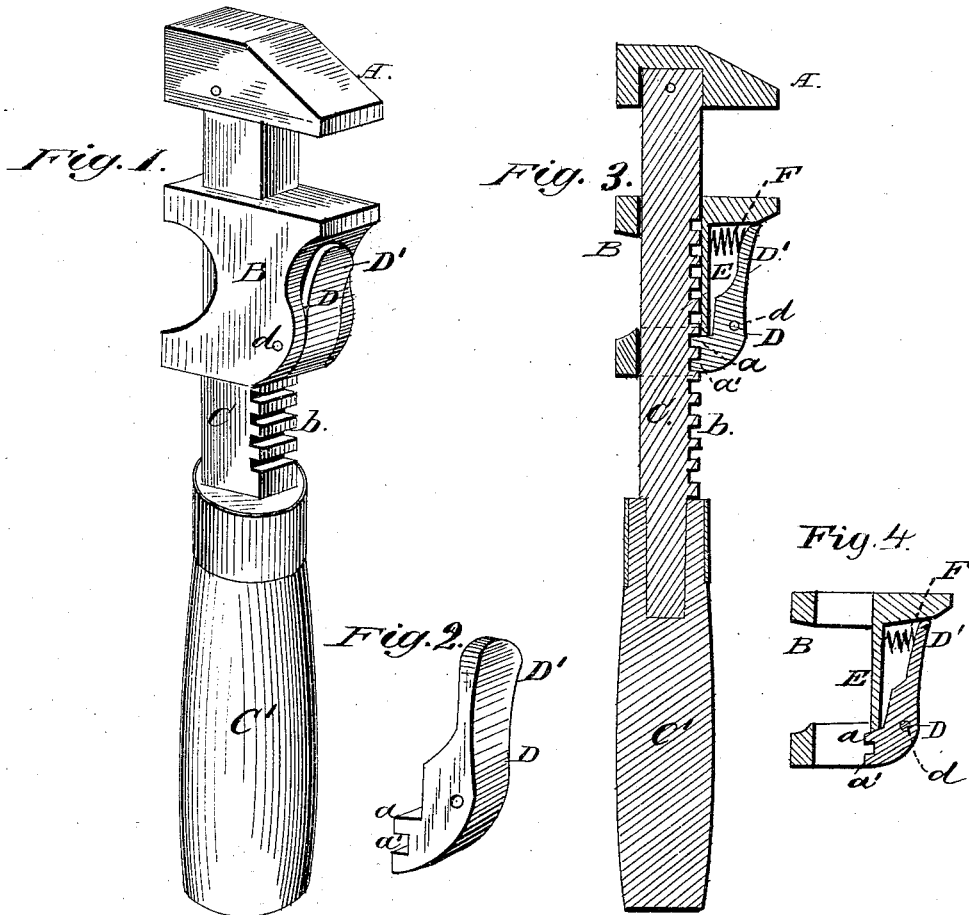


W. A. HEATH.
Wrench.

No. 221,305.

Patented Nov. 4, 1879.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM A. HEATH, OF HEALDSBURG, CALIFORNIA.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **221,305**, dated November 4, 1879; application filed July 16, 1879.

To all whom it may concern:

Be it known that I, WILLIAM A. HEATH, of Healdsburg, in the county of Sonoma and State of California, have invented certain new and useful Improvements in Wrenches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of a wrench embodying my improvement. Fig. 2 is a perspective view of the toothed catch for securing the movable jaw in place. Fig. 3 is a longitudinal section of the wrench; and Fig. 4 is a detail sectional view of the movable jaw-box, showing its inner wall or diaphragm for re-enforcing the upper tooth of the catch and relieving its pivot-pin from strain.

Similar letters of reference indicate corresponding parts in all the figures.

This invention has relation to that class of wrenches known technically as "monkey-wrenches," or wrenches having a movable jaw which is adjustable in its relation to the fixed jaw; and it consists in the combination, with the said fixed jaw or head and its shank, of an adjustable jaw in the form of a hollow box containing a spring-catch, and provided with a partition-wall or diaphragm which separates the thumb-piece of the catch and its operating-spring from the shank upon which the box-jaw slides, the lower end of said diaphragm being adapted to brace or re-enforce the tooth at the lower end of the catch, which holds the jaw in its adjusted position, substantially as and for the purpose hereinafter more fully described, and particularly pointed out in the claim.

In the drawings, C is the shank of my improved wrench, which is inserted into a handle, C', and provided at its upper end with the stationary head or jaw A. B is the movable jaw, which consists of a hollow box provided on its rear side with a partition or diaphragm, E, which extends from the upper

part of the jaw down toward its lower end, where it is broken off, to allow room for the teeth *a a'* of the spring-catch D, which is pivoted at *d* in the side pieces of jaw B, and has a thumb-piece, D'. F is a spring inserted between the thumb-piece D' and diaphragm E, which forces the lower toothed end of the catch D in against the notches *b* of shank C, with which it engages.

In this class of wrenches, as ordinarily constructed, the teeth upon the spring-catch and the pin upon which this is pivoted have to sustain all the pressure in operating the wrench; but by my improvement the upper tooth, *a*, is re-enforced by the lower edge of the diaphragm E impinging upon it when the catch is in its closed or locked position.

If desired, the lower edge of said diaphragm may be beveled, and the tooth *a* beveled to conform thereto, as shown in Fig. 4 of the drawings; but this is not necessary except in wrenches of exceptionally large size.

I am aware that wrenches of this class have been constructed before with a tooth-re-enforcing shoulder, forming a part of the adjustable jaw, as shown in the patent to J. A. Partridge, No. 63,935, granted on the 16th day of April, 1867, and I do not claim such feature, broadly; but

I claim as my improvement and desire to secure by Letters Patent of the United States—

In a wrench of the described class, the combination, with the rigid head A and notched shank C, of the adjustable hollow box-jaw B, containing the pivoted catch D' D and its operating-spring F, and provided with the inner partition or diaphragm, E, the lower end of which impinges against the upper tooth of the spring-catch, substantially as and for the purpose herein shown and specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM A. HEATH.

Witnesses:

HENRY FOX,
THOS. RILEY.