(No Model.)

G. H. BUZZELL.

PIPE WRENCH.

No. 438,343. Patented Oct. 14, 1890.

Fig. 1.

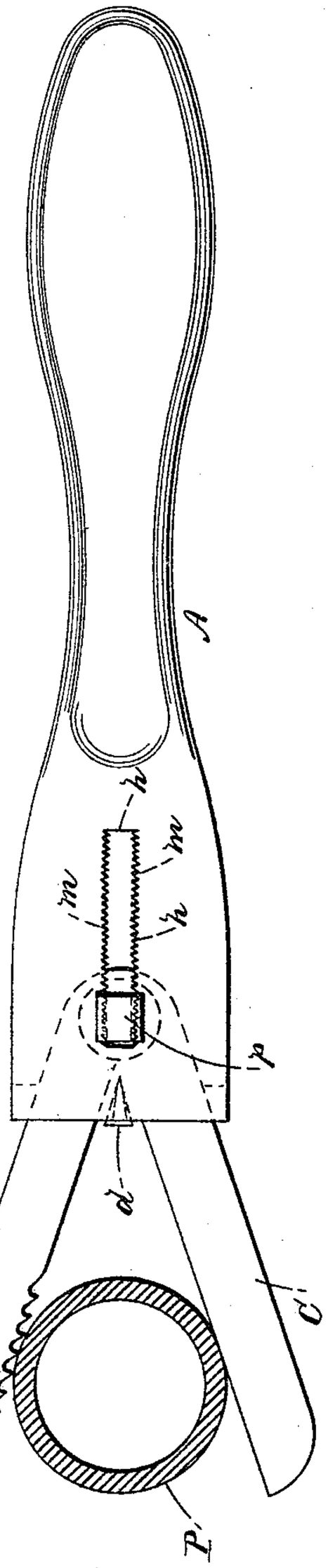


Fig. 2.

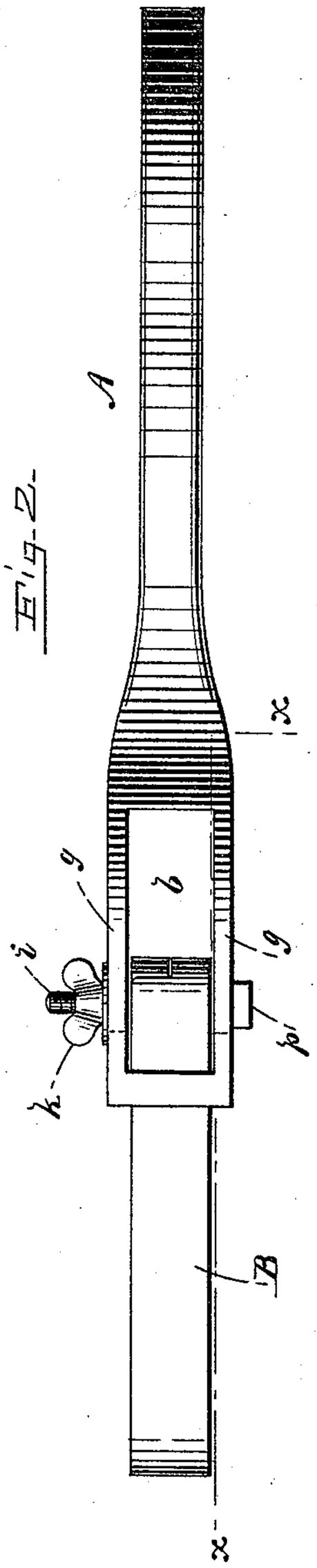
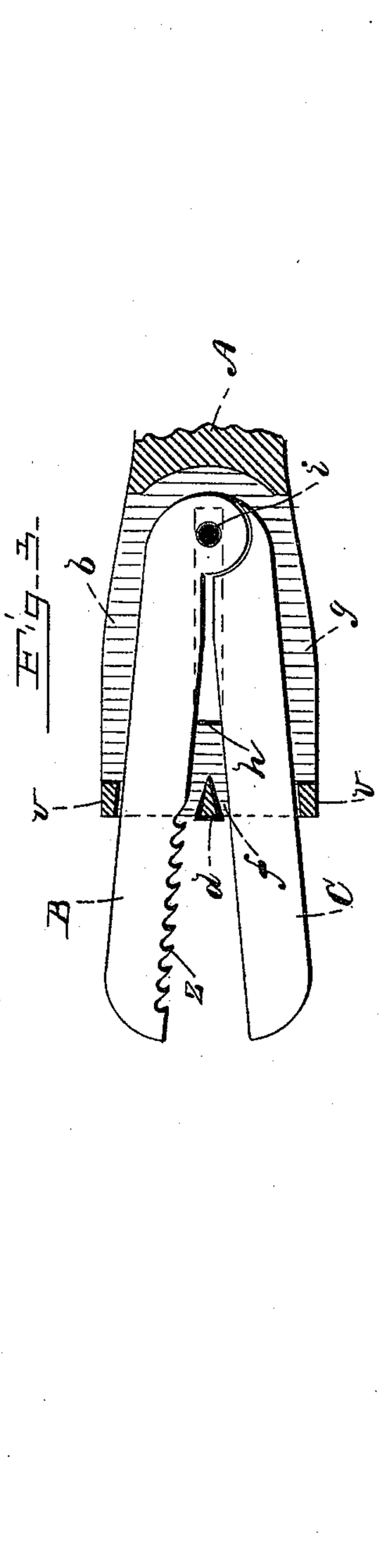


