

(No Model.)

C. A. MAHLE.

MACHINE FOR MAKING WOODEN CURRY COMBS.

No. 411,345.

Patented Sept. 17, 1889.

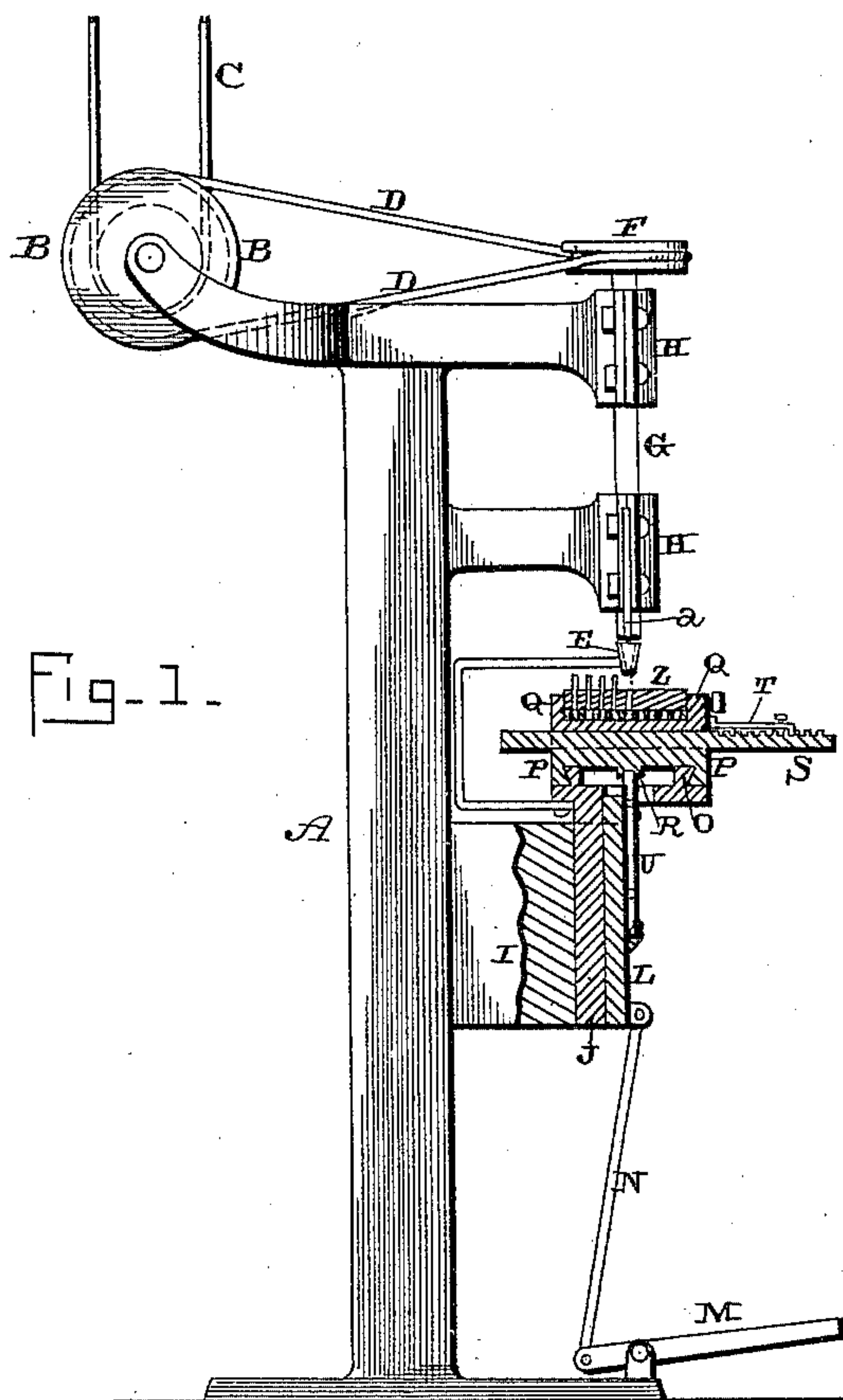


Fig. 2.

