

W. F. Loi,

Wrench.

No 78,299.

Patented May 26, 1868.

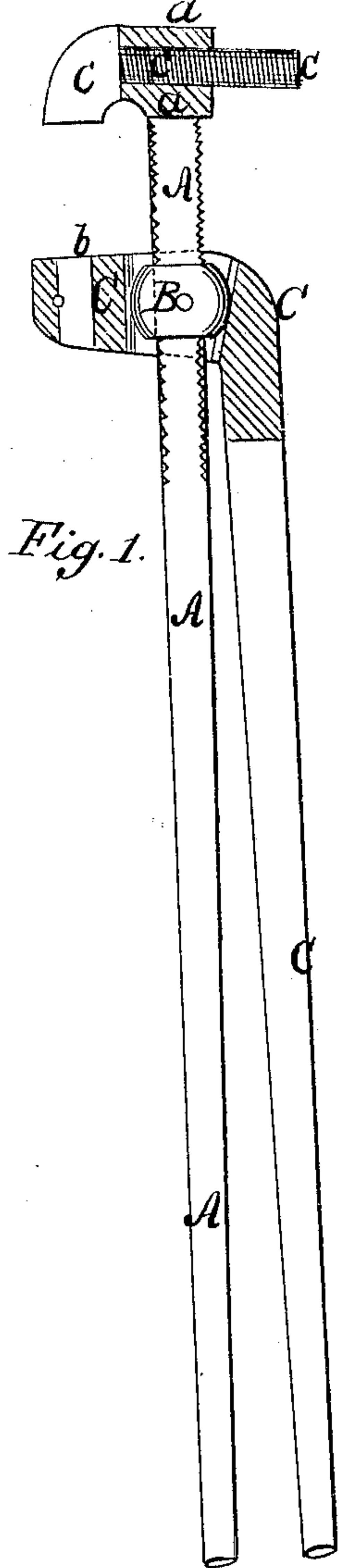


Fig. 1.

