

J. R. BROWN.
WRENCH.

No. 172,551.

Patented Jan. 25, 1876.

Fig. 1.

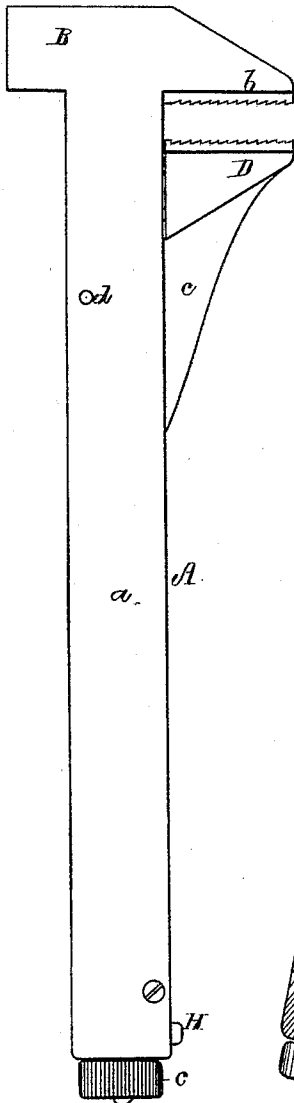


Fig. 2.

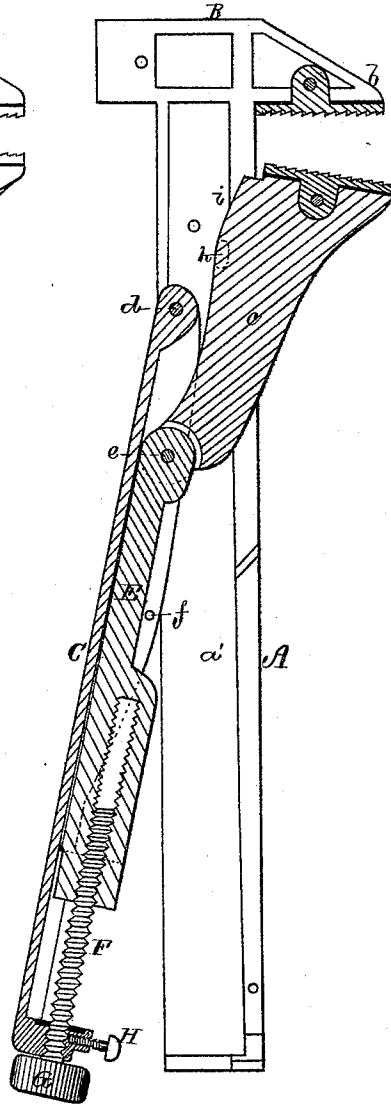
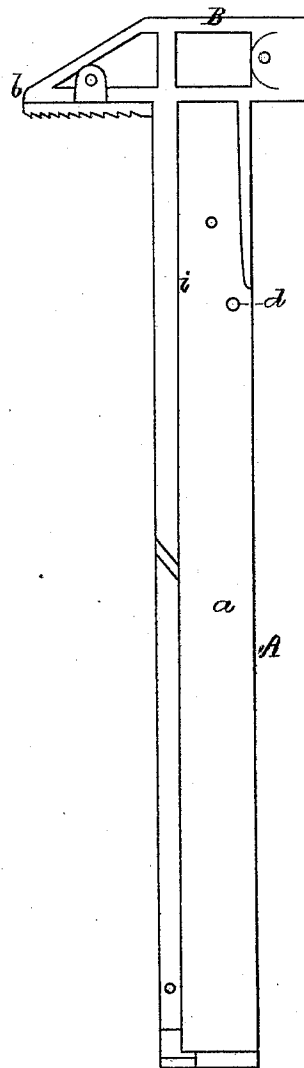


Fig. 3.



Witnesses.

S. M. Piper

L. W. Mollen

James R. Brown.

by his attorney.

R. H. Eddy.

UNITED STATES PATENT OFFICE.

JAMES R. BROWN, OF CAMBRIDGEPORT, ASSIGNOR TO ELIZA A. CLOUD-MAN, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **172,551**, dated January 25, 1876; application filed December 1, 1875.

To all whom it may concern:

Be it known that I, JAMES R. BROWN, of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Coach-Wrenches; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side elevation, and Fig. 2 a longitudinal section, of one of my improved wrenches. Fig. 3 is an inner side view of one half portion of its combined shank and head.

In this wrench, made as represented in the drawings, the handle A is separated lengthwise into two parts, *a a'*, such being also the case with the jawed head B, each half of which is one piece, with one of the portions *a a'* of the handle. Furthermore, there is a jaw, *b*, to the head B. Each part, *a* or *a'*, of the handle is chambered lengthwise of it, the chamber being open in front and in rear to receive and allow to operate a lever, C, and the shank *c* of a movable jaw, D, all being as shown. Near its upper end the lever C is pivoted to the handle, the pivot being represented at *d*. The lever, movable on its pivot, can be moved into or out of the handle. The lever C is grooved lengthwise to receive a slide E, which at its upper end, by means of a tongue, *e*, is jointed to the shank *c* of the jaw D. The slide E is held in place on the lever by a pin, *f*, which goes through the latter, or is arranged therein, as shown. An adjusting-screw, F, provided with a milled head, G, is pivoted in the lower part of the lever C, and screws into the slide E, there being on the lever a small clamp-screw, H, to work against the pivotal part or neck *g* of the screw F. From each side of the shank *c* a stud, *h*, is projected, such studs being to bear against the inner sides of the meeting flanges *i i* of the two parts *a a'* of the handle. By means of the screw F the distance of the movable

jaw from the stationary jaw may be adjusted or rendered greater or less, as circumstances may require. So, by means of the lever C, the jaw D may be inclined more or less to the jaw *b*, and the wrench used as pipe-tongs, to grasp or gripe a pipe or object, from all of which it will be seen that I have produced a wrench in which the movable jaw not only may be preserved in parallelism with the stationary jaw while the said movable jaw may be in the act of being adjusted to a distance nearer to or farther from the stationary jaw, (in which case the lever C is to be wholly within the handle,) but may, by turning the lever out of the handle, be rendered more or less oblique to the stationary jaw, and the instrument be used as tongs to grasp and turn a pipe or a nut. The two parts *a a'* of the handle, when placed one upon the other, are to be fastened together by screws or rivets.

The handle and head may be constructed of one solid piece, with the handle suitably chambered and open to receive the movable jaw-shank *c*, the lever C, and the parts connected therewith.

The clamp-screw H is to prevent the adjusting-screw from being accidentally revolved after an adjustment of the movable jaw.

I claim—

1. The combination of the stationary jaw or head B, the chambered handle A, the lever C, slide E, screw F, and the movable jaw D, provided with the shanks *c* and stud *h*, all being arranged and applied substantially as, and to operate as, set forth.

2. The combination of the clamp-screw H with the lever C, screw F, slide E, movable jaw D, shank *c*, studs *h*, handle A, and head B, all arranged and applied essentially as specified and represented.

JAMES R. BROWN.

Witnesses:

R. H. EDDY,
J. R. SNOW.