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE H. BUZZELL, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO OZRO C. CLARK, OF SAME PLACE.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 438,343, dated October 14, 1890.

Application filed August 18, 1890. Serial No. 362,275. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. BUZZELL, of Boston, in the county of Suffolk, State of Massachusetts, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved pipe-wrench represented as in use; Fig. 2, a top plan view of the same, and Fig. 3 a longitudinal section taken on line *x x* in Fig. 2.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates especially to that class of wrenches known as "pipe-wrenches;" and it consists in certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvements will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the handle, which may be of any suitable form, and is provided in one end with a chamber *b*, said chamber opening at two sides and through the end of said handle. A spreader *d* extends laterally across the mouth *f* of the chamber, said spreader being wedge-shaped in cross-section. Each side wall *g* of the chamber is provided with a longitudinal slot *h*.

The jaws B C consist of two levers, which project into the chamber at opposite sides of the spreader, respectively, said levers being pivoted on a bolt *i*, fitted to slide laterally in the slots *h*. A check-nut *k* is turned onto the bolt to secure it in position in the slots. The edges of one slot may be indented or corrugated, as shown at *m* in Fig. 1, the bolt-head *p* engaging said corrugations and preventing the bolt from slipping in the slots when the wrench is in use. One jaw B is toothed at *z*, the corresponding edge of the companion jaw being preferably smooth; but both jaws may be toothed, if desired.

In the use of my improvement the nut *k* is loosened and the bolt *i* moved in the slots *h*, projecting the jaws outward until they are spread sufficiently to receive the pipe P, the spreader *d* causing said jaws to separate as they move outward. The nut is then turned onto the bolt sufficiently to bind it securely in its slots and prevent the jaws from being accidentally forced inward. The wrench is operated to turn the pipe in the usual manner, the toothed jaw preventing it from slipping thereon and causing the pipe to bind firmly between the jaws as the wrench is moved. The distance between the spreader *d* and ends *v* of the chamber-mouth is slightly greater than the width of the jaws, admitting free play thereto and enabling the jaws to be more readily adjusted on the pipe. Wrenches as thus constructed are cheap and durable. The jaws when worn may be easily removed for sharpening or substituted for others.

Having thus explained my invention, what I claim is—

1. In a pipe-wrench, a handle chambered longitudinally at one end and provided with slots in the walls thereof, in combination with two movable jaws mounted on a pivot fitted to slide in said slots, substantially as set forth.

2. In a pipe-wrench, a handle provided with a chamber opening through one end and having slots in its walls, in combination with a pivot fitted to slide in said slots, two movable jaws mounted on said pivot and projecting from the mouth of said chamber, and mechanism for securing said pivot in said slots, substantially as described.

3. In a pipe-wrench, a chambered body or handle, in combination with a movable pivot or bolt fitted to slide laterally in slots in the chamber-walls, a check-nut for said bolt, two jaws pivoted in said bolt and projecting from said chamber, and a spreader for said jaws, substantially as set forth.

4. In a pipe-wrench, the body or handle A, provided with the chamber *b*, having the slots

h roughened or corrugated at *m*, in combination with the pivot-bolt *i*, the check-nut *k* thereon, and the jaws B C, pivoted on said bolt, substantially as described.

5. In a pipe-wrench, the handle A, chambered at *b* and provided with the slots *h* and spreader *d*, in combination with the bolt *i* and nut *k*, the toothed jaw B, and smooth jaw C, pivoted on said bolt, all being arranged to operate substantially as set forth.

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Witnesses:
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