T. A. JONES.

ADJUSTABLE RATCHET WRENCH.

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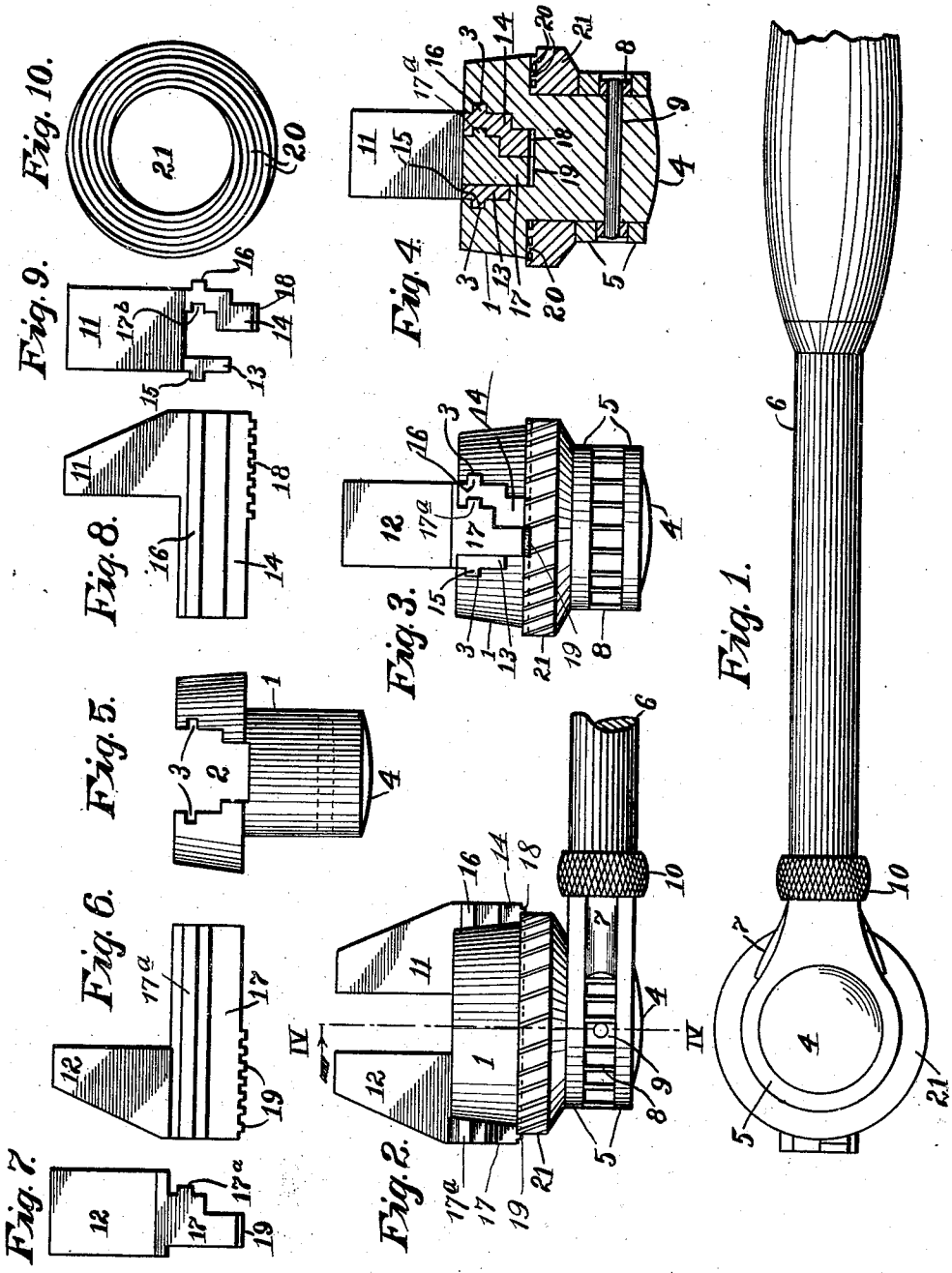
915,443. Patented Mar. 16, 1909.



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ADJUSTABLE RATCHET-WRENCH.

No. 915,443. Specification of Letters Patent. Patented March 16, 1909.

