2 Sheets—Sheet 1.

# R. M. CUMMINGS.

## CUT-NAIL MACHINE.

No. 192,237. Patented June 19, 1877.

*Fig. 1.*

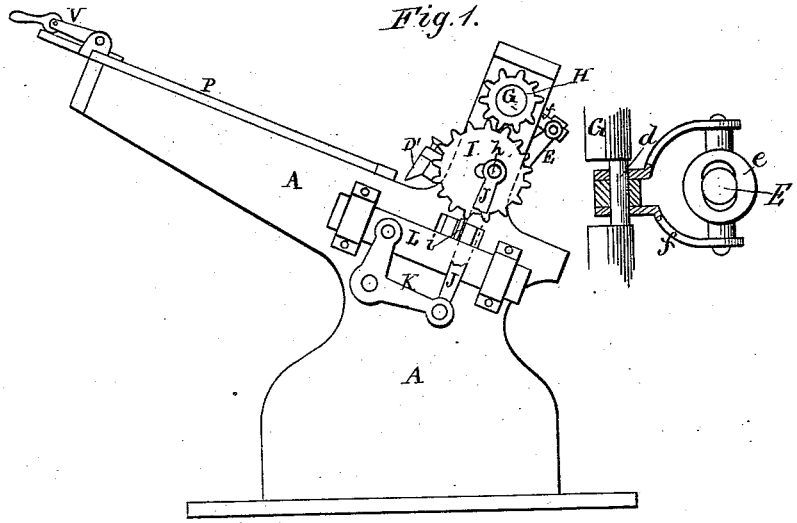



*Fig. 2.*

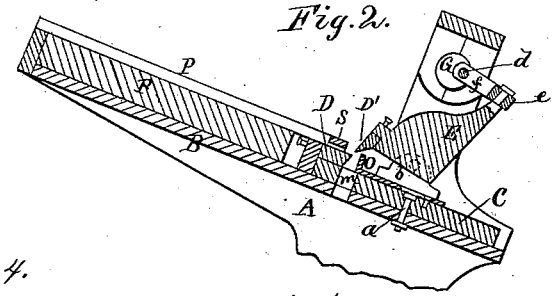



*Fig. 4.*

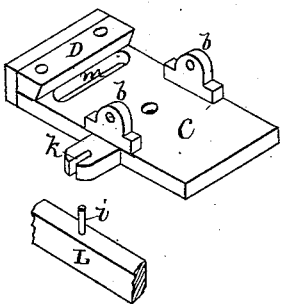
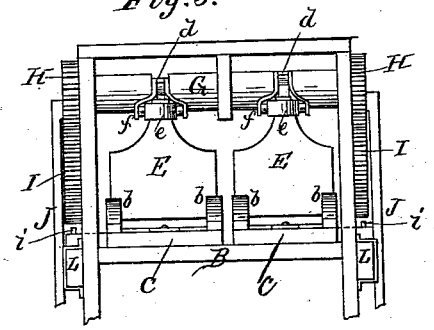



*Fig. 3.*




WITNESSES

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2 Sheets—Sheet 2.

# R. M. CUMMINGS.

## CUT-NAIL MACHINE.

No. 192,237. Patented June 19, 1877.

*Fig. 5.*

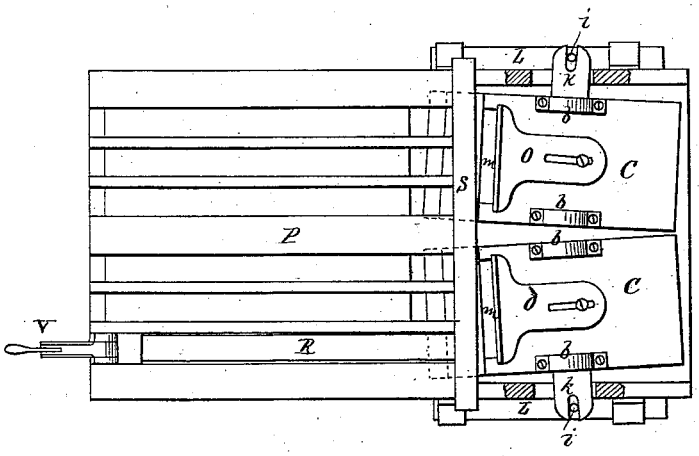
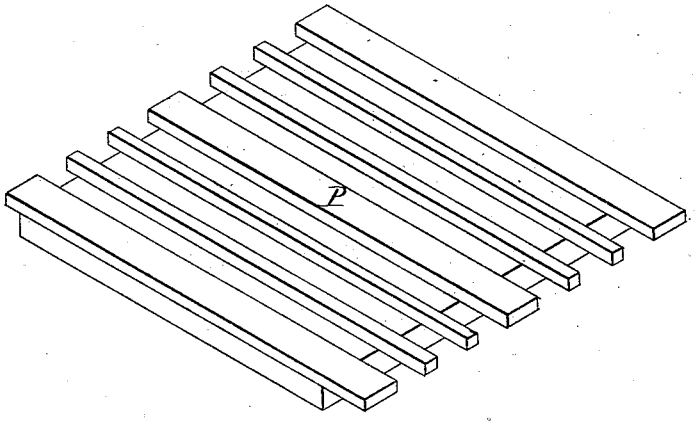