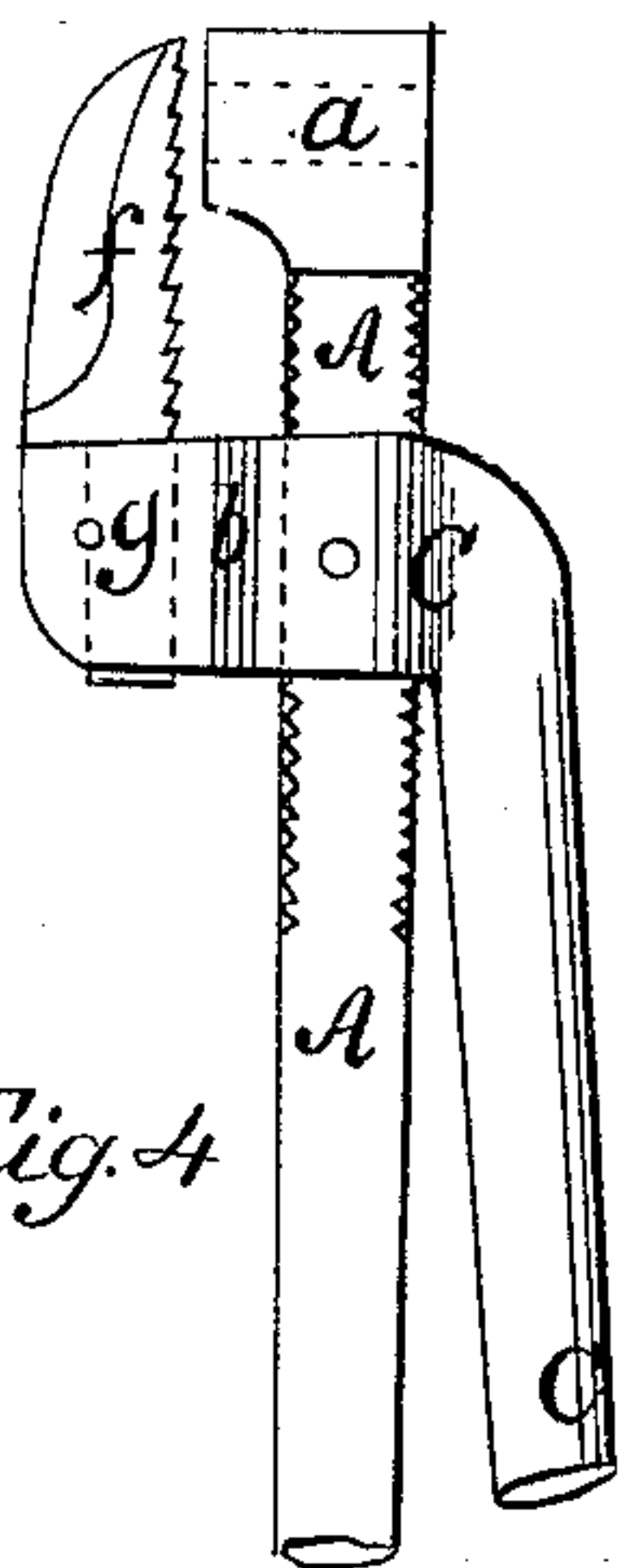


Fig. 4.

