(No Model.)

E. A. STIMSON.

SCREW CUTTING MACHINE.

No. 464,532. Patented Dec. 8, 1891.

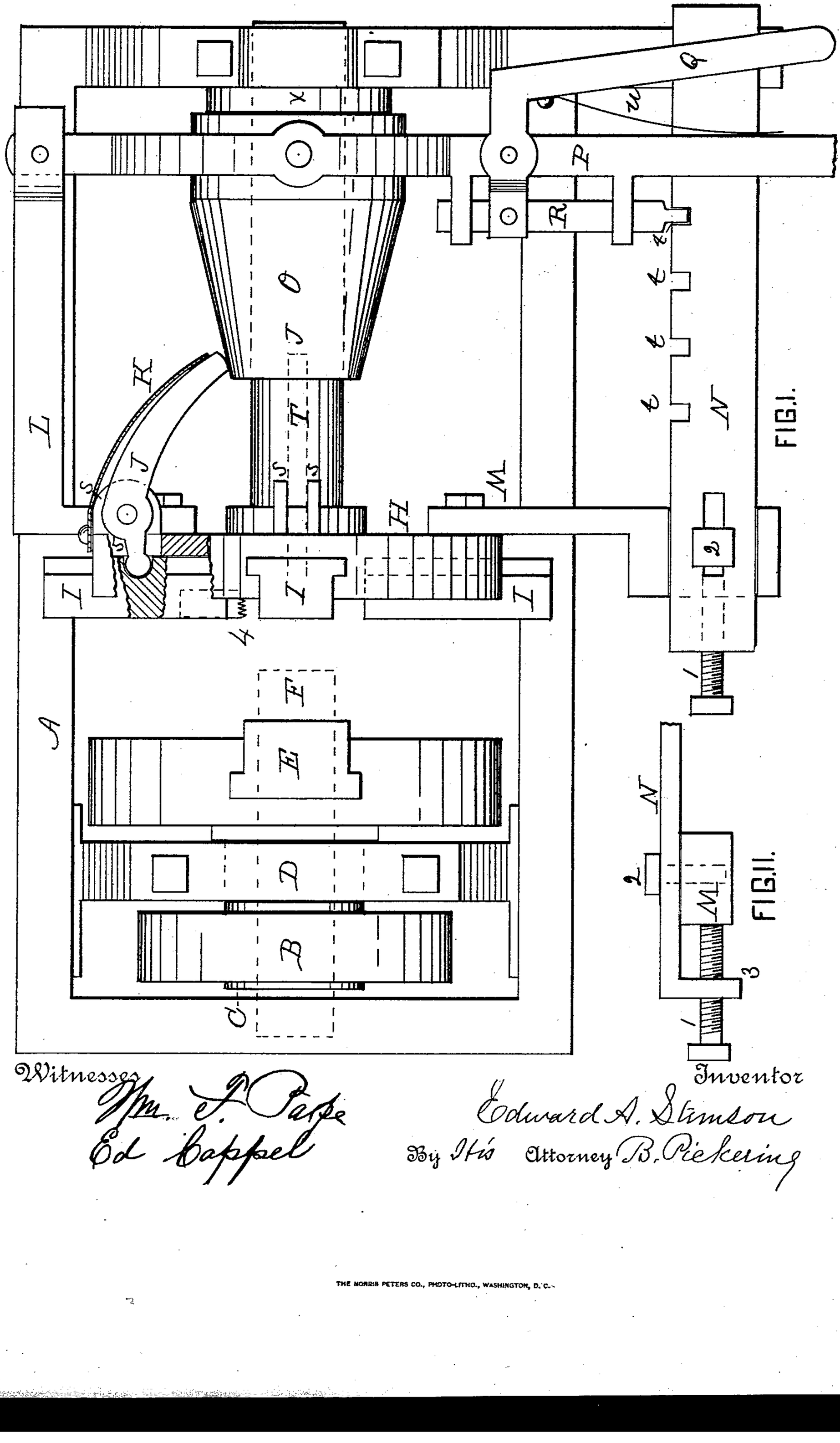

FIG. I.

FIG. II.

Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD A. STIMSON, OF DAYTON, OHIO.

SCREW-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 464,532, dated December 8, 1891.

Application filed April 27, 1891. Serial No. 390,608. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. STIMSON, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Screw-Cutting Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in screw-cutting machines, the features of which will be fully hereinafter described and claimed.

The object of my invention is the adjustment of the jaws carrying the dies, in order that screw-threads may be cut on rods or tubes of varying diameters, and by an adjustment which will be accurate.

The machine by which I accomplish the object is illustrated in the accompanying drawings, in which—

Figure I is a plan of the machine with some of the parts omitted and others broken away. Fig. II is a side view of the left end of the adjustment-bar.

Like letters and numerals designate like parts in the two views.

A is a substantial frame on which the parts of the machine are mounted. The rotating part of the machine comprises the hollow shaft C, held in bearings in the sliding support D, the head with jaws E, to grasp the tubing, (shown by dotted lines at F,) and these parts are identical with those long in use. The shaft T may be fixedly attached to a cross-piece of the frame, or held in a revolving turret, and on the inner end of this shaft is fixedly attached the head H, which is of the usual form, with the exception that it is provided with a series of four pairs of ears S. Within these ears are pivoted the arms J. The inner ends engage the four jaws I, and the outer ends are held against the surface of the cone O by means of the flat springs K. Of these four parts but one of each is shown in the illustration. The jaws I are identical with those long in use, with the exception of the slot 5, in which the end of the arm has a bearing. At 4 is shown one of the screw-cutting dies as attached to the jaw.

O is a cone, which moves freely on the shaft, and is carried backward and forward by the lever P, the inner end of which is circular, and is attached by pins above and below to said cone.

The arm L is bolted to the cutter-head, and said lever is pivoted to its outer end. In two arms of this lever are held the locking-bar R, which is jointed to the angular lever Q, the same being pivoted to the former lever, and is provided with the flat spring *u*, which causes the said locking-bar to engage one of a series of notches *t*. The arm M is bolted to the cutter-head, and this with an extension from the side of the frame supports the adjustment-bar N. This bar is provided with a series of notches, in the left end with a slot through which the screw 2 enters to engage the arm, and with a lug 3 to receive the adjusting-screw 1. When the adjustment-bar is brought to its required position, it is bound by said screw. The farther the cone is carried to the left the less will be the diameter of the screw-threaded pipe, and as the cone is carried to the right the dies are removed from the screw-thread and the threaded pipe is removed. The action of the spring in holding the arms against the cone carries out the dies from the thread.

In operation the principal lever and the releasing-lever are grasped by the hand and carried to the left until the jaws are carried near enough to produce the desired diameter of screw, and when the said lever engaging one of the notches is not sufficiently accurate the further adjustment is effected by the end screw. At each operation the cone is carried to the right to release the dies, and the lever is brought back to the same notch in the adjustment-plate before the pipe is revolved to cut the thread. The collar *x* arrests the movement to the right of the cone.

What I desire to secure by Letters Patent is—

In a screw-cutting machine, the combination of the shaft T, cone O, head H, jaws I, with screw-cutting dies attached, arms J, springs K, lever P, locking-lever Q, with flat spring *u*, locking-arm R, and adjustment-plate N, with notches for said locking-arm, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EDWARD A. STIMSON.

Witnesses:

B. PICKERING,

B. F. HENLEY.