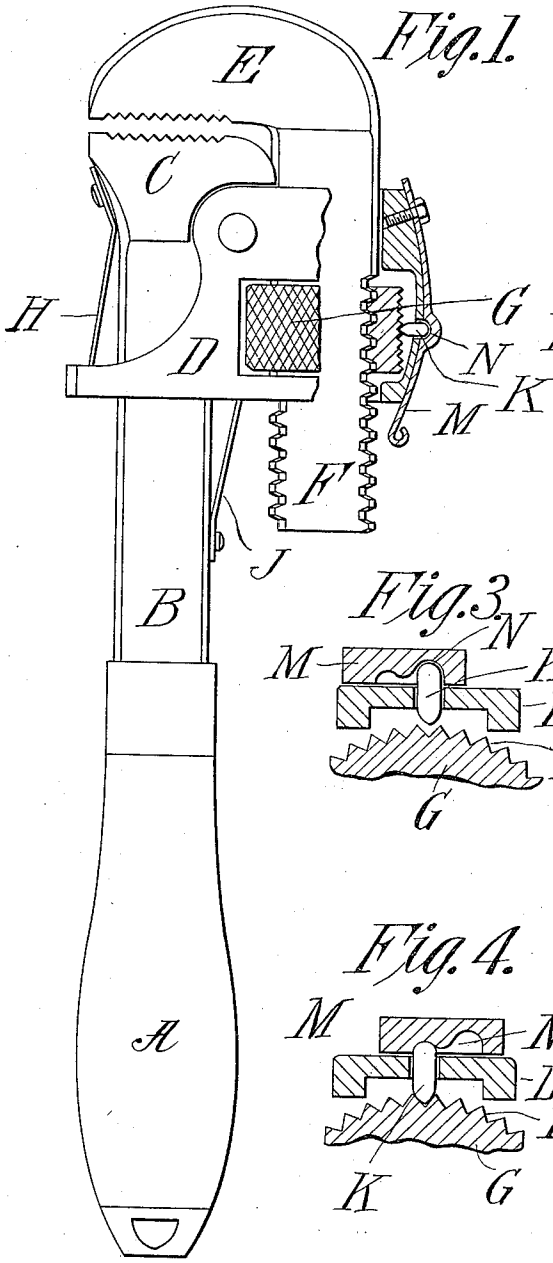

Fig. 2.

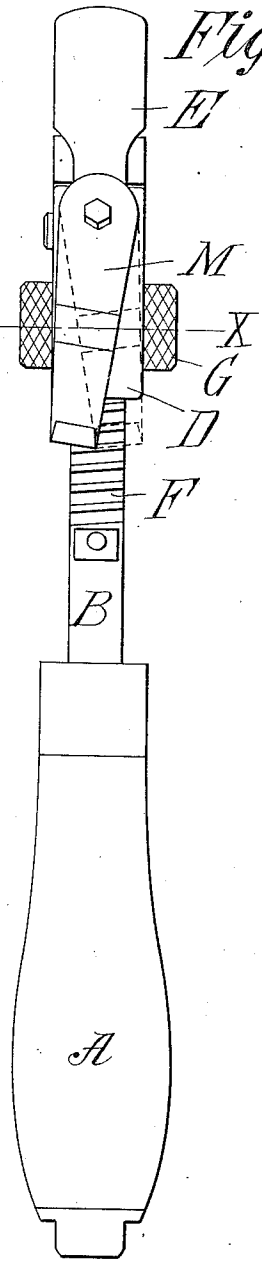

Fig. 3.

Fig. 4.

WITNESSES:

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WRENCH.

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To all whom it may concern:

Be it known that I, ARTHUR L. MOORE, a citizen of the United States of America, and resident of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Wrenches, of which the following is a full, clear, and exact description.

My invention relates to improvements in wrenches, and the main object of the invention is the provision of a wrench adapted to serve either as a nut or pipe wrench and in which the jaws of the wrench may be incidentally locked at a certain and determined adjustment according to the desire of the user.

In order that when the desired adjustment is obtained, it will be impossible for the wrench to accidentally work loose and destroy the adjustment, thus rendering the wrench a saver of considerable time and expense, another object of my invention is the provision of a wrench provided with locking means which may be applied to wrenches at the time of manufacture or upon wrenches in use at a small expense, thus insuring a desirable, efficient and thoroughly practical improvement in this character of invention.

