

S. C. PHINNEY.
 Improvement in Cutting Boot and Shoe Counters
 No. 120,998.

Patented Nov. 14, 1871.

Fig. 1

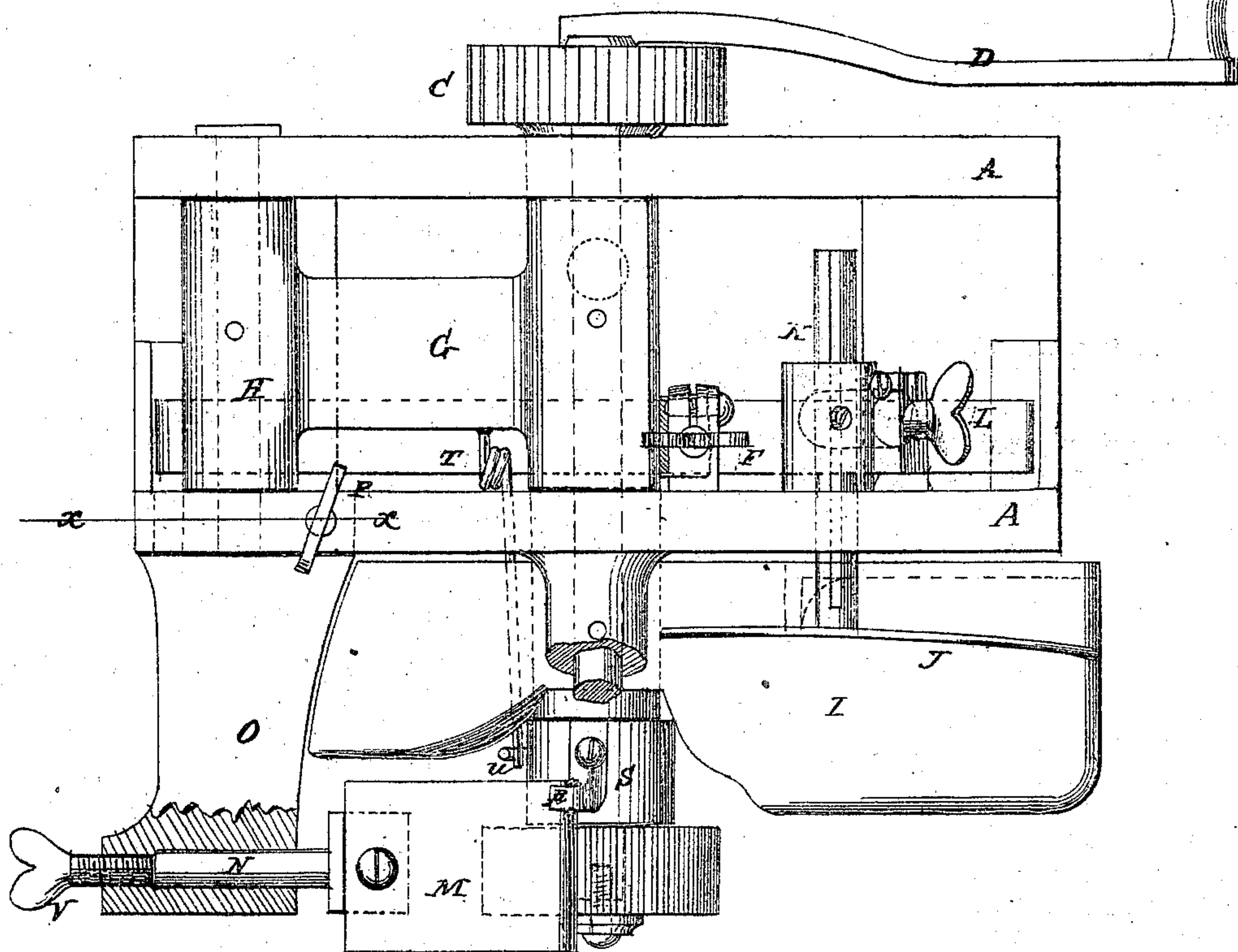
