(No Model.)

E. J. STONE.

PIPE WRENCH.

No. 540,409. Patented June 4, 1895.

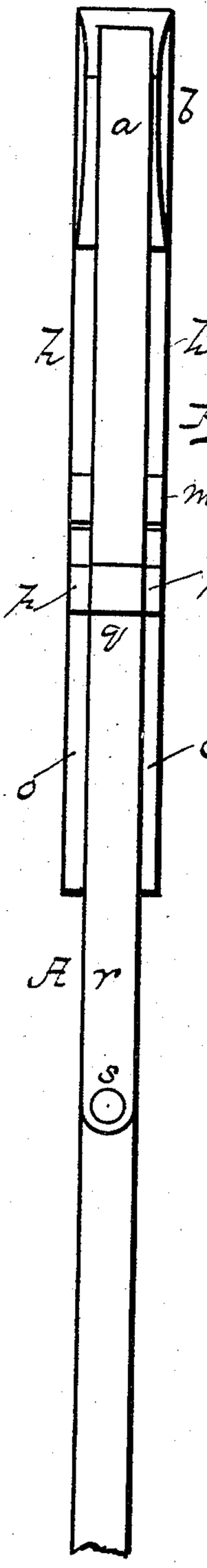

Fig. 2.

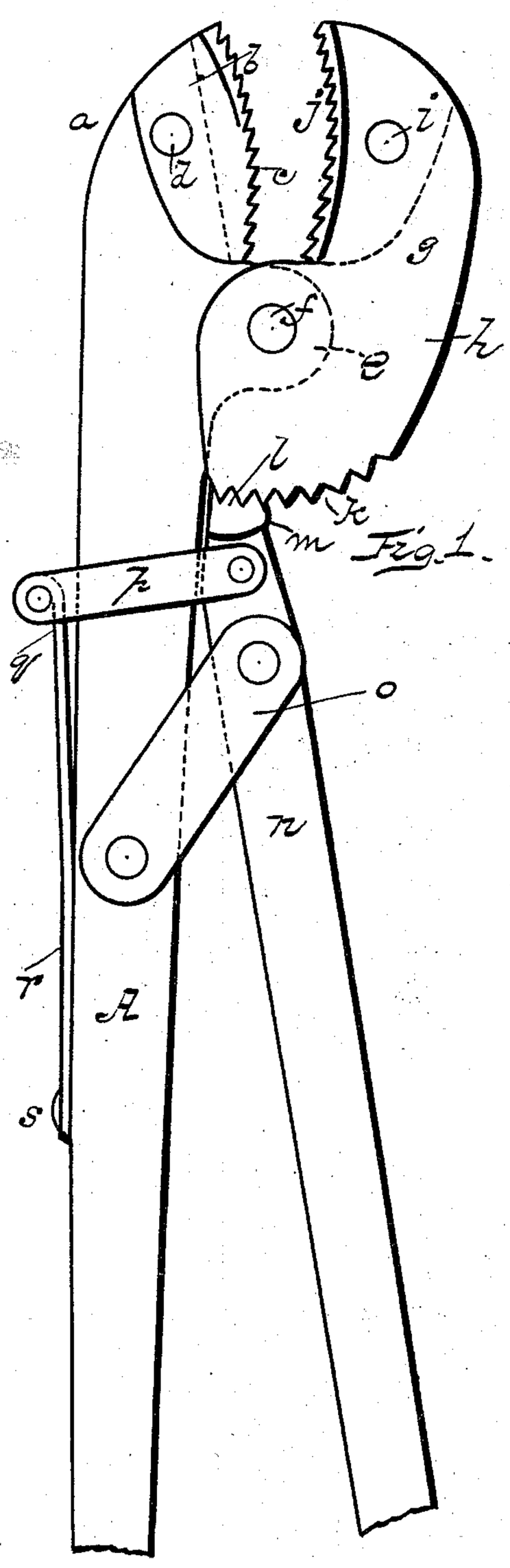

Fig. 1.

