J. R. Brown,

Wrench.

No. 24,927. Patented Aug 2, 1859.

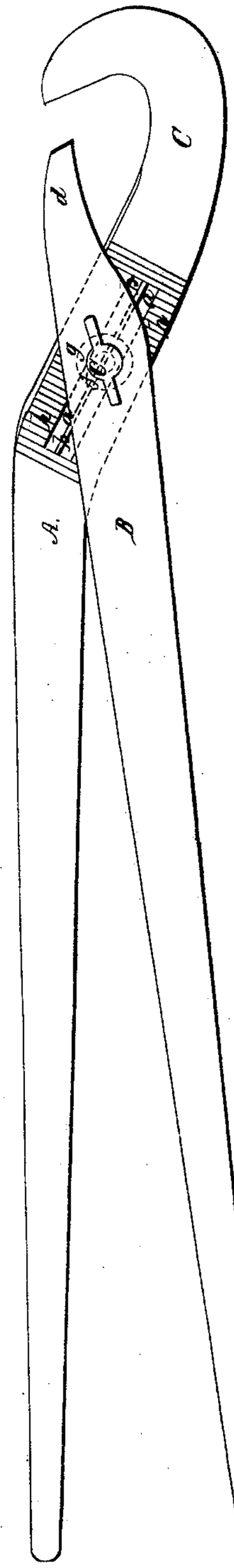

Fig. 1.

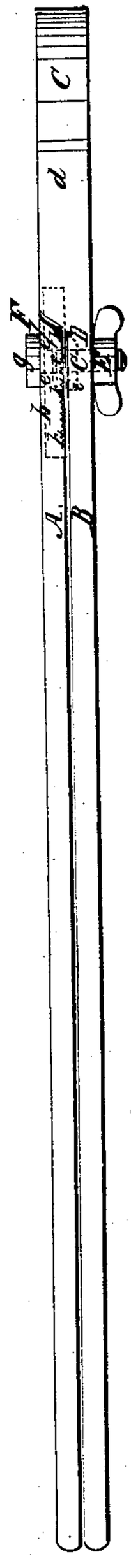

Fig. 2.

Fig. 3.

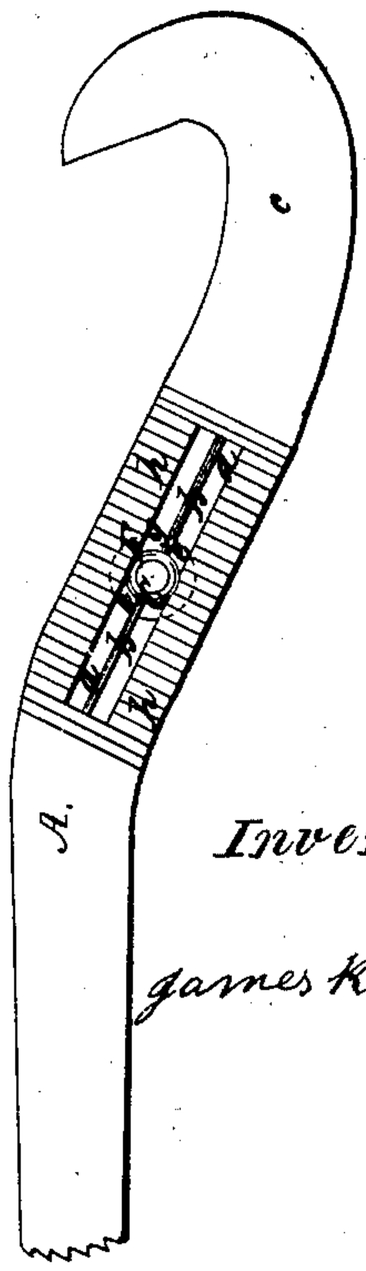

Fig. 4.

Witnesses:

R. H. Eddy

F. P. Hale Jr.

Inventor:

James R. Brown

UNITED STATES PATENT OFFICE.

JAMES R. BROWN, OF BOSTON, MASSACHUSETTS.

PIPE-TONGS.

Specification of Letters Patent No. 24,927, dated August 2, 1859.

