# C. W. GLIDDEN.

## Nail Cutting-Machines.

No. 135,797. Patented Feb. 11, 1873.

Fig. 1.

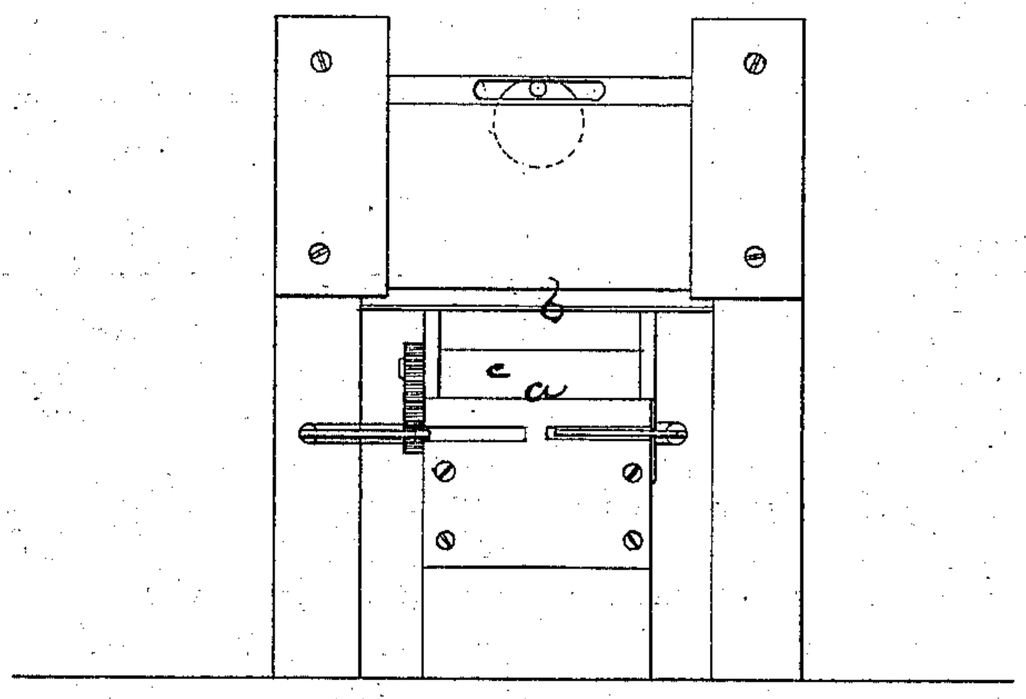



Fig. 2.

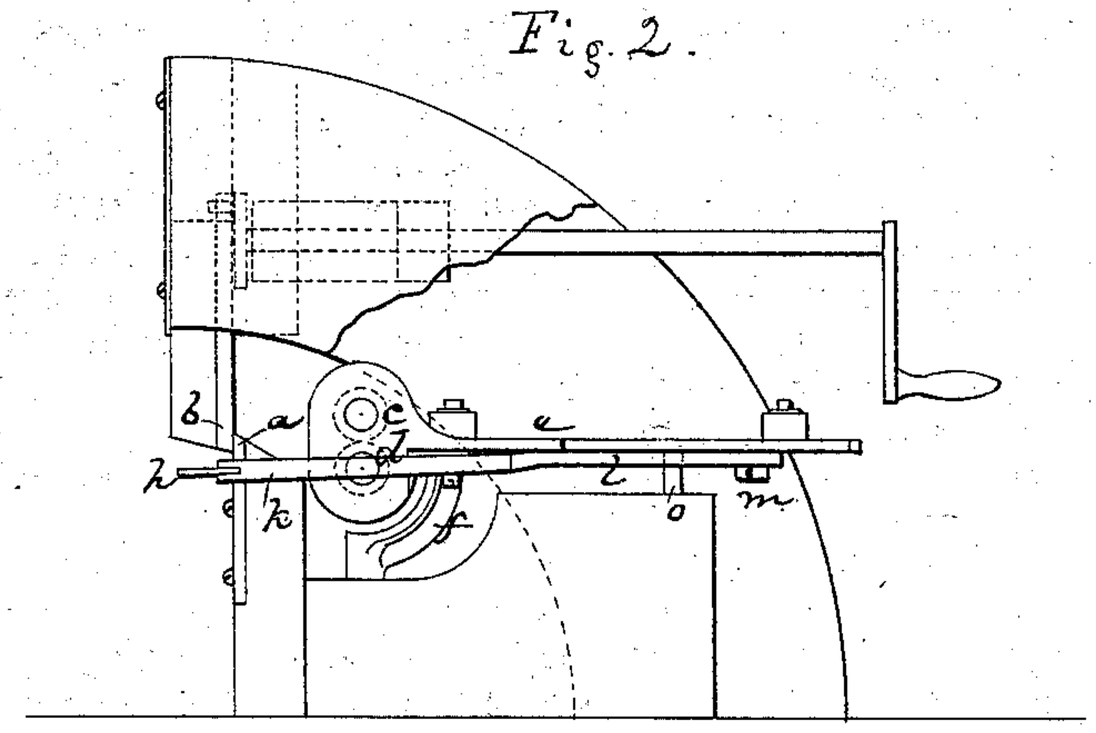
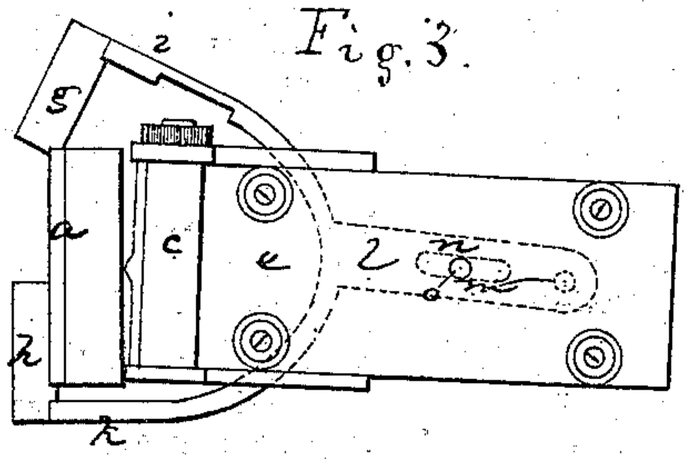



