D. B. LORING.

MACHINE FOR MAKING HORSESHOE NAILS.

No. 184,719. Patented Nov. 28, 1876.

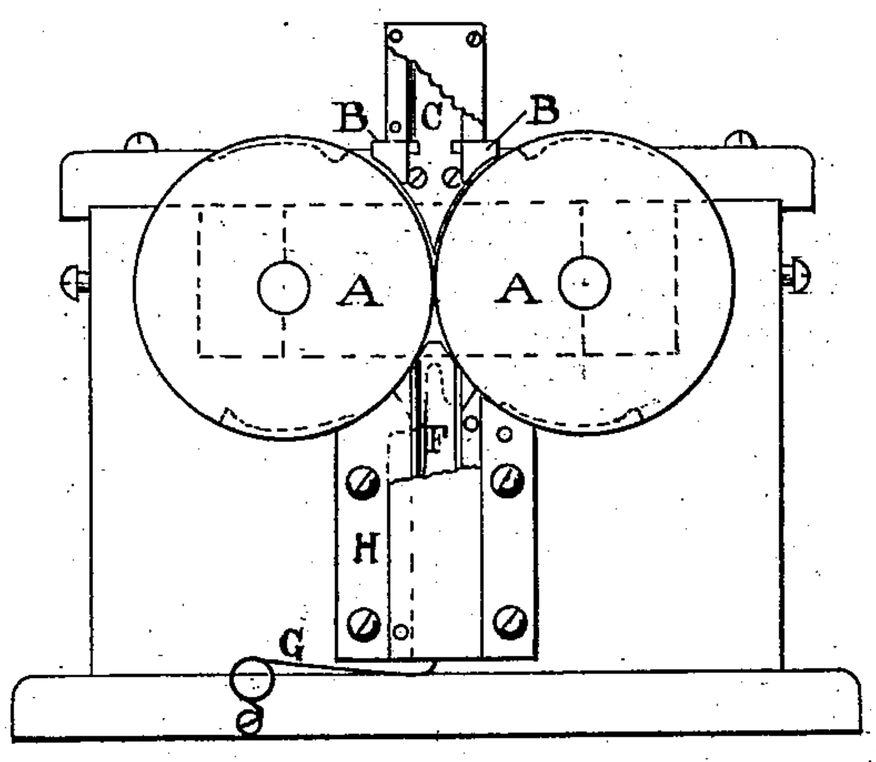

Fig. 1.

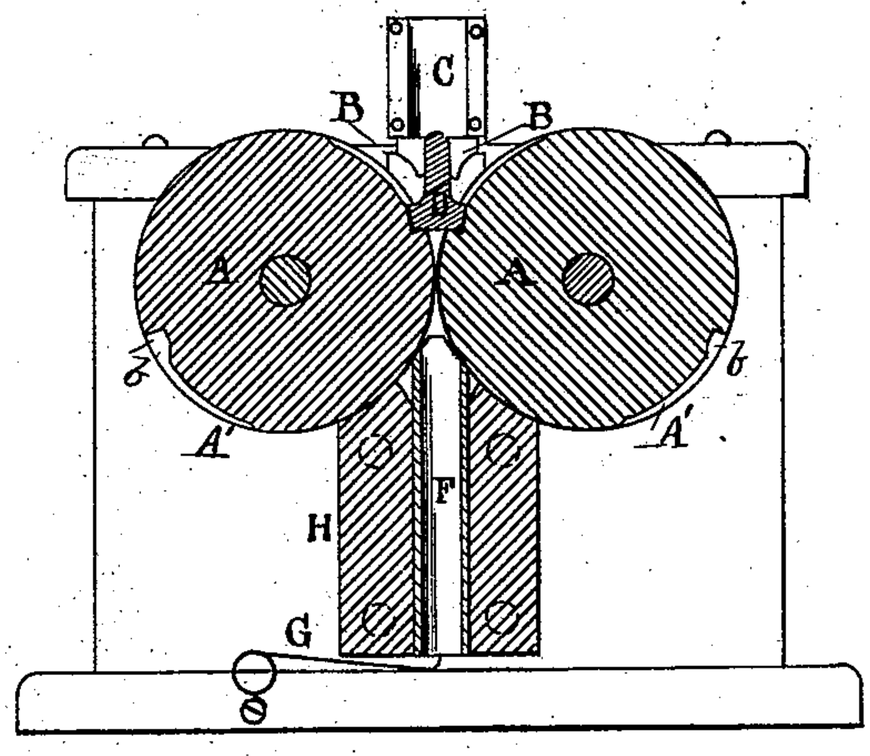

Fig. 2.