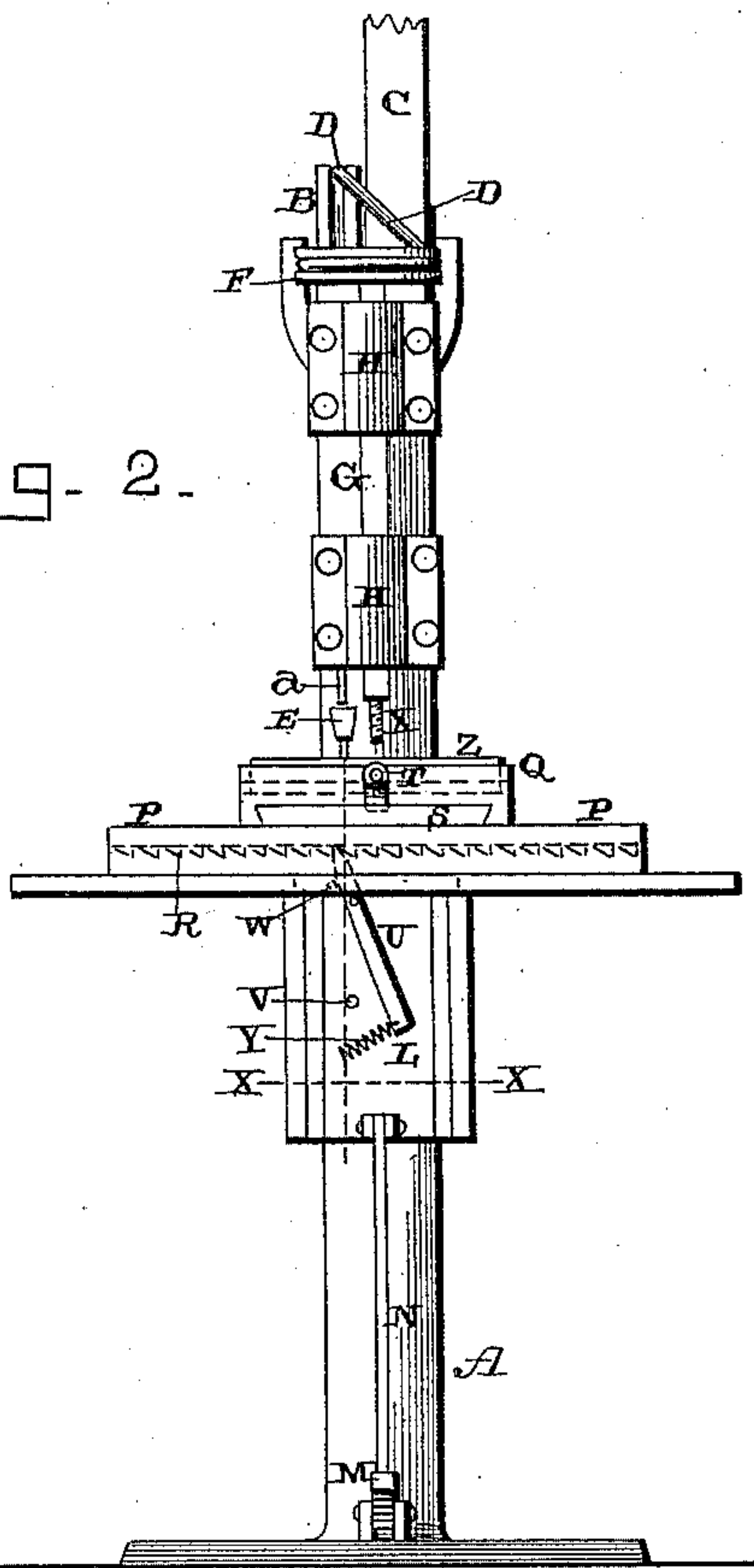
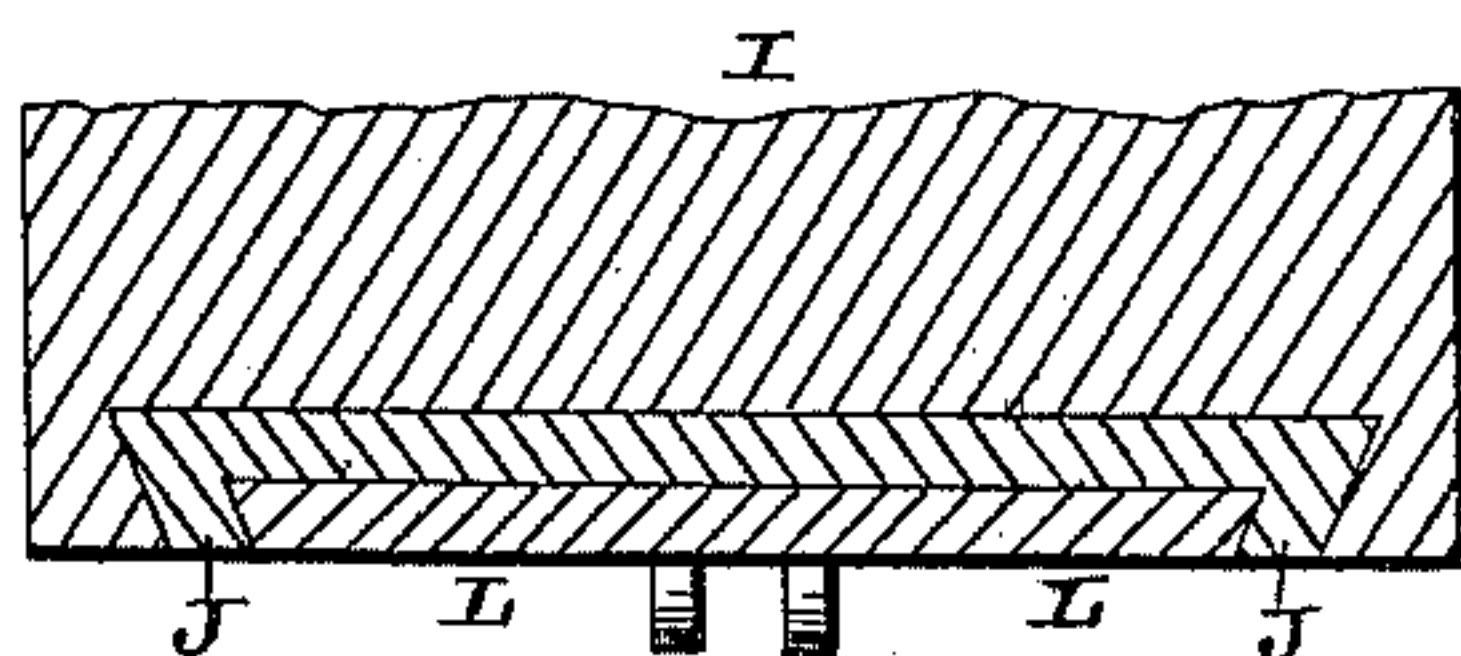


