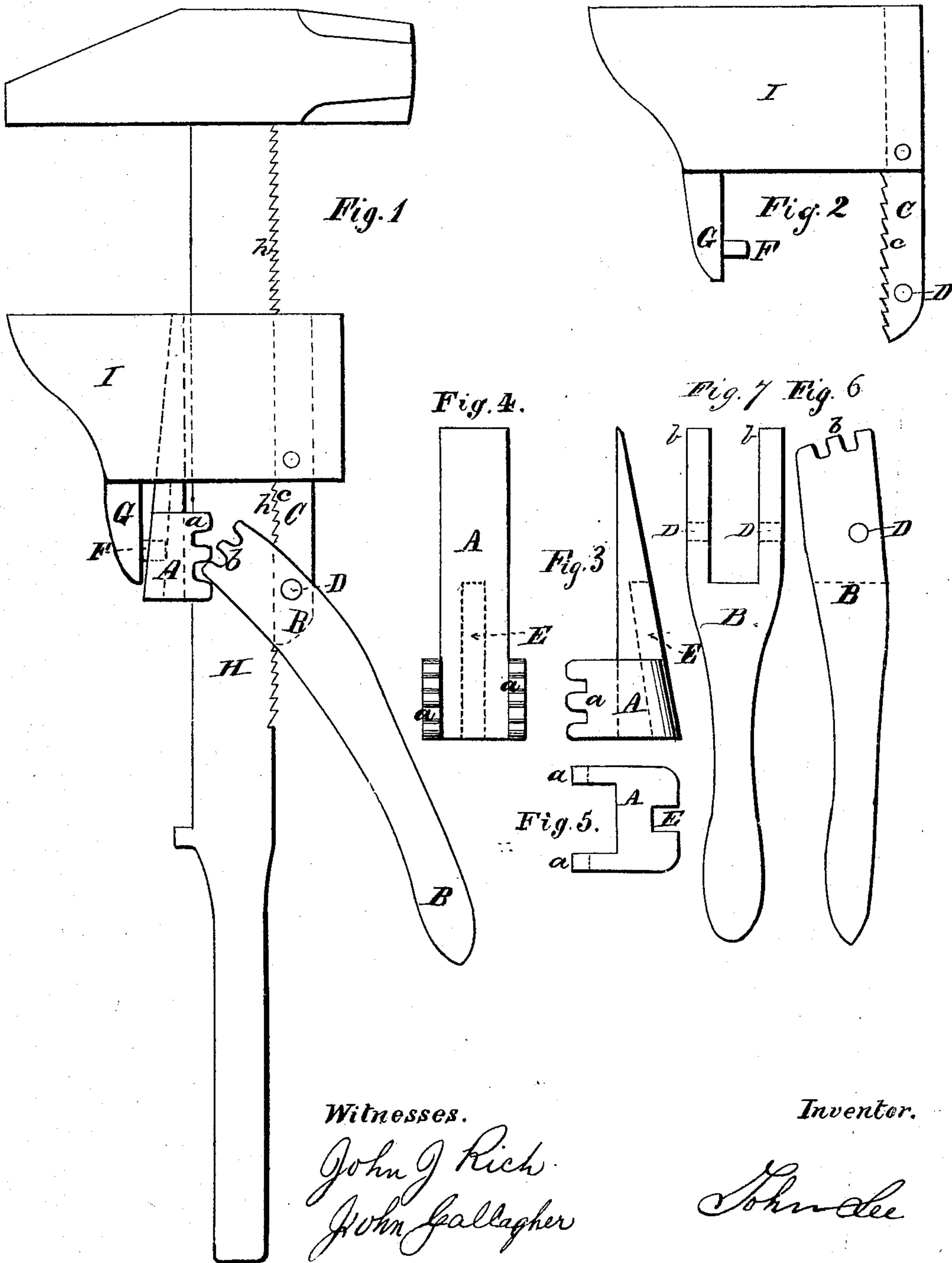


J. LEE.
Wrenches.

No. 145,953.

Patented Dec. 30, 1873.



Witnesses.

John J. Rich.
John Gallagher

Inventor.

John Lee

UNITED STATES PATENT OFFICE.

JOHN LEE, OF ST. LOUIS, MISSOURI, ASSIGNOR OF TWO-THIRDS HIS RIGHT
TO JOHN J. RICH AND JOHN GALLAGHER, OF SAME PLACE.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **145,953**, dated December 30, 1873; application filed
June 7, 1873.

To all whom it may concern:

Be it known that I, JOHN LEE, of St. Louis, St. Louis county, Missouri, have invented an Improvement in Monkey-Wrenches, of which the following is a specification:

This invention is an improvement on the patent of T. J. Smith and (myself) John Lee, dated June 3, 1873, No. 139,622; and my present improvement consists in changing the position of the wedge-actuating lever from the front side of the stem, where it interferes with the action of the wrench when in use, to the rear side of the stem; also, slotting out the rack end of the lever so as to embrace the stem; also, in forming the wedge with two racks which embrace the sides of the stem, and form guides for the wedge. The racks of the wedge mesh with those of the lever.

In the drawing, Figure 1 is a side view of the wrench. Fig. 2 is a side view of the moving jaw, detached. Fig. 3 is a side view of wedge, detached. Figs. 4 and 5 are, respectively, a front elevation and an end view of the wedge. Fig. 6 is a side view of the lever detached.

A is the wedge, having two racks, *a*, one on each side of the stem H. This wedge runs up into the slot in the moving jaw I, through which the stem passes, and when forced inward tightens the stem in the slot, and engages together the ratchet-teeth *h* of the stem, and those *c* of the rear portion C of the moving jaw. The wedge A is slotted at the outer side, as shown by dotted line at E, Fig. 3, to receive

the guide and stop-pin F which acts to keep the said wedge in proper line, and also to prevent its being drawn too far outward by the lever B. The lever B is pivoted at D to the part C of the moving jaw, and extends upon both sides of the stem in two racks, *b*, which engage the racks *a* of the wedge, so that the movement of the lever will force the wedge inward or outward to lock the jaw I upon the stem, or to loosen it so that it can be slid thereon.

When the jaw I is fixed, and the wrench ready for use, the lever is in close proximity to the rear side of the stem and does not incommode the operator.

I claim—

1. The combination of the parts C and H, having corrugations or ratchet-teeth *c* and *h*, wedge A, having guide-racks *a* on opposite sides of the stem, and forked lever B, all arranged substantially as set forth.

2. The combination of the wedge A, having racks *a* embracing the stem H, and slot E, moving jaw I, projection G carrying the guide and stop pin F, all substantially as and for the purpose set forth.

In testimony that I claim the above-described invention, I have hereunto signed my name.

JOHN LEE.

Witnesses:

JOHN J. RICH,
JOHN GALLAGHER.