

G. R. BAIR.
WRENCH.

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994,364.

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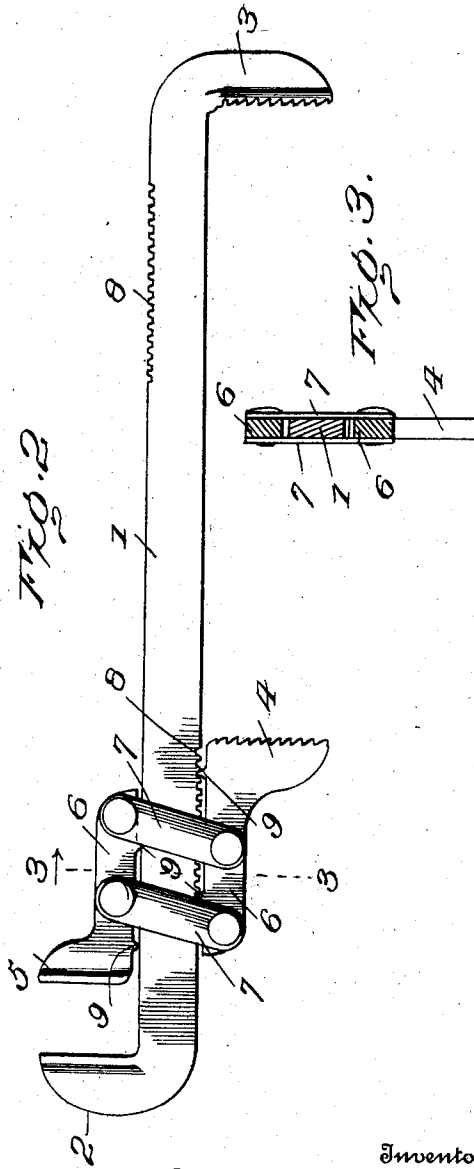
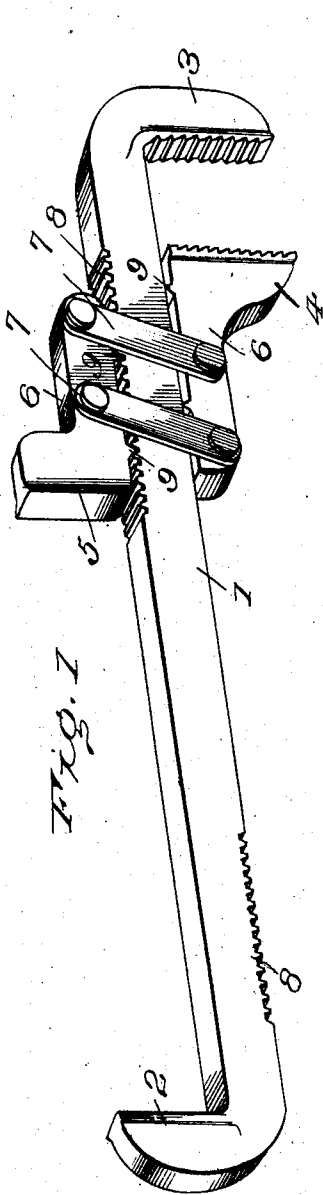
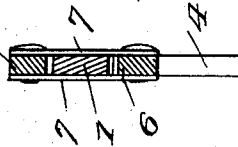


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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WRENCH.

994,364.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE R. BAIR, citizen of the United States, residing at Belvue, in the county of Pottawatomie and State of Kansas, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention comprehends certain new and useful improvements in wrenches of the sliding jaw type, and the invention has for its primary object a simple construction of wrench of this character which will be durable and strong, easy to handle and adjust, and capable of being cheaply manufactured, the preferred embodiment of the invention comprising a combination nut and pipe wrench.

With this and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of my improved device arranged as a pipe wrench; Fig. 2 is a side elevation of the device arranged as a nut wrench; and, Fig. 3 is a transverse sectional view, the section being taken substantially on the line 3—3 of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The present embodiment of the invention includes a shank 1 which may be of any desired length, width and thickness, the said shank having oppositely extending ends 2 and 3 which project substantially at right angles from the shank, said ends forming the relatively fixed or rigid jaws of the tool.

4 and 5 designate the movable jaws. The movable jaws lie against the opposite edges of the shank 1, one of said jaws being toothed to co-act with the corresponding fixed jaw, so that these two jaws may be used for engaging pipes, rods or the like, while the other movable and fixed jaws are preferably smooth, so as to render them more applicable for use with nuts or any other work where liability to mar the parts will be precluded.

Each of the two movable jaws 4 and 5 is formed with a lock stem 6. The two stems 6 are pivotally connected by two pairs of links 7 which are arranged in parallel relation to each other on opposite sides of the shank 1, being pivotally connected to the respective stems by rivets or similar fastening devices. Preferably, the shank 1 is formed near each end and on opposite side edges with a rack 8, and each locking stem 6 is correspondingly formed with one or more teeth 9 arranged for locking engagement with the teeth of the respective rack, there being two of these locking teeth for each stem in the present instance, the teeth being arranged near the ends of the stem, as clearly illustrated in the drawing.

From the foregoing description in connection with the accompanying drawing, the operation of my improved wrench will be apparent. In the practical use of the device, either one movable jaw or the other is moved up along the shank to engage the work with this complemental fixed jaw, and the opposite locking stem is then pushed forwardly so as to cause the links to assume an oblique position relative to the shanks, with the teeth of said stem securely engaged in the teeth of the adjacent rack 8. It will thus be understood that any tendency of the jaws to open will be effectually resisted by the canting effect and the interlocking engagement of one set of locking teeth with the adjacent rack. In order to adjust the wrench it is only necessary to move the two jaws 4 and 5 relative to each other until the links assume a position substantially at right angles to the shank, whereupon the two locking stems will be at the maximum distance apart and the jaws 4 and 5 can be easily slid along the shank toward one end or the other to secure the desired adjustment, according as the wrench is to be used as a pipe wrench or a nut wrench.

Having thus described the invention, what is claimed as new is:

The herein described wrench, embodying a shank provided at opposite ends with oppositely extending fixed jaws, movable jaws arranged against opposite edges of the shank and adapted to co-act with the fixed jaws, respectively, each jaw being provided with a locking stem formed with teeth, and the shank being formed on its edges with racks adapted to be engaged by said teeth, and

two pairs of links in parallel relation to each other, connected to the respective locking stems, the links embracing the shank, whereby the stem of each movable jaw may, by
5 engaging the shank, hold the other movable jaw in operative position relative to its complementary fixed jaw.

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

GEORGE R. BAIR. [L. S.]

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