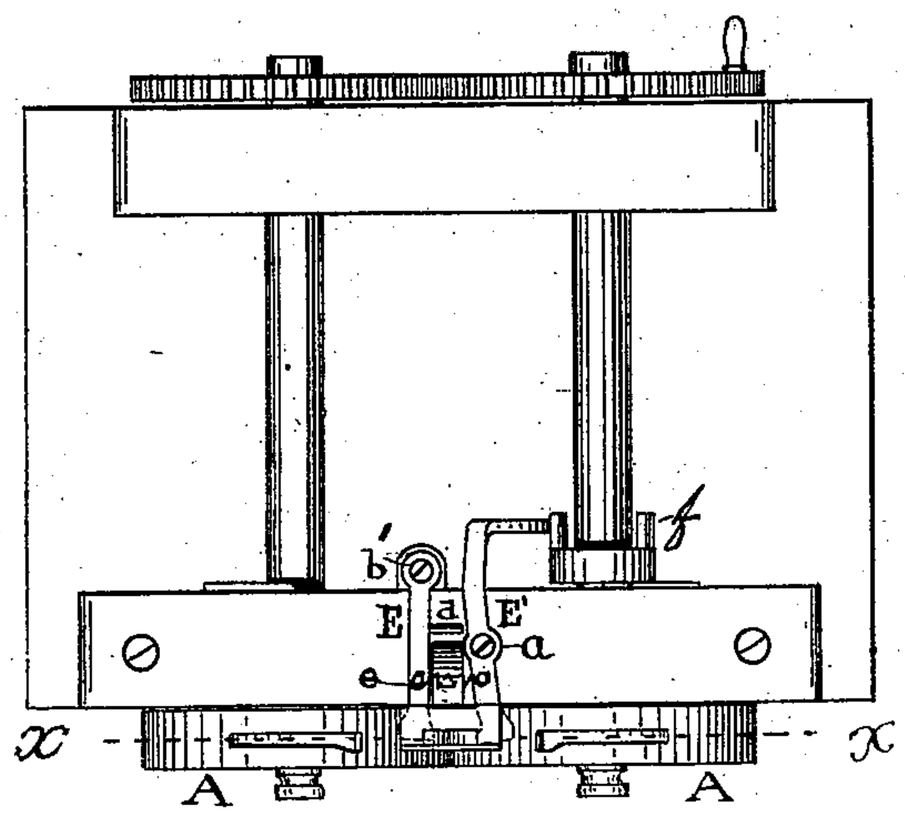

Fig. 3

WITNESSES

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DAVID B. LORING, OF BOSTON, ASSIGNOR TO CALEB W. HODGDON, OF SAME PLACE, AND JOHN E. WHEELER, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR MAKING HORSESHOE-NAILS.

Specification forming part of Letters Patent No. **184,719**, dated November 28, 1876; application filed September 27, 1876.

To all whom it may concern:

Be it known that I, DAVID B. LORING, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Horseshoe-Nail Machines, of which the following is a specification:

This invention relates to the class of machines employed in rolling a blank into a rolled blank, and consists in the following described mechanism for feeding the blanks to the rolls, and delivering the rolled blanks from the rolls.

Reference is made to the accompanying drawing, forming a part of this specification, in explaining the same, in which Figure 1 is an end elevation of a machine showing my invention. Fig. 2 is a vertical cross-section of the same on the line *x x* of Fig. 3, and Fig. 3 is a plan.

The rolls A are provided with the dies A′, which are conversely shaped to each other. In feeding the blank D to the rolls, the head-forming portion of the blank is the part seized by the dies and first acted upon. As a consequence, it is necessary that the blank (which is of a peculiar form, especially adapted for this method of feeding) should drop vertically into the dies, the part forming the head dropping into the head-forming recesses *b* in the dies, while the shank of the blank is prevented from moving in any direction but vertically into the dies, between the rolls.

To effect this uniform feeding, I provide the lower end of the feeding-chute C with the two guides B, arranged to open and close horizontally, and automatically actuated by levers E and E′, one of which—the operating lever E′—contacts with the pins *f* on one of the shafts driving the rolls, and is thereby positively actuated.

It will be seen that the operating-lever is pivoted at *a*, and that lever E is pivoted at *b′*, and that the pin *d* projecting from said lever, and spring *e* acting in connection with each other and with the operating-lever E′, cause lever E to move the guide B on its free end the same relative distance from and to the center of the chutes that is provided its accompanying guide B on the end of lever E′.

The delivering-tunnel F is constantly held against the rolls by the spring G; and the frame H, within which the tunnel operates, is extended to contact with the periphery of the rolls, the upper inner corners being cut away, as shown.

The object of this construction is to free the dies of any blank disposed to remain in the die, by causing the head of the blank to contact with the top of tunnel F, which is forced down by it until the blank contacts with frame H, when it is released from the die, and drops through the tunnel, which, by the action of spring G, is returned to its position between the lower parts of the rolls.

The operation of the machine is as follows: The blank D is inserted into the chute C, with its head-forming portion downward, and the guides B, operated by the roll-driving shaft, as above described, are caused to open just before the dies A′ converge. This permits the blank to drop upon the rolls, and the guides then close upon the shank of the blank, and hold it in such a position that the head-forming portion drops vertically into the head-forming parts of the dies, which are thus enabled to seize and roll each blank uniformly and perfectly.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In a machine for making horseshoe-nails, the combination of the stationary conductor or feeding-chute C, automatic guides B, arranged to operate between said conductor and the rolls, and the rolls or revolving dies B′, all arranged to operate substantially as described.

2. The combination of the guides B, levers E E′, spring *e*, and pin *d*, with the pins *f*, substantially as shown and described.

3. The combination of the tunnel F, spring G, and frame H, with the dies A′, substantially as shown and described.

4. The combination of the automatic feeding device described, with the revolving dies A′, and the automatic delivering apparatus, substantially as and for the purpose described.

DAVID B. LORING.

Witnesses:

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