

No. 726,013.

PATENTED APR. 21, 1903.

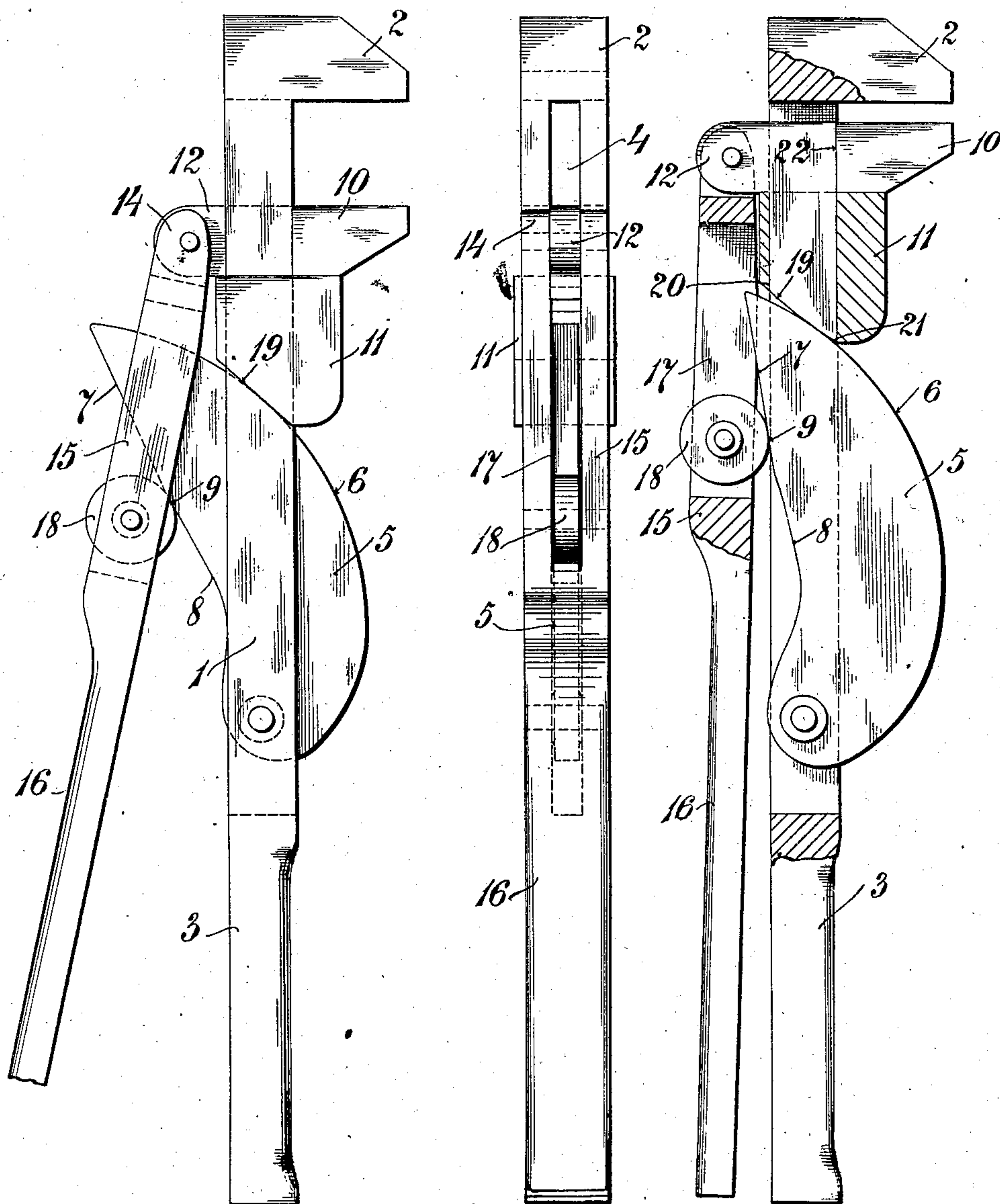
H. AUE.
QUICK ACTING WRENCH.
APPLICATION FILED JAN. 9, 1903.

NO MODEL.

Fig.1.

Fig.2.

Fig.3.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY AUE, OF NOBLESTOWN, PENNSYLVANIA.

QUICK-ACTING WRENCH.

SPECIFICATION forming part of Letters Patent No. 726,013, dated April 21, 1903.

Application filed January 9, 1903. Serial No. 138,327. (No model.)

To all whom it may concern:

Be it known that I, HENRY AUE, a subject of the Emperor of Germany, residing at Noblestown, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Quick-Acting Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in wrenches, and relates more particularly to that class of wrenches known in the trade as "monkey-wrenches," the primary object of the invention being to construct a wrench which may be easily and rapidly adjusted, so as to regulate the space between the jaws to conform to different-sized nuts upon which it may be desired to use the wrench. Such being the broad idea of the invention, it may be briefly described to embrace the following elements: a wrench-shank provided at its outer end with a rigid jaw and its other end shaped to form a handle. This wrench-shank is slotted from a point adjacent to the inner end of the handle to a point adjacent to the jaw carried by the shank. A movable jaw is mounted to slide on the wrench-shank and has a lever pivoted thereto, which lever is formed at its outer or free end into a handle. This lever, like the shank, is slotted, and pivotally mounted in the slotted shank is a cam which projects into the slotted lever, while the latter carries a bearing-roller adapted to engage one edge or face of said cam, the opposite edge or face thereof bearing against the movable jaw, whereby when the lever is pressed toward the shank the movable jaw is held firmly in the position in which it has been placed on said shank.

