J. McCrum.

Drilling Attachment for Lathes.

No. 57,536. Patented Aug. 28, 1866.

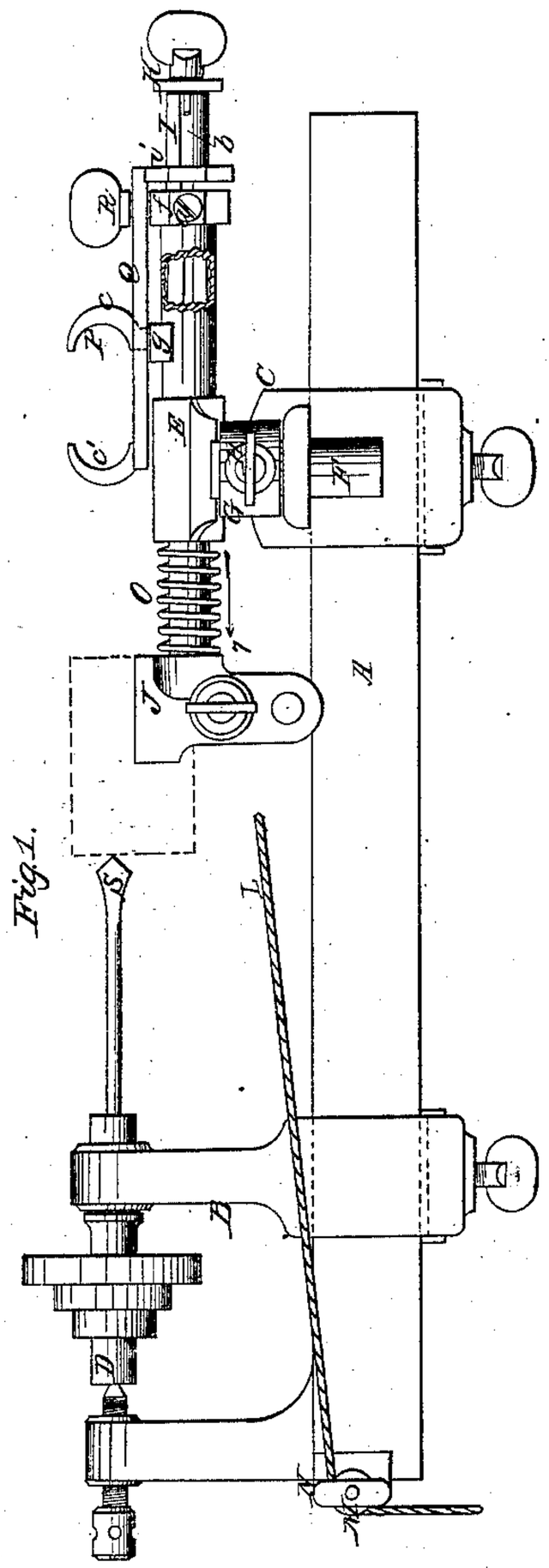

Fig. 1.

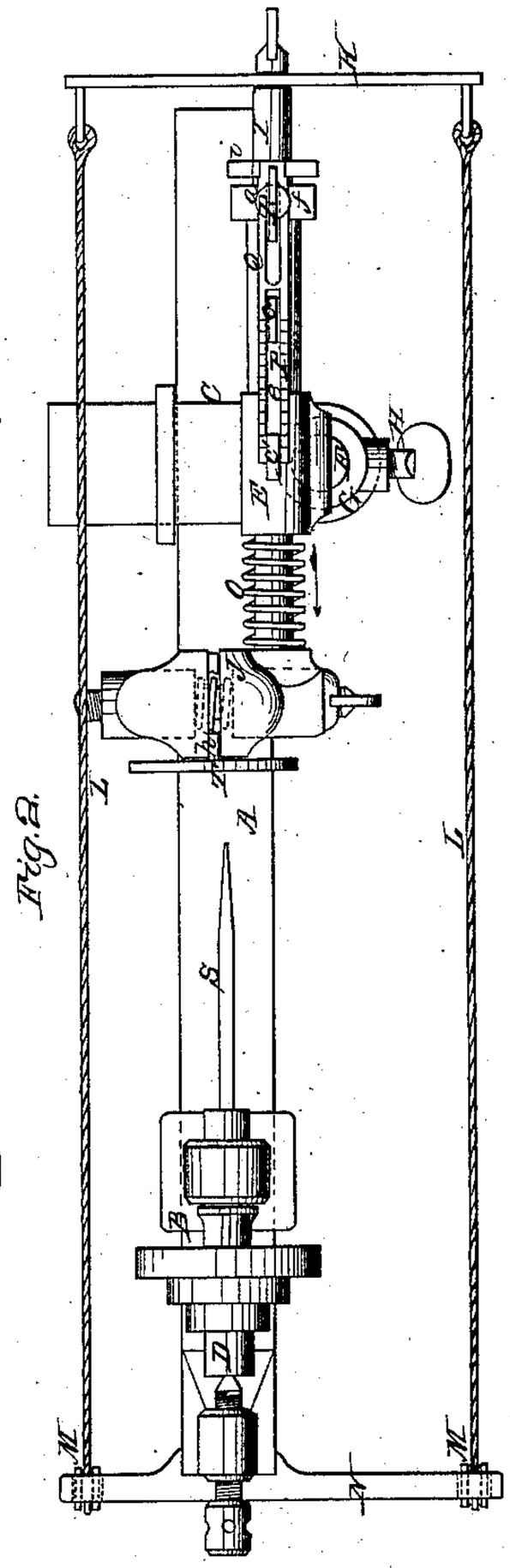

Fig. 2.

