

No. 729,747.

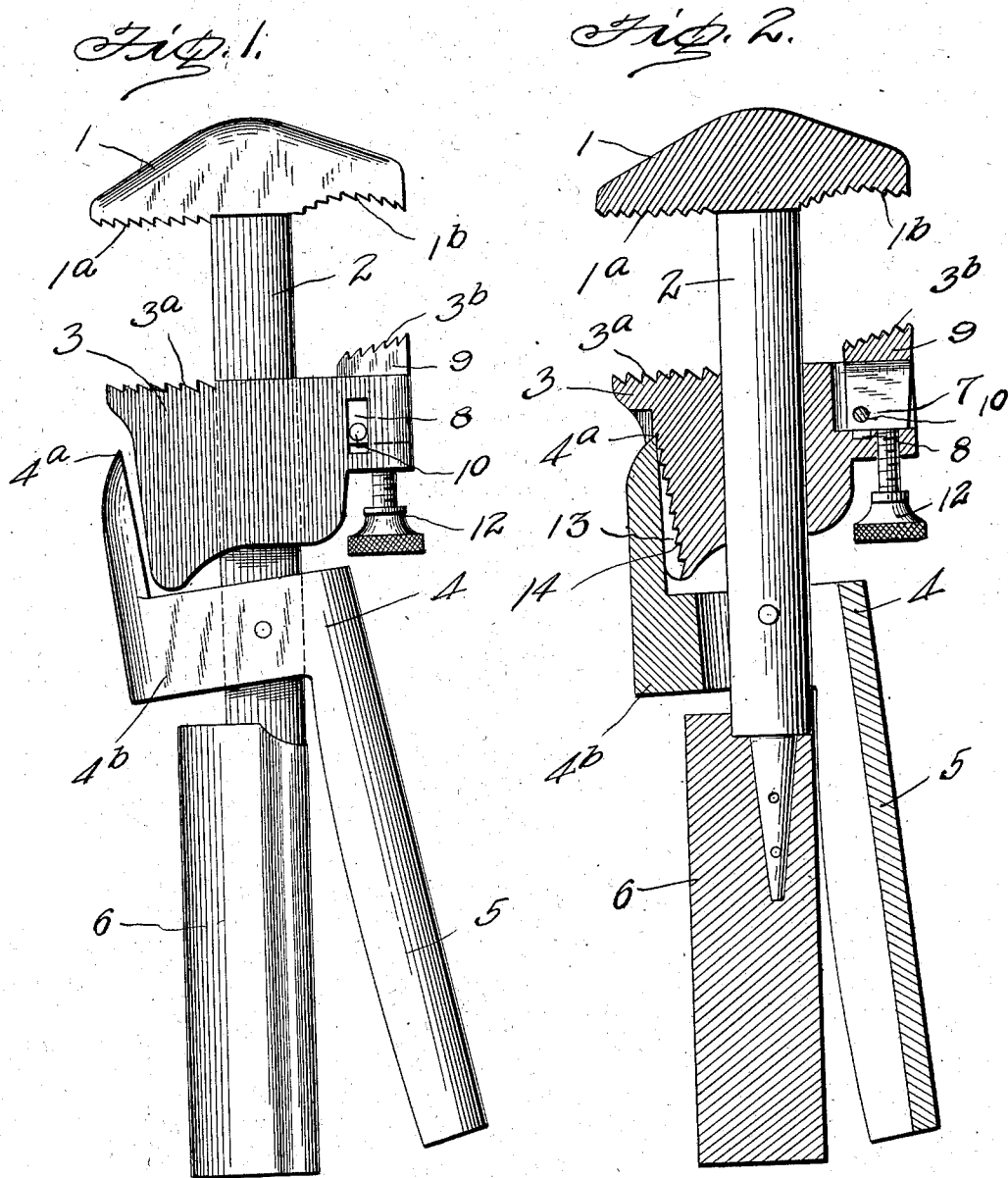
PATENTED JUNE 2, 1903.

J. H. FLANIGAN.

WRENCH.

APPLICATION FILED JAN. 15, 1903.

NO MODEL.



Witnesses

Witnesses
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UNITED STATES PATENT OFFICE.

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WRENCH.

SPECIFICATION forming part of Letters Patent No. 729,747, dated June 2, 1903.