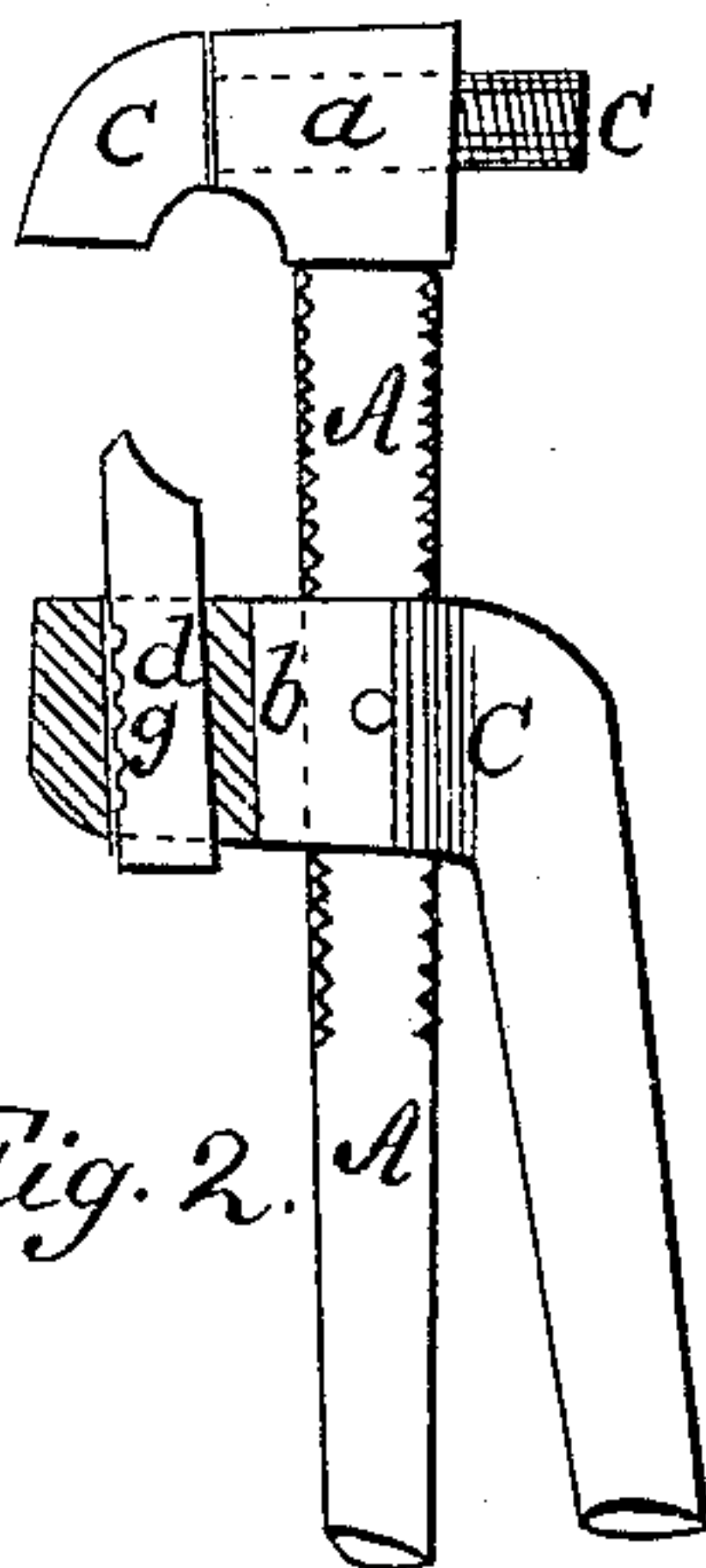


Fig. 2.

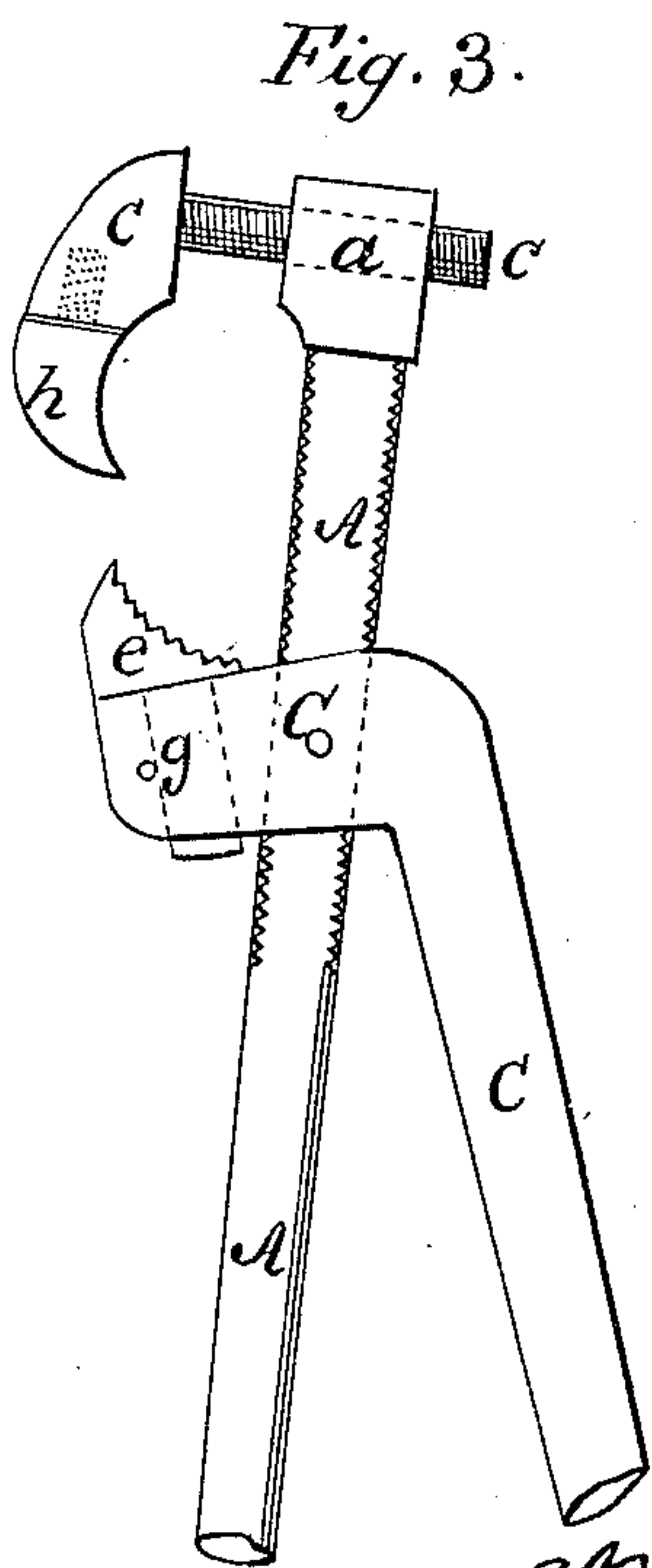


Fig. 3.