To all whom it may concern:

Be it known that I, JAMES R. BROWN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Pipe-Tongs; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1, is a side view of my improved tongs; Fig. 2, an edge view of them; Fig. 3, a section taken through their fulcrum screw pin; Fig. 4, is an inner view of the slotted jaw lever.

My improvement has reference to the peculiar arrangement and application of devices for adjusting and fixing in position the fulcrum screw pin of the two jaw levers.

In the drawings, A, and B, denote the jaw levers of the pipe tongs. The former is provided with a hooked jaw, *c*, while the latter has a tooth or jaw, *d*, formed as shown in the figures. Besides the hooked jaw, the lever, A, is furnished with an elongated slot, *a*, for the reception of the fulcrum pin, C, whose head, *g*, extends beyond the sides of the slot and is provided with a square projection, *e*, to enter the slot and prevent the pin, C, from rotating therein. Furthermore, the pin, C, is adapted to a rod, *b*, so as to be capable of sliding freely on it, such rod, *b*, extending within the slot and from end to end of it as shown in the drawings.

The inner surface of the hooked jaw lever A, on each side of the slot is serrated or provided with a toothed rack, as seen at *h*, and on the pin, C, and between the two levers, A, B, is a toothed stopper, D. This stopper is formed not only with a square projection, *f*, to enter the slot but with a round head, *r*, having its inner surface provided with teeth, *k*, *k*, to fit and enter the spaces between the teeth of the rack, *h*. The lever, B, is countersunk to receive the round head of the stopper, the lever being applied to the said head and the shank of the screw pin, C, so as to be capable of being turned freely thereon in such manner as to cause the jaw, *d*, either to approach toward or recede from the jaw, *c*, as circumstances may require.

Between the parts, *e*, and *f*, and on the shank of the pin, C, is a helical spring, F, which serves to press the stopper, D, out of engagement with the rack, *h*, while the clamp nut, E, is being unscrewed, the said nut being applied to the fulcrum pin, C, as seen in the drawing.

If desirable the stopper, D, may have a cylindrical projection to extend through the lever, B, as shown by dotted lines at *m*, *m*, in Fig. 3. While the lever, B, would turn on this projection, the clamp nut would bear directly against this projection in case the same should extend a very short distance beyond the outer face of the lever. Thus, it will be seen that the projection would enable the stopper to be held in engagement with the rack without the pressure of the nut being exerted through the lever, B, as would be the case, were the stopper not provided wtih the projection.

The office of the stationary rod, *b*, is to so hold the pin, C, in position as to enable the spring, F, to drive the stopper out of engagement with the rack, *h*.

By means of the rack and stopper arranged and applied with respect to the jaw levers and their fulcrum screw pin as described, the position of the pin may be changed and fixed in the slot as circumstances may require in order to vary the distance between the tooth and hooked jaw of the two levers. The great advantage of the rack and stopper is the certainty with which they will hold the pin in place under great strain on it, while the pipe tongs may be in use, and besides this, they enable the nut to be easily worked on the screw pin, as it is not liable to become set thereon or so fixed as to render it difficult for a person to turn it by his hand or fingers. Where an inclined plane is used, as in the pipe tongs of Gilmore, patented on or about April 6th, 1858, a great strain on the jaws is apt not only to cause the nut to become set very hard, but to damage the threads of the screw. With my improvement, all such difficulties are avoided, particularly, when each of the teeth of the rack has that face of it which is next the hooked jaw made to stand at a right angle to the inner surface of the lever, A.

I do not claim in combination with the jaw levers and screw pin of pipe tongs, a means of adjusting and fastening the fulcrum screw pin in any desirable position within the slot of the hooked jaw lever, as this is not new; nor do I claim the arrangement of an inclined plane, or device of like nature on the outer surface of the hooked

jaw lever and with respect to the slot thereof and the washer of the screw pin and its nut as shown in the pipe tongs described in the aforementioned patent of the said Gilmore.

What I claim as my invention or improvement is—

The arrangement and application of the serrated surface or rack, *h*, the spring, F, and toothed stopper, D, with respect to the two jaw levers, A, B, the clamp nut, E, and the screw pin, C, applied to the toothed jaw lever, A, substantially as described.

In testimony whereof I have hereunto set my signature.

JAMES R. BROWN.

Witnesses:
R. H. EDDY,
F. P. HALE, Jr.