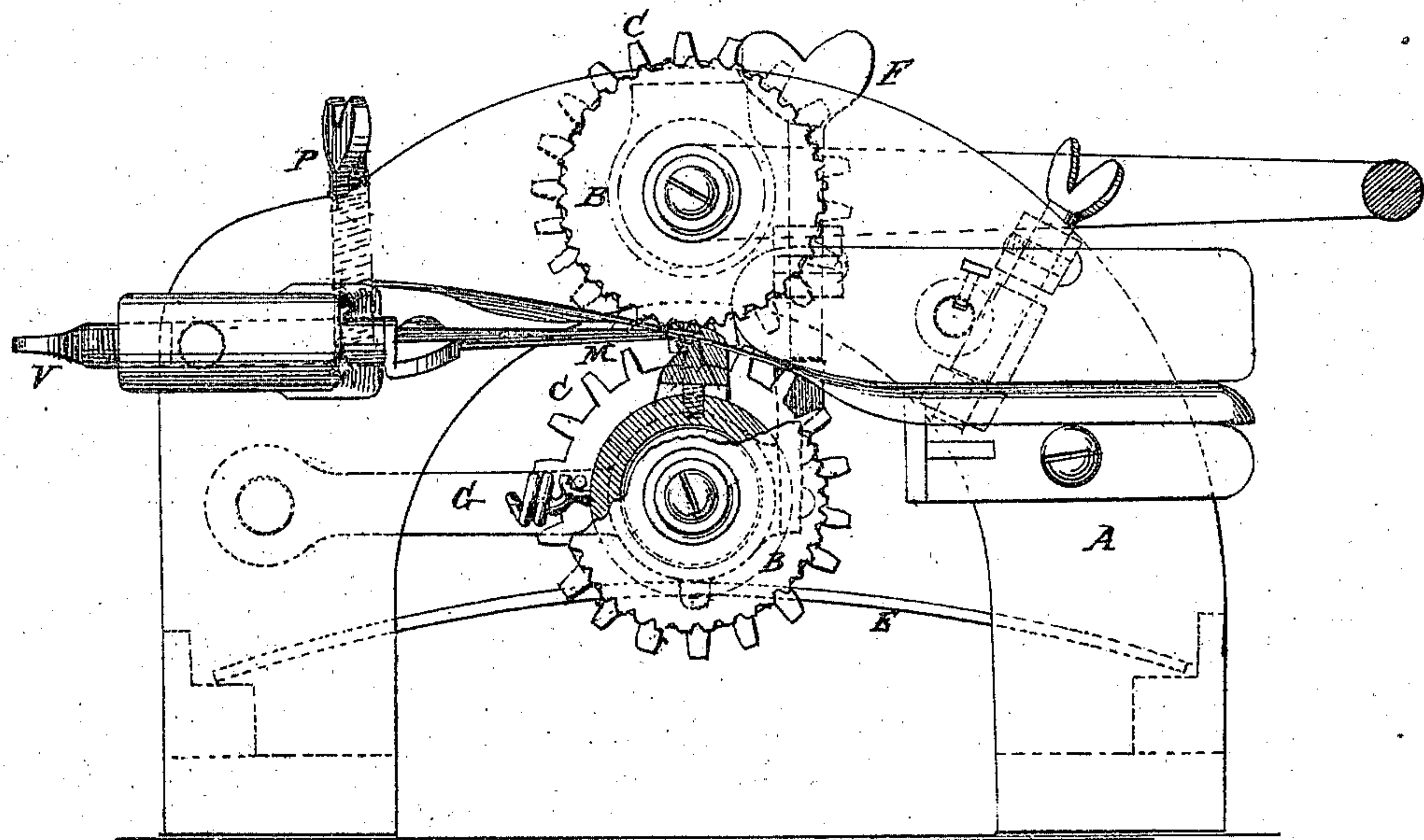
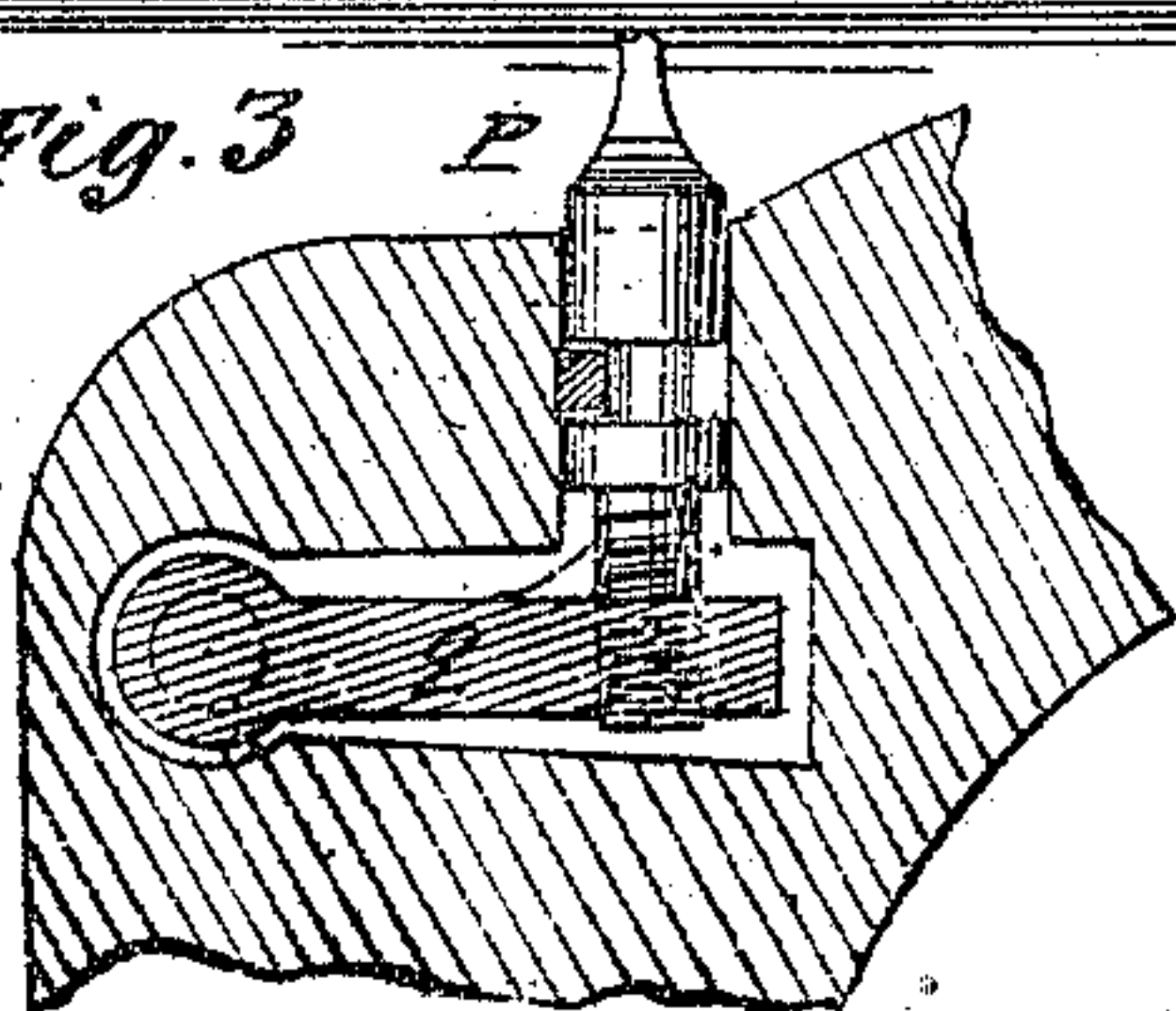