To attain the desired object, my invention consists broadly in the combination with the adjusting means of a nut or pipe wrench, of a clamp or lock for engaging said adjusting means to retain said means in a desired and determined adjustment.

The invention also consists of a wrench combining locking means embodying novel features of construction and combination of parts substantially as disclosed herein.

In order that the details of construction and the operation of my improvements may be readily understood and the advantages accruing therefrom be fully appreciated, I have illustrated in the accompanying drawings a wrench constructed in accordance with and embodying my invention.

In the drawings:—Figure 1 represents a side elevation of a type of wrench provided with my clamping or locking mechanism, the mechanism being shown in section and in locked position. Fig. 2 is an edge view of the wrench taken from the rear and showing my locking lever. Figs. 3 and 4 represent detail sectional views on the line X—X, Fig. 2, showing respectively the parts in the positions they assume when the locking mechanism is not in use and when in locked or clamped position.

Referring by letter to the drawings, in which similar letters of reference denote corresponding parts in the several views, A represents the handle or grasping portion of the wrench, B the bar or shank fitted to the handle, C the lower or rigid jaw of the wrench, D the pivot yoke or frame mounted on the rigid jaw C, the movable jaw E having the rack F passing through the yoke or frame, G the nut for adjusting the movable jaw with reference to the rigid jaw, and H and J the springs engaging the yoke or frame mounted on the bar or shank; and these parts are all of well known and common construction, and in connection with which I use my locking device, although I would have it understood that my improvement may be used upon any construction of wrench where it would perform its function in an efficient and practical manner.

My locking mechanism of extremely simple construction consists of the stud or dog K slidably mounted in a small aperture in the frame D and having its inner portion adapted to engage with the teeth or knurled portion L on the surface of the adjusting nut. To force the stud K into engagement with the teeth of the adjusting nut and when desired to permit it to become freed from such engagement, I employ the pivoted metallic lever M having therein the two recesses N of different depths which engage with the stud K. When the deep recess is in proximate relation to stud K, said stud does not engage with the teeth of the adjusting nut, thereby allowing the nut to be freely moved. However, the back wall of the other shallower recess acts as a cam to force the stud K into firm engagement with the teeth of the adjusting nut, so that the nut cannot be turned; thus jaw E when properly set for any particular use is locked against movement. The lever M has an extension toward the wrench handle which by the thumb or forefinger of the same hand that holds the wrench may be transversely swung for controlling the locking dog or stud.

From the foregoing description taken in connection with the drawings, the manner of using my wrench will be readily understood, and it will be apparent that the desired adjustment is obtained by manipulat-

ing the adjusting nut, and when such determined adjustment is obtained, it is simply necessary to move the lever and bring the lug into engagement with the teeth of the adjusting nut, as clearly shown in Figs. 1 and 4, which action locks the nut and retains the jaws at the determined adjustment and absolutely prevents accidental change of the adjustment.

It is frequently found necessary to use a wrench upon a class of work where for a considerable time it is desired to use the wrench upon work of a certain size, and my wrench possesses particular advantage and desirability under these circumstances, as the desired adjustment can be quickly obtained, and it is absolutely impossible for an adjustment to be accidentally destroyed, and the wrench thus saves a vast amount of time.

I claim:—

1. In a wrench, the combination of a rigid jaw, a frame mounted on said jaw, a movable toothed jaw mounted in the frame, an adjusting nut, engaging the movable jaw, having a knurled or toothed surface, and a stud slidably mounted in the frame, a lever pivoted on the frame having therein a cam recess adapted to engage with the stud to cause, or release, engagement of the dog with the adjusting nut.

2. In a wrench, the combination of a rigid jaw, a frame mounted on said jaw, a movable toothed jaw mounted in the frame, an adjusting nut, engaging the movable jaw having a knurled or toothed surface, and a stud slidably mounted in the frame relatively to the nut, a lever having one end pivoted on the frame and extending longitudinally of the wrench, and having the extremity thereof extending toward the handle end of the wrench so that it may be easily swung from side to side on its pivot, the lever having within its side next to the frame a cam recess to cause or release the engagement of the stud with the teeth of the adjusting nut accordingly as the lever is swung.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

ARTHUR L. MOORE.

Witnesses:
G. R. DRISCOLL,
WM. S. BELLENS.