Fig. 3.



Witnesses:

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Inventor:

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per
J. A. Lehmann, atty.

UNITED STATES PATENT OFFICE.

CLEMENCE A. MAHLE, OF CORRY, PENNSYLVANIA.

MACHINE FOR MAKING WOODEN CURRY-COMBS.

SPECIFICATION forming part of Letters Patent No. 411,345, dated September 17, 1889.

Application filed April 26, 1889. Serial No. 308,649. (No model.)

To all whom it may concern:

Be it known that I, CLEMENCE A. MAHLE, of Corry, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Making Wooden Curry-Combs; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in machines for making wooden curry-combs; and it consists in the combination of a stationary-revolving bit for boring the holes in the block, a block-holder which has both an endwise and lateral adjustment, so as to move the block under the bit, a vertically-moving support upon which the block-holder is placed, a slide connected to the treadle, and a lever which engages with a ratchet on the under side of the block-holder, as will be more fully described hereinafter.

The objects of my invention are to produce a machine for making wooden curry-combs, and in which the parts are so arranged that when the block is raised to the revolving bit to have a hole bored a punch forces a pin into the hole last bored and at the same time that a new hole is being bored, and to adjust the block-holder endwise by means of a treadle.

Figure 1 is a side elevation of a machine which embodies my invention, partly in section. Fig. 2 is a front view. Fig. 3 is a horizontal section taken on the line *xx* of Fig. 2.

A represents a suitable standard or support, upon the upper end of which is journaled the driving-pulley B, which is driven by the belt C, and from which pulley B extends the belt D around the pulley F on the upper end of the revolving bit-shaft G, which is journaled in suitable bearings H, prepared for it. This shaft G has only a rotary movement.