Fig. 2



Witnesses: Fig. 3

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SYLVANUS C. PHINNEY, OF STOUGHTON, MASSACHUSETTS, ASSIGNOR TO S. C. PHINNEY AND J. C. PHINNEY, OF SAME PLACE.

IMPROVEMENT IN CUTTING BOOT AND SHOE COUNTERS.

Specification forming part of Letters Patent No. 120,998, dated November 14, 1871.

To all whom it may concern:

Be it known that I, SYLVANUS C. PHINNEY, of Stoughton, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Machine for Cutting Boot and Shoe Counters; 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 drawing forming part of this specification.

The object of this invention is to furnish a machine for dividing leather, or for cutting it into counters for boots and shoes without waste; and it consists in the mode of adjusting the knife, the feed-rolls, and the gauge, and in the arrangement of the same in relation to each other, as will be hereinafter set forth and described.

In the accompanying drawing, Figure 1 is a top or plan view. Fig. 2 represents a front end view. Fig. 3 is a section of Fig. 1 taken on the line *x x*.

Similar letters of reference indicate corresponding parts.

A is a cast-iron frame, consisting of two semi-circular arches connected together at top and bottom, by which the operating parts of the machine are supported. B B are the feeding-rolls on two horizontal shafts placed parallel with each other at right angles to the side of the frame A. The two feed-roll shafts are geared together by the wheels C C and revolved by means of the crank D attached to the upper shaft; or in any suitable manner. The lower shaft passes through a sleeve which rests on the spring E, and is made adjustable by means of a screw, F, which forces it down onto the spring and separates the feed-rolls, or adjusts them to receive thick or thin leather, as may be desired. The spring reacts when the screw is turned back, and thus gives the backward or upward motion to the roll. The upward motion of the lower sleeve is limited by a lug cast thereon, which strikes the upper part of the frame. The end of this stop-lug is seen in dotted line in Fig. 1. The adjustable sleeve is kept in proper position by means of the arm G, which terminates in the cross-tube H. Through the cross a pin (seen in dotted lines) passes, and through the frame. As the feed and lower feed-shaft are raised and lowered this pin serves as a bearing, but the motion is so slight that the two

gear-wheels C C are not materially affected by the movement. I is the apron upon which the leather to be cut is laid. J is the gauge. K is the stem of the gauge, which passes through the front arch of the frame. The gauge is moved back and forth on the apron by a rack-and-pinion movement, one side of the stem being formed into a rack and the pinion being on the thumb-screw L. The stem of the gauge is grooved so that it moves back and forth on a feather. The width of the counter to be cut is regulated by this gauge. M is the cutting-knife, which is fastened to the round shank N. This shank passes through the end of the adjustable arm O on a feather, so that it is allowed only a longitudinal motion. The arm O is attached to the front of the frame by a pivot secured through the frame by a screw-nut. The arm is turned on this pivot by means of the thumb-screw P, (see Fig. 3,) which engages with the arm *q*, which is attached to the arm-pivot and works in a recess in the frame. The effect of turning the thumb-screw P would naturally be to throw the entire edge of the knife up or down, but the inner corner of the knife is confined, by the clamp R, just above the surface of the lower feed-roller, so that the opposite corner only of the knife is movable. The effect, therefore, of turning the arm O on its pivot is to vary the edge of a knife from a horizontal position and set it at an angle with the face of the feed-rollers and of the leather for "skiving" or making a bevel cut as the leather is fed up to it. By dividing the leather in this manner all the leather cut off in skiving or beveling the counters is saved, making a very material difference in the number of counters cut from a piece of leather. The clamp R is attached to the ring S, which ring is on the adjustable sleeve which governs the position of the lower feed-roller. T is a spring, the end of which bears on a pin, *u*, of the ring S with a constant pressure, which holds the corner of the knife in the proper position when the lower roller is being raised or lowered. V is a thumb-screw working in the end of the shank N, by means of which the knife is moved forward or backward between the feed-rollers. The feed-rollers reach out from the front of the frame sufficiently far to cover the apron and admit the widest counter which it is desired to cut.

Through these various modes of adjustment and the general construction and arrangement of

parts a machine is produced which divides leather into counters in a most perfect and satisfactory manner, effecting a very great saving in material as well as in time.

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

1. Adjusting the gauge J by a rack-and-pinion movement, substantially as shown and described.

2. The clamp R, ring S, and spring T, arranged to operate upon the cutting-knife, substantially as and for the purpose set forth.

3. The arms O and *q* and screw P, arranged substantially as and for the purposes described.

4. The combination of the feed-rolls B B, apron I, gauge J, and knife M, when the same are arranged to operate substantially as and for the purposes described.

SYLVANUS C. PHINNEY.

Witnesses:

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SYLVANUS C. PHINNEY, Jr.

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