Application filed August 18, 1908. Serial No. 449,072.

To all whom it may concern:

Be it known that I, THOMAS A. JONES, a citizen of the United States, residing at Kansas City, in the county of Wyandotte and State of Kansas, have invented certain new and useful Improvements in Adjustable Ratchet-Wrenches, of which the following is a specification.

My invention relates to an adjustable ratchet-wrench; and my object is to provide a simple and efficient tool of this character combining the advantages of a ratchet-wrench with one having adjustable or movable jaws.

With this and other objects in view, the invention may consist in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims, it being understood that various changes in form, proportions, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

Referring now to the accompanying drawing: Figure 1 represents an inverted plan view of my improved wrench. Fig. 2 is a broken side elevation of the same. Fig. 3 is an end view of the wrench. Fig. 4 is a vertical section on line IV—IV of Fig. 2. Fig. 5 is a detail of a housing employed in carrying out the invention. Figs. 6 and 7 are side and end views, respectively, of one of the movable jaws. Figs. 8 and 9 are side and end views, respectively, of the other movable jaw. Fig. 10 is an inverted plan view of a nut for adjusting the jaws.

1 designates a housing which is provided at its upper enlarged portion with an irregular-shaped seat 2, having oppositely-disposed longitudinal grooves 3. Said housing is also provided with a shank 4 which is loosely embraced by a bifurcated loop 5 secured to the handle 6 of the wrench. Handle 6 is provided with a double-acting pawl 7 adapted to engage external ratchet-ring 8, arranged in the bifurcated portion of loop 5 and removably secured to shank 4 by a transverse pin 9. Either end of pawl 7 is adjusted into engagement with ratchet-ring 8 by a knurled nut 10 rotatably mounted on the forward portion of handle 6. By adjusting one end of pawl 7 into engagement with the ratchet-ring, the housing, together with the jaws which it carries, may be rotated in one direction by oscillating handle 6, and by adjusting the opposite end of pawl 7 into engagement with the ratchet-ring, the housing and the jaws may be rotated in an opposite direction by oscillating said handle. Hence a nut may be screwed or unscrewed from a bolt by merely oscillating the handle instead of rotating the same as is necessary with the customary wrench containing a movable jaw.

11 and 12 designate the jaws, one or both of which may be movable. In the drawing I have shown both jaws slidably arranged in seat 2 of the housing. Jaw 11 is provided with two parallel arms 13 14, extending at right angles thereto. Said arms are provided with longitudinal flanges 15 16, respectively, which loosely enter grooves 3 and prevent jaw 11 from moving upward out of seat 2. Jaw 12 is provided with an arm 17 extending at rightangles thereto and slidably mounted between arms 13 14. Arm 17 is provided with a longitudinal flange 17^a which enters a groove 17^b in arm 14 and prevents arm 17 from moving upward from between arms 13 and 14. Arms 14 and 17 are provided at their undersides with rack-teeth 18 19, respectively, which are engaged by the spiral thread or threads 20 of an external adjusting-nut 21, removably and rotatably mounted upon shank 4, between the enlarged upper portion of the housing and the upper side of loop 5. By turning nut 21 in one direction, jaws 11 and 12 will be forced outwardly in opposite directions, and by turning said nut in a reverse direction, said jaws will be drawn toward each other. By simultaneously moving the jaws it is obvious that more rapid adjustment may be obtained than in those wrenches wherein but one jaw is adjustable.

From the above description it is apparent that I have produced a wrench which is comparatively simple in construction, easy to operate, and well adapted for the purpose intended.

Having thus described my invention, what I claim is:—

1. A tool of the character described consisting of a handle, a housing carried by said handle, jaws movably mounted in said housing and provided with rack-teeth, and a removable external nut rotatably mounted on the housing between the handle and said jaws provided with threads engaging the rack-teeth to move the jaws in or out.

2. A tool of the character described consisting of a housing comprising an enlarged upper end and an integral shank, a handle carrying said housing, a pair of jaws seated in the upper portion of the housing, provided with rack-teeth, and a removable nut journaled on the shank between the handle and the enlarged portion of the housing, said nut engaging the rack-teeth for the purpose described.

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

THOMAS A. JONES.

Witnesses:
F. G. FISCHER,
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