Cast with the standard A is a suitable support I, upon which the block-holder and its attachments are supported. The outer face of this support I is made dovetailed, as shown in Figs. 2 and 3, and inside of the dovetailed groove is placed the vertically-moving sup-

port J, upon the top of which the block-holder is placed. In the outer face of the support J is also formed a dovetailed groove, in which the vertically-moving slide L is placed. The support J has a rising and falling movement in the front edge of the support I sufficiently great to raise the brush-block up to the bit. This vertical movement is caused by first forcing up the slide L by the treadle, and then after the slide has been moved as far as possible the movement is transferred to the part J by the pressure of the lever U against the under side of the carriage P. To the lower end of this slide L is connected the treadle M by means of the connecting-rod N. Upon the top of the support J are formed the dovetailed guides O, and moving endwise upon these guides O is the carriage P, upon which the block-holder Q is laterally adjustable. Extending laterally across the top of the carriage P, which is provided with the ratchets R on its under side, is the dovetailed guide S, which serves to hold the block-holder Q in a straight line as it is adjusted laterally across the top of the carriage and so as to bring the block into position to have a new row of holes bored in it. Upon the top of the guide S is formed a series of cogs, ratchets, or stops of any kind and with which the spring T, provided with a catch at its outer end, engages. Each one of the notches, ratchets, or teeth indicates the distance between the rows of holes to be bored and rows of pegs which have been stuck in the block. The ratchets R, on the under side of the carriage P, regulate the distance between the holes and pegs in each row. Pivoted to the vertically-moving slide L is the lever U, and secured to the slide are the two stop-pins V W, which regulate the distance that the lever shall turn upon its pivot. Secured to the lower end of the lever is a spring Y, for returning the lever to position as soon as it is left free to move.

The operation of my invention is as follows: The block Z is secured in the block-holder Q by means of a thumb-screw or other similar device, and then the block-holder Q is adjusted upon the guide S, so that the first row of holes will be bored in the proper position. The carriage P is moved outward upon the dovetailed guides O until the end of the block

is brought under the bit. The operator then depresses the treadle M, which first forces the slide L upward, so as to bring the upper end of the lever U in contact with the first one 5 of the ratchets R, and this pressure causes the carriage to be moved forward one ratchet. After the carriage P has been forced forward by the lever U the continued pressure upon the treadle M lifts the support J, the carriage, and the block-holder to the bit X, when 10 the first hole is bored. As the pressure upon the treadle ceases all of these parts sink back into their normal position, and the operator then drops a wooden peg into the cup E, 15 which is supported in a line with the bit X, but to one side of it, so that when the block-holder is next raised the punch *a*, which is in a direct line over the cup E, will force the peg into the hole immediately under the cup. 20 While a new hole is being bored by the bit X, a peg is being forced into one of the holes which has already been bored, thus enabling the operation of driving the pegs and boring the holes to be done at the same time. After 25 the carriage has been moved the full length of the block the operator raises the outer end of the spring T and moves the block-holder one notch upon the guide S, so as to bring the block into position to have another row 30 of holes bored in it. The operator must, after the machine has once been set into operation, drop the peg into the cup E by hand, adjust the block-holder laterally, and operate the treadle M until a full row of holes has been 35 bored again. As soon as the treadle M is depressed, so as to withdraw the upper end of the lever U out of contact with the ratchet

R, the spring Y draws the lower end of the lever U back into an almost vertical position, so as to adjust it to engage with another 40 ratchet when the slide L is raised. The upward pressure upon the slide causes the lever U to force the carriage forward one notch.

Having thus described my invention, I claim—

1. The combination of the revolving bit, the laterally-adjustable block-holder placed upon the top of the carriage, the endwise-movable carriage placed upon the vertically-moving support, the vertically-moving support upon which the carriage is placed, a vertically-moving slide provided with a spring-actuated lever for moving the carriage endwise, and a treadle which first operates the slide for moving the carriage endwise and 55 then raises the support, so as to feed the block being bored to the bit, substantially as shown.

2. The combination of the stationary rotating bit, a stationary punch, and a cup placed 60 above the block-holder with a laterally-adjustable block-holder, an endwise-moving carriage, a vertically-moving support upon which the carriage is placed, a vertically-moving slide, a pivoted spring-actuated lever attached 65 to the slide, and a treadle, substantially as described.

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

C. A. MAHLE.

Witnesses:

E. P. ELLIS,
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