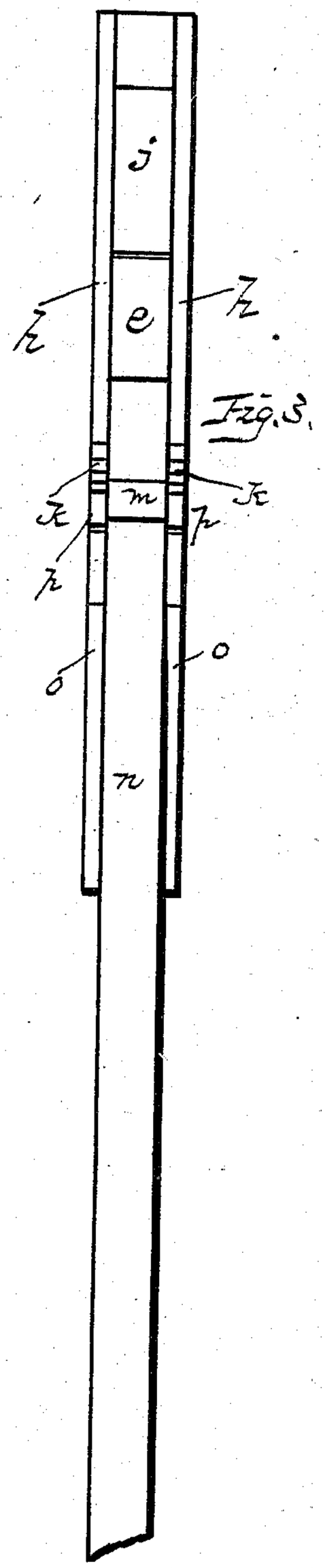

Fig. 3.

WITNESSES—

Jas. B. Clarke

M. M. Morton

INVENTOR—

Edward J. Stone—

by E. H. Bates Attorney—

UNITED STATES PATENT OFFICE.

EDWARD J. STONE, OF WAVERLY, PENNSYLVANIA.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 540,409, dated June 4, 1895.

Application filed March 7, 1895. Serial No. 540,803. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. STONE, a citizen of the United States, residing at Waverly, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Pipe-Wrenches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention has relation to improvements in pipe wrenches, of the class having pivoted jaws and it consists in the novel construction, combination and arrangement of the same, all as will be hereinafter fully described.

The annexed drawings, to which reference is made, fully illustrate my invention, in which—

Figure 1 is a side view of my pipe-wrench. Fig. 2 is an edge view. Fig. 3 is a view of the edge opposite that shown in Fig. 2.

Referring by letter to the accompanying drawings, A, designates the main bar or handle of the wrench, to the end *a* of which is secured one of the pipe jaws *b* having the usual teeth *c*. This jaw *b* has a bifurcation, into which the upper end *a* of the main bar A is secured by a transverse rivet *d*. The bar A, is also provided with an offset or bearing *e* to which is pivoted (at *f*) a movable jaw *g* comprising two parallel plates *h*, *h*, between which is secured, by a rivet *i*, a toothed plate *j*. These plates *h h* are twin plates and are provided with teeth *k*, struck from an arc of a circle from the point of the pivot *f*, which teeth engage similar teeth *l* on the extreme inner end *m* of a movable bar or handle *n*. This bar *n* is pivoted to the main bar by two oblique plates *o*, *o*; one on either side of said bars and said bar *n* is also pivoted to a plate *p* on either side thereof. To the opposite end of said plates *p*, *p*, is connected the free end *q* of a flat spring *r*, that is secured to the main bar, at *s*.

It will be seen from the above description, taken in connection with the drawings, that pressure upon the handles will cause the jaws to close and firmly grip a pipe, by the action of the teeth on the movable bar engaging the teeth *k* on the jaw plates.

In order to adjust the pivoted jaw to pipes of different sizes, the operator forces the movable handle or bar outwardly from the stationary bar, thus retracting and disengaging the teeth *l* from the teeth *k*, when the jaw can be set by the operator turning the jaw *g* upon its pivot *f* for pipes of different sizes and the spring forces said handle back to its normal position causing the teeth to again engage one another. Said spring also serves to loosen the grip upon the pipe when the handles are freed from the grasp of the operator, and a device as herein shown and described is simple in operation, durable and at the same time cheap to manufacture.

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

1. In combination with the fixed bar having the toothed gripping plate *b*, of the pivoted jaw, comprising two parallel plates pivoted to the offset *e* of the fixed bar and provided with the gripping teeth *j* and teeth *k*, the movable bar having the teeth *l* adapted to engage said teeth *k*, the plates *o*, *o*, pivoted at one end to the bar A, and at the opposite end to the bar *n*, the plates *p*, *p*, and spring *r* said plates pivoted at one end to the bar *n* and at the other end to the spring; the latter secured at *s* to the bar A, substantially as described.

2. In combination with the fixed jaw, and the bar or handle thereof, of a pivoted jaw having the teeth *k*, and the movable bar having the teeth *l*, engaging said teeth *k*, the plates *o*, *o*, pivoted both to the fixed bar and movable bar, the plates *p*, *p*, pivoted to the movable bar and to the spring, secured to the fixed bar at one end and to the plates *p*, *p*, at the opposite end, all substantially as described.

3. In combination with the fixed bar having the toothed gripping plate, of the pivoted jaw, comprising two parallel plates, riveted to one another, at *i*, and pivoted to the offset or bearing *e* and having the teeth *k*, the movable bar *n*, provided at its end with teeth *l*, engaging said teeth *k*, *k*, and the pivoted plates *o*, *o*, connecting the two bars A, *n*, to one another and the pivoted plates *p*, *p*, connecting the upper end of the bar *n* to the spring and the spring *r*, secured at *s*, to the bar A all substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD J. STONE.

Witnesses:

PARDON B. STONE,

DEXTER SINSABAUGH.