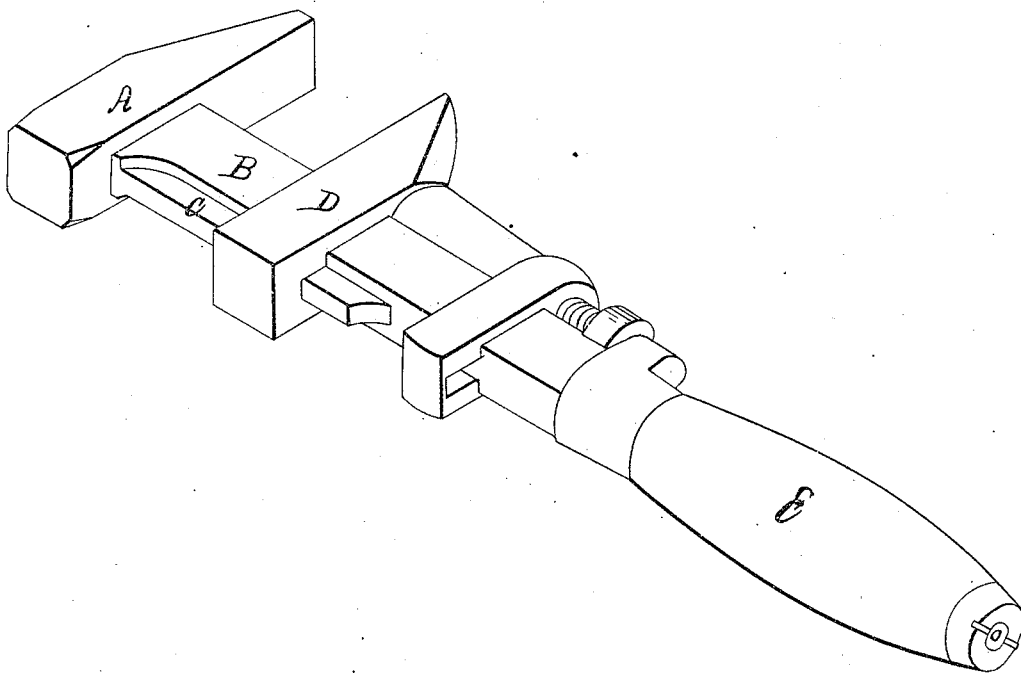


J. P. Lindsay,

Wrench.

No 51,465.

Patented Dec. 12, 1865.



Witnesses.

A. Hatch
R. Fitzgerald

Inventor.

J. Parker Lindsay

UNITED STATES PATENT OFFICE.

J. PARKER LINDSAY, OF NEW HAVEN, CONNECTICUT.

IMPROVED WRENCH.

Specification forming part of Letters Patent No. 51,465, dated December 12, 1865.

To all whom it may concern:

Be it known that I, JOHN PARKER LINDSAY, of the city and county of New Haven, in the State of Connecticut, have invented a new and useful Improvement in Wrenches; and I do hereby declare that the following is a full, clear, and exact description of the construction, character, and operation of the same, reference being had to the accompanying drawing, which makes part of this specification, which drawing is a perspective view of the wrench ready for use, showing the rib, spline, or feather on the back of the bar, and the method of fitting the adjustable jaw and its appendages.

My improvement consists in making the bar with a rib, spline, or feather on the back edge or side from the permanent jaw for at least the whole distance over which the adjustable jaw will slide to strengthen the bar at that part or point where it uniformly fails whenever the wrench is overstrained.

I make the permanent jaw A of wrought-iron or any other suitable material, as a part of or as the same piece as the bar B, in the usual way.

I make the bar B of wrought-iron or any other suitable material, in any of the usual ways, except that on the back side or edge I construct a longitudinal rib, feather, or spline, C, as a lateral projection to brace or give increased strength to the bar B in that part which is the point where wrenches always prove weakest. This rib or spline C may be made of any

desired form or shape in the cross-section, and be made to extend longitudinally from the permanent jaw A to any desired extent along the back of the bar B not less than the distance to which the adjustable jaw D can be moved, and its width may be governed by the maker's judgment, as it will need to be broader in proportion as the bar B approaches toward or becomes a square in the cross-section. This rib or spline C is to be forged or made of the same piece with the bar B and permanent jaw A.

I make the adjustable jaw D and its appendages of malleable cast-iron, or any other suitable material, of any of the well-known forms or shapes of screw-wrenches, or otherwise, suited to the bar B and jaw A, and I secure the whole to the handle E in any convenient manner.

The advantage of my improvement over all wrenches formerly in use consists in the very great additional strength which the rib or spline gives to the bar B at that point in comparison with the weight of the additional metal which is used.

What I claim as my invention, and desire to secure by Letters Patent, is—

Making the bar B of the wrench with a rib, spline, or feather on its back edge or side, substantially as herein described and set forth.

J. PARKER LINDSAY.

Witnesses:

A. HATCH,
R. FITZGERALD.