Witnesses:
Wm. Truran

Inventor:
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UNITED STATES PATENT OFFICE.

JAMES McCRUM, OF LOCUST GROVE, OHIO.

DRILLING ATTACHMENT FOR TURNING-LATHES.

Specification forming part of Letters Patent No. **57,536,** dated August 28, 1866.

To all whom it may concern:

Be it known that I, JAMES McCRUM, of Locust Grove, Adams county, State of Ohio, have invented a new and useful Drilling Attachment for Turning-Lathes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of my invention; Fig. 2, a plan or top view of the same.

Similar letters of reference indicate like parts.

This invention relates to a new and useful attachment for turning-lathes, whereby articles may be drilled with greater facility than hitherto, as hereinafter fully set forth.

A represents the bed of a turning-lathe; B, the fixed, and C the sliding or puppet, head of the same.

D is the mandrel, placed in the fixed head B, as usual, and E is a horizontal tube, which is employed on the sliding or puppet head, instead of the ordinary screw-center rod. This tube E has a pendent cylindrical rod, F, attached, which is fitted in a socket, G, on the puppet-head, and secured therein by a set-screw, H. This arrangement admits of the tube E being adjusted higher or lower, as may be desired, and also of being adjusted more or less angularly with the bed A, or in the same plane therewith, as may be required.

I represents a rod, which is fitted snugly in the tube E, but is allowed to slide freely therein. This rod I has a vise, J, on its inner end, and a cross-bar, K, on its outer end, the ends of the cross-bar having cords L L attached to it, which pass over pulleys M M in the end of a bar, N, attached to the end of the bed A, near the head B, the cords L L being sufficiently far from the bed A, so as not to interfere with the belt which drives the mandrel D.

O is a spiral spring, placed on the rod I between the vise J and the inner end of the tube E, said spring having a tendency to press the rod I in the direction indicated by arrow 1.

The rod I, if of cylindrical form, as shown in the drawings, is prevented from turning within the tube E by means of a screw, *a*, passing through the side of E, and fitting in a longitudinal groove, *b*, in the side of I.

To the upper side of the tube E there is permanently attached one leg, *c*, of a pair of calipers, P, the other leg, *c'*, being attached to a slide, Q, which has a longitudinal slot, *d*, made in it for the fixed leg *c* to pass through, and also has another longitudinal slot, *e*, made in it for a set-screw, R, to pass through into a head or flange, *f*, on the outer end of tube E, the slide Q resting on said head, and on a shoulder, *g*, at the lower part of the fixed leg *c* of the calipers. The slide Q is secured at any desired point within the scope of its adjustment by means of the set-screw R.

S is the drill, fitted in the mandrel D of the head B, and T is a circular plate, having a tang, *h*, projecting from it at right angles, which tang is grasped in the vise J when the plate T is used. (See Fig. 2.)

A weight is attached to the ends of the cords L, and this weight performs the same function as the spring O. Either or both may be used.

The operation is as follows: In drilling plates the thickness of the latter is determined by the calipers P, the slide Q being graduated in order to facilitate that operation. The thickness being ascertained, the slide Q is adjusted so that a head, *i*, on its outer end (which head serves as a stop for the bar K, and through which head the rod I passes) will prevent the rod I being moved toward the drill any farther than is necessary for the drill to penetrate through the work.

The spring O and weighted cords L, either or both, constitute the feed.

The plates, in being drilled, are held against the face-plate T, a piece of wood being interposed between.

In drilling rods, bars, or other articles lengthwise or longitudinally, the face-plate T is dispensed with, said articles while being drilled being secured in the vise, as shown in Fig. 1.

This simple attachment will, it is believed, be a great acquisition to machinists and other artisans who use the drill.

The invention may also, for small work, be advantageously used with the bore.

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

1. The sliding rod I, with the spring O and weighted cords L, either or both, applied to it, in connection with an adjustable stop mechanism composed of the bar K, attached to the rod I, and a head, *i*, on the slide Q, all being arranged and applied to the puppet-head of a lathe, to operate in the manner substantially as and for the purpose set forth.

2. The calipers P, applied to the tube E and slide Q, in combination with the drilling attachment, substantially as and for the purpose specified.

3. The particular arrangement of the slide Q, tube E, vise J, spring O, and weighted cords L with the puppet-head C of a lathe or drilling-mandrel, substantially as and for the purpose set forth.

JAMES McCRUM.

Witnesses:
WM. SENER,
E. KELLY.