Fig. 3.




Witnesses.
M. W. Frothingham.
L. H. Latimer.

Inventor.
Charles W. Glidden.
By his Attys.
Crosby & Gould.

# UNITED STATES PATENT OFFICE.

CHARLES W. GLIDDEN, OF LYNN, ASSIGNOR TO JAMES W. BROOKS, TRUSTEE, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN NAIL-CUTTING MACHINES.

Specification forming part of Letters Patent No. **135,797**, dated February 11, 1873.

*To all whom it may concern:*

Be it known that I, CHARLES W. GLIDDEN, of Lynn, in the county of Essex and State of Massachusetts, have invented certain Improvements in Nail-Cutting Machines; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates to a provision in nail-cutting machines for delivering nails uniformly, or so that their heads will all lie together or in the same direction, the invention being applicable to that class of machines that cut nails from a plate having a width equal to the length of the nails, and having nails cut from it, heads and points, the common method of cutting such nails being to swing the plate laterally after each cut, or to turn the plate over after each cut, this invention pertaining more particularly to machines which vibrate the plate.

In such machines I use, in connection with the cutting mechanism and feed mechanism, and directly in combination with the vibrating table that effects the change of position of the plate, and of the feed-rolls in case the same be carried by the plate, two arms, which are alternately brought under the end of the plate to be severed, so that the point end or part of the severed nail falls directly upon one of the arms with its head part extending over the end of the arm, thereby canting the nail so that it drops head first into a suitable receptacle, which will retain or guide it in this position, each slide being, in turn, brought under the point-forming edge of the plate, or the edge which will form the point end of the nail next to be cut.

My invention consists in the combination, with a nail-cutting mechanism that forms nails or nail-blanks with alternate heads and points, (so that with one nail the head lies in one direction, and with the next nail the head lies in the opposite direction,) arms which respectively move under the nail-points or small ends of the nails to be cut, so that the point end strikes upon the arm interposed to receive it, causing the head end or large end to cant downward, or vice versa, thereby insuring the descent of the nail head first.

The drawing represents enough of a nail-cutting machine to enable my invention to be clearly understood.

*a* denotes the stationary cutter; *b*, the movable cutter; *c d*, the feed-rolls, between and by which the plate is fed and presented over the edge of the cutter *a*. *e* denotes the table upon which the nail-plate is supported. This table and the feed-roll housings form a frame that is supported by a post, *f*, or other device or mechanism capable of a rotative movement that will impart to the plate the alternate change of position necessary for the cutters to effect the head-and-point cutting of the plate, the nail-plate supporting and feeding mechanism, the cutting mechanism, and the plate-vibrating mechanism being the same as in any ordinary nail-cutting machine of this description. In front of the bed-cutter stand two arms, *g h*, extending from two prongs, *i k*, of a lever, *l*, pivoted at *m* to the under surface of the table *e*. In front of the pivot *m* is a slot, *n*, and through this slot extends a stationary pin, *o*, by which, when the table is moved in either direction, (to position the nail-plate,) the lever is moved so as to carry one of its arms forward toward the center of the cutter *a* and the other arm back from said center.

When the table is moved so that the point of the blank or nail to be severed will be over the arm *g* the arm *g* is moved forward by the movement of the table that positions the plate, and the other arm, *h*, is drawn back. When the severed nail falls the point part strikes the arm *g*, and the head part, which projects over said arm, tips down, causing the nail to fall head first. When the table is next moved to present the plate in position for the next nail to be cut, with a head at the opposite edge of the plate, the movement of the table carries forward the arm *h* and draws back the arm *g*, and the severed nail drops upon the arm *h* with its head end projecting beyond the end of the arm *h*, over which end the nail tips and descends head first.

By arranging the mechanism so that the arms are moved in opposite directions to those described the point ends of the nails may be caused to descend first.

In either case the nails are delivered with their heads all in one direction.

I claim—

In combination with a nail-plate feeding and cutting mechanism, mechanism for canting the nails and causing them to be delivered in uniform position, substantially as described.

Executed this 9th day of December, A. D. 1872.

C. W. GLIDDEN.

Witnesses:
FRANCIS GOULD,
M. W. FROTHINGHAM.