All of the above construction, together with other details entering into my invention, will be hereinafter more specifically described and then particularly pointed out in the appended claims; and in describing the invention in detail reference will be had to the accompanying drawings, forming a part of this application, and wherein like numerals of like parts throughout the different views of the drawings, in which—

Figure 1 is a detail side elevation of my improved wrench, the lever-handle being partly broken away. Fig. 2 is a detail edge view of the wrench, and Fig. 3 is a central vertical sectional view partially in side elevation.

To put my invention into practice, I provide a shank 1, which at its outer end is provided with a rigid jaw 2 and has its other or inner end shaped to form a handle or grip 3. The body of this shank is slotted, as at 4, the slot extending from a point adjacent to the handle or grip portion 3 to a point adjacent to the rigid jaw 2. Pivotally mounted in the shank within this slot is a cam 5, the back or convex face 6 of which projects toward the movable jaw of the wrench and the opposite edge of which has inclined surfaces 7 8 of different pitch, forming the cam-face 9 between the two inclined faces. The movable jaw embodies the jaw proper, 10, which is made integral with the keeper or strap 11, that surrounds the shank 1. The jaw proper, 10, carries an arm or extension 12, which extends through the slot 4 of the shank 1 and has pivoted thereto the bifurcated end 14 of a lever-handle 15, the outer end of which is shaped to form a handle or grip 16. This lever-handle is provided with a slot 17, which is in line with the slot 4 in the shank 1, and the lever-handle has mounted therein within the slot 17 a bearing-roller 18, adapted to engage with the cam and force the latter into engagement with the inclined face 19, provided on the inner end of the sleeve or keeper 11.

In operation it is to be noted that when the lever-handle 15 is moved outwardly from the shank of the wrench either of the two members may be moved—that is, the lever-handle and the movable jaw connected thereto may be slid toward or away from the rigid jaw, or the lever-handle may be held stationary after being moved outwardly and the shank moved through the keeper 11 of the movable jaw—whereby to adjust the position of the two jaws. When the jaws have been properly positioned, the lever-handle is closed toward the shank and the bearing-roller 18 engages the inclined faces of the cam 5, forcing the face 6 of this cam into engagement with the inclined face 19 of the keeper, thus binding the keeper at point marked 20 firmly against

the shank of the wrench, tending to force the keeper at point marked 21 away from the shank and forcing the face 22 of the jaw 10 into firm engagement with the shank. When the jaws are positioned for nuts of large size, the bearing-roller 18 will engage with the inclined or cam face 8 of the cam 5, and when the jaws are positioned for nuts of comparatively small size, in which condition the cam 5 will be forced largely through the slot in the shank, the bearing-roller will engage upon the cam-surface 9.

It is to be noted that the adjustment is extremely rapid to vary the distance between the jaws, whereby to accommodate different-sized nuts, and as greater pressure is applied to the lever-handle the movable jaw is the more firmly held in position whereby to firmly grip the nut being operated upon.

While I have herein shown and described the invention in detail illustrating a practical embodiment of the invention, yet it will be evident that in the construction various slight changes may be made without departing from the general spirit of the invention or the scope of the appended claims.

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

1. In a wrench, the combination of a slotted shank member having a rigid jaw at one end and a handle or grip at its other end, of a cam mounted in the slot of said shank member, a movable jaw mounted on the shank member, a slotted lever-handle member pivoted to the movable jaw, and a bearing-roller mounted in the slotted lever-handle member to engage the cam carried by the shank member and bind said cam against the movable jaw to lock the latter, substantially as described.

2. In a wrench, a shank provided with a slot and carrying a jaw at its outer end, a cam pivotally mounted in said slot, a movable jaw slidably mounted on the shank and provided with an extension or arm projecting through the slot in the shank, a slotted lever-handle pivotally connected to said arm or extension of the movable jaw, and a bearing carried by the lever-handle to engage the cam and force

the latter into engagement with the movable jaw, as and for the purpose described.

3. In a wrench, a slotted shank provided with a jaw at its outer end, a cam member mounted in the slot and free to work there-through, a movable jaw slidably mounted on the slotted shank, and a lever-handle pivoted to the movable jaw and provided with a slot to receive the cam member, said lever-handle adapted when forced toward the shank to engage the cam member and bind the latter against the movable jaw to lock the latter, substantially as described.

4. In combination with a shank provided with a rigid jaw at its outer end, a cam member pivoted to the shank, a movable jaw slidably mounted on the shank, a lever-handle pivoted to the movable jaw, and means carried by the lever-handle to engage the cam member when the lever-handle is forced toward the shank to bind said cam member against the movable jaw, substantially as described.

5. In combination with a shank provided with a rigid jaw, a cam member pivoted to the shank, a movable jaw slidably mounted on the shank, and provided with an inclined inner end, and means pivoted to the movable jaw and adapted when pressed toward the shank to force the cam member into engagement with the inclined face of the movable jaw, as and for the purpose described.

6. In combination with a slotted wrench-shank having a rigid jaw at its outer end, a movable jaw slidably mounted on the slotted wrench-shank, a slotted lever-handle carried by the movable jaw, and means mounted in the slotted wrench-shank adapted to be engaged by the lever-handle when the latter is pressed toward the shank for engagement with the movable jaw to lock the latter in position, substantially as described.

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

HENRY AUE.

Witnesses:

A. M. WILSON,
E. E. POTTER.