*Fig. 6.*

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# UNITED STATES PATENT OFFICE.

RICHARD M. CUMMINGS, OF NASHUA, NEW HAMPSHIRE.

## IMPROVEMENT IN CUT-NAIL MACHINES.

Specification forming part of Letters Patent No. **192,237**, dated June 19, 1877; application filed May 29, 1877.

*To all whom it may concern:*

Be it known that I, RICHARD M. CUMMINGS, of Nashua, in the county of Hillsborough, and in the State of New Hampshire, have invented certain new and useful Improvements in Boot and Shoe Nail Machine; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a machine for making boot and shoe nails, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation of my machine. Fig. 2 is a longitudinal vertical section, and Fig. 3 a rear view, of the same. Fig. 4 shows one of the swinging plates. Fig. 5 is a plan view of the bed, with plate-holder and swinging plates. Fig. 6 is a perspective view of the plate-holder.

A represents a suitable frame-work, in which is formed an inclined stationary bed, B. On this bed, near the lower end, are placed two plates, C C, held in place on the bed by means of center bolts *a a*, and around which said plates are allowed to rock or oscillate.

On the upper end of each plate is secured an adjustable cutter or blade, D, against which works a corresponding cutter, D′, fastened to a rocking lever-block, E, mounted upon journals in ears *b b* formed on the upper side of the plate C.

In the upper part of the frame is a shaft, G, provided with two eccentrics, *d d*, which are, by forked pitmen *f f*, connected with swivels *e e* on the top of the rocking lever-blocks E E.

The center bolts *a* on which the plates C work should be on the same angle with the center of the stroke of the swivels, and the holes in said swivels are made a little oblong to allow for adjustment of the two extreme strokes of the eccentrics.

The motion of the swing-plates C is derived from a cog-wheel, H, on each end of the shaft G, which meshes with another cog-wheel, I, having a crank or wrist-pin, *h*, connected by a pitman, J, with one end of a pivoted elbow-lever, K, and the other end of this lever connected to a sliding bar, L, having a pin, *i*, projecting upward through a slotted ear, *k*, on the side of the plate C, as shown.

The driving-wheel H has only half the number of cogs of the wheel I, so that for one revolution of the eccentric shaft G the plates C will be turned in one direction, and the cutters D′ brought down to cut the nail-plates, and for the next revolution the plates will be turned in the opposite direction, and the cutters D′ again brought down to cut another blank from each nail-plate.

P represents the plate-holder, placed in the bed B, and formed with a series of channels or grooves to receive and guide the nail-plates R, each of which is followed by a clamp. This plate-holder P can be taken out when the shears require grinding or adjustment, and it can be replaced with duplicate plate-holders when a change in the width of the nail-plates is required, corresponding to the length of the nails.

The nails, after being cut from the plates, drop down through the swing-plates C, the openings *m* through the same and through the bed being made conical enough to not weaken them.

Each swing-plate C is provided with an adjustable gage, O, against which the nail-plates feed while the shears are opening, so as to adjust them to the size of the nails.

Over the lower part of the shears, and at right angles with the nail-plate channels, is a bar, S, which acts as a stop for the clamp V, which follows the nail-plate when the same is nearly cut up. These clamps are then transferred to other plates, holding the plates firmly until cut up, and also serve as weights to feed the plates down the inclined plane quicker, as soon as the shears are opened, against the stop-gage O.

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

In a machine for making boot and shoe

nails, the combination of an eccentric shaft, connected by a forked pitman with a swivel on a rocking lever-block, gear-wheels and pitmen connecting the eccentric shaft with a sliding bar, and an oscillating plate carrying the lever-block, and operated by the sliding bar, the oscillating plate and lever-block having the blades or cutters attached to them, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 24th day of May, 1877.

RICHARD M. CUMMINGS.

Witnesses:
FRANK GALT,
H. AUBREY TOULMIN.