Application filed January 15, 1903. Serial No. 139,192. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. FLANIGAN, a citizen of the United States, residing at Sheffield, in the county of Colbert and State of Alabama, have invented certain new and useful Improvements in Wrenches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in wrenches, and has for its object to provide a combined nut and pipe wrench which will be simple in construction and strong and durable in use.

Another object is to produce a wrench of this character which can be quickly adjusted and positively held, doing away with the threaded shank and traveling nut so commonly used in wrenches of this form.

With these and other objects in view the invention consists in the construction and arrangements of the parts, as will be hereinafter more fully described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the wrench, and Fig. 2 is a longitudinal sectional view of the same.

In the drawings, 1 denotes the fixed jaw. 2 denotes the shank. 3 denotes the sliding jaw; 4, the pivoted detent; 5, the handle of said detent, and 6 the wrench-handle.

The jaw 1 is preferably formed integral with the shank 2 and is of double form—that is, it has two working faces 1^a and 1^b arranged on each side of the said shank, the working face 1^b being curved to adapt the same for engagement with a pipe or other round bodies, the face 1^a being flat for use upon nuts or bodies having square surfaces.

The sliding jaw 3 is also double and has correspondingly arranged working faces 3^a and 3^b. The working face 3^a is flat and is adapted to act in conjunction with the face 1^a of the fixed jaw. The part of the jaw having the working face 3^b has formed therein a cavity 7, opening through the top and outer edge thereof, and in sides of the jaw are formed oppositely-arranged slots 8, which communi-

cate with the cavity 7. In the said cavity is arranged a block 9, on which is formed the working face 3^b, which is adapted to act in conjunction with the working face 1^b of the fixed jaw 1.

On the block 9 are formed laterally-projecting lugs 10, which are adapted to enter and move in the slots 8, whereby the block 9 and face 3^b are adapted to move in and out to have a slight rocking movement. An adjusting-screw 12 passes up through a threaded opening formed in the lower wall of the cavity 7, and the end of the screw 12 is adapted to impinge against the inner end of the block 9, so that by working the screw in or out the block 9 and working face 3^b may be moved in or out of the cavity 7 and adjusted to the body which is to be turned. The slight rocking motion of the block 9 will allow the wrench to be slipped around the body in one direction without acting upon the same; but when moved in the opposite direction the working face 3^b will bind and cause the body to be turned.

The edge of the sliding jaw adjacent to the working face 3^a is inclined inwardly toward the shank 2, as shown, and has formed therein a depression or groove 13, in the base of which is formed a series of ratchet-teeth 14, upon which is adapted to act the end 4^a of the detent 4. The said detent consists of the tooth-engaging end or finger 4^a, which is fixed to or integral with a right-angularly-disposed yoke 4^b, in which is formed a longitudinally-disposed elongated opening through which is adapted to pass the shank of the wrench. A pivot-pin passes through the shank and through the sides of the yoke 4^b and pivotally connects the detent 4 to said shank. The handle 5 of the detent is fixed to or integral with the yoke 4^b at the opposite side thereof from the finger 4^a, said handle being adapted to lie along the direction of the wrench-handle 6 and is hollowed or concave in cross-section. When the sliding jaw is closed against the fixed jaw of the wrench, the detent-handle will lie in juxtaposition to the wrench-handle, which is slightly reduced on this side to allow the same to engage the hollowed or concave side of the detent-handle.

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In practice when it is desired to adjust the wrench to a nut or pipe the fixed jaw is engaged with the same and the sliding jaw is then moved up until it also engages. The
 5 wrench-handle and the detent-handle are now both tightly grasped, which will cause the detent-finger to engage one of the teeth on the sliding jaw, whereby said jaw will be firmly held against the object and cannot slip or
 10 work back as long as the handles are held together.

The working faces of both jaws are provided with the usual serrations for gripping the objects with which they are engaged.

15 From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

20 Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what 25 I claim as new, and desire to secure by Letters Patent, is—

In a combined nut and pipe wrench, the combination with a fixed jaw, having two working faces, of a sliding jaw having two 30 corresponding working faces, one of which faces is pivotally connected to said sliding jaw, an adjusting-screw carried by said jaw whereby an independent adjustment may be given said pivoted working face, an inclined 35 toothed surface formed on said sliding jaw, a pivoted detent adapted to engage said inclined toothed surface whereby said sliding jaw may be held in adjusted positions, and a handle fixed to said detent for operating the 40 same, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH H. FLANIGAN.

Witnesses:

W. R. WESTON,
 JAMES CADEN.