Witnesses
W. B. Ashkettle
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United States Patent Office.

NARDO F. LOI, OF NEW YORK N. Y.

Letters Patent No. 78,299, dated May 26, 1868.

IMPROVEMENT IN PIPE-WRENCHES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, NARDO F. LOI, of New York, in the county and State of New York, have invented a new and improved Pipe-Wrench; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 represents a side view, partly in section, of my improved pipe-wrench.

Figures 2, 3, and 4 are detail side views of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new wrench, which is so arranged that it can be adapted for clamping all sizes of pipe, from the smallest to the largest, and also for clamping plates or other articles of suitable shape. It is, in fact, a universal wrench, useful in every machine-shop, and wherever wrenches are required.

The instrument is formed chiefly of two levers; one is pivoted to a nut that works on the other lever, so that the ends of the levers form jaws, that can, by means of the nut, be moved as far apart or as close together as may be required.

The invention chiefly consists in the use of various devices that can be attached to the ends of the levers, for the purpose of adapting the instrument to any desired use, as will hereinafter be more fully set forth.

A, in the drawing, represents a metal rod, having a head, *a*, at one end, and a screw-thread around its body near to the head. B is a nut, which is screwed upon the rod A. C is an L-shaped bar, having its shorter arm pivoted to the nut B, so that its longer arm will, in connection with the lower part of the rod A, form the handles of the wrench.

The head *a* of the rod A projects from the rod in the same direction in which the short arm *b* of the bar C projects, as in fig. 1. The head *a* is perforated horizontally, so that a block, *c*, can be screwed into it, as shown. The block *c* will, with its lower face, be opposite to the upper face of the arm *b*, and these two parts will thus form a pair of jaws for clamping any desired article. The lower arm, *b*, can, by turning the nut B, be adjusted nearer to or farther from the block *c*, so that articles of suitable size can be clamped. The arm *b* is perforated to receive upright jaws *d*, *e*, or *f*.

The jaw *d*, which can be fastened by means of a pin, *g*, in the arm *b*, has a concave inner edge, which, in connection with the concave lower edge of the head *a*, will serve to clamp small pipes, as shown in fig. 2. The jaw *d* is or may be made up-and-down adjustable, not only on the rod A by means of the nut B, but also in the arm *b*, for which purpose it is notched as shown.

By inserting in the arm *b*, instead of the jaw *d*, a jaw, *e*, and by screwing an arm, *h*, into the jaw *e*, as in fig. 3, the device will be adapted for clamping large pipes. The jaw *e* is laterally adjustable in the head *a*, so that it can be set for pipe of any suitable diameter.

By substituting a jaw, *f*, fig. 4, for the jaw *d* or *e*, and by removing the jaws *h* and *e*, the device will be adapted for clamping plates or other narrow articles between the roughened jaw *f* and the face of the head *a*.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. The fixed handle A, when its head *a* is perforated at right angles to the handle, to receive the screw shank of the adjustable jaw *e*, which is placed above and parallel with the jaw *b* of the handle C, as herein described, for the purpose specified.

2. The construction, arrangement, and operation of the handle C, having the perforated jaw *b*, the pivoted nut B, screw-threaded handle A, head *a*, and adjustable jaw *e*, as herein described, for the purpose specified.

3. The jaws *d*, *e*, *f*, when adjusted in the arm *b* of the lever C, by means of the notches and transverse pin *g*, as herein described for the purpose specified.

N. F. LOI.

Witnesses:

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ALEX. F. ROBERTS.