

S. H. BELLOWS.  
Monkey-Wrench.

No. 228,437.

Patented June 8, 1880.

fig. 1.

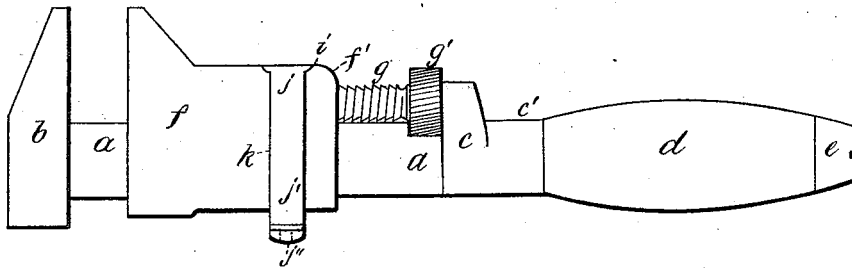


fig. 2.

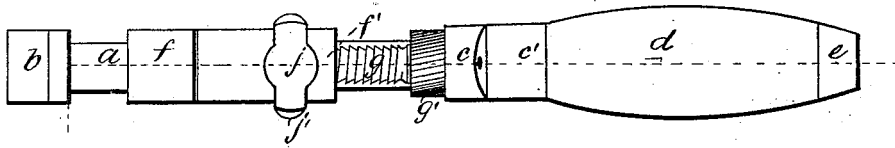
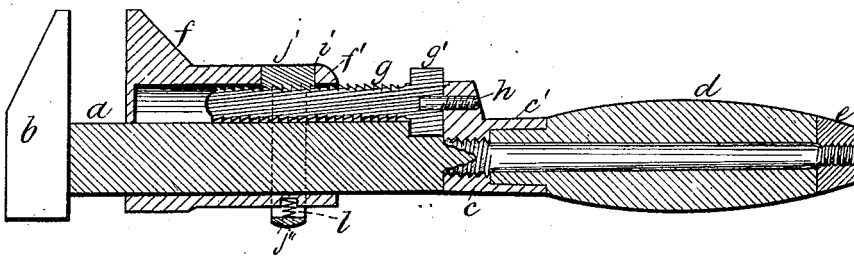


fig. 3.



Witnesses:

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Inventor:

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# UNITED STATES PATENT OFFICE.

STEPHEN H. BELLOWS, OF ATHOL, MASSACHUSETTS.

## MONKEY-WRENCH.

SPECIFICATION forming part of Letters Patent No. 228,437, dated June 8, 1880.

Application filed June 11, 1879.

To all whom it may concern:

Be it known I, STEPHEN H. BELLOWS, of Athol, in the county of Worcester and State of Massachusetts, have invented a certain new and useful Improvement in Monkey-Wrenches, of which the following is a specification, reference being had to the accompanying drawings, where—

Figure 1 is a side view. Fig. 2 is a front view. Fig. 3 is a view in central vertical longitudinal section.

My invention is an improvement in that class of side-screw wrenches which commenced with the invention of Loring Coes, patented April 16, 1841, wherein a screw located on one side of the wrench-bar is used to move and adjust the movable jaw of the wrench. It is an improvement on that subclass of said side-screw wrenches exemplified in the patent of Benjamin F. Joslyn, dated July 10, 1877, and numbered 192,920, which subclass not only embodies the Coes construction, but combines with it the feature of connection and disconnection between the side screw and movable jaw at will.

My invention consists in certain details of construction which involve certain advantages hereinafter alluded to.

The letter *a* denotes the wrench-bar; *b*, the fixed jaw; *c*, the step-plate screwing upon the wrench-bar and bearing the ferrule *c'*; *d*, the wooden handle, and *e* the nut on the lower end of the wrench-bar, holding the wooden handle in place.

The letter *f* denotes the movable jaw, sliding upon the bar and having a bearing, *f'*, for the adjusting-screw *g*, on the lower end of which screw is the rosette *g'*, let into the bar, so that the screw rests against the side of the bar, this to prevent the screw from bending under severe back-thrust. A screw, *h*, driven up through the step-plate, forms a pivot for the lower end of the adjusting-screw.

The movable jaw *f* bears in front the mortise *i*, in which lies, fits, and slides the half-nut *j*, meshing into the thread of the adjusting-screw. The sides of the movable jaw bear the mortises *k k*, and in them lie and slide the nut-arms *j' j'* running backward and projecting from the back side of the movable jaw, their rear ends being joined by the tie-

piece *j''*, which is riveted to the ends of the nut-arms. A spring, *l*, socketed in the back side of the movable jaw, presses the half-nut to mesh with the adjusting-screw. The user of the tool, by pressing with his thumb on the tie-piece *j''*, unmeshes the nut from the adjusting-screw and moves the movable jaw to any desired adjustment, when, on removing said pressure, the spring returns the nut to mesh.

That part of this structure which is made up of the half-nut *j*, the arms *j' j'*, and the tie-piece *j''* is technically called the "stirrup."

Now it will be noticed, on comparing my construction with the construction of said Joslyn wrench, that it (my construction) enables me to locate my stirrup, not, as in Joslyn's case, below the lower extremity of the movable jaw, but above such lower extremity, and in or on the body of the movable jaw.

The resulting practical advantages are obvious, to wit:

First, protection of the stirrup from accidental breakage or other injury. These wrenches are largely used in machine and other shops, and are not, as a rule, laid down gently, but are often thrown down rudely, and even in their legitimate and careful use are subject to hard hits. When this stirrup, which is the most delicate part of the whole mechanism, is below the lower end of the movable jaw it is in just the place where it is most liable to accidental injury, and is entirely unprotected therefrom. An adequate protection is afforded when the stirrup is located in and on the body of the movable jaw.

Second, in two wrenches of the same length (and all these wrenches go into market by standard sizes) my construction admits of a much wider opening of the movable jaw than the Joslyn wrench. The wooden handle and the jaw (the movable jaw) are fixed quantities as to length. A handle must be of a certain length to afford an adequate grasp to the hand, and the movable jaw must be of a certain length to resist the cocking tendency under strains. These lengths are well known and fixed to wrench-makers. Just so much space as a stirrup below the movable jaw takes up on the bar, by just so much the opening capacity of the wrench is diminished. My construction is not open to objection on this head.

Third, when the stirrup is below the movable jaw the spring which keeps the half-nut in mesh requires a separate piece wherein to socket it, borne between the spring and the bar. In my construction the spring is socketed directly in the back of the movable jaw.

I claim as my improvement—

In combination, in an adjustable wrench, the bar *a*, the movable jaw *f*, the adjusting-

screw *g*, the stirrup *j j' j''*, borne in and upon the body of the movable jaw and above the lower end thereof, and the spring *l*, all substantially as shown and described.

STEPHEN H. BELLOWS.

Witnesses:

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