J. P. FLANDERS & N. W. GOODRICH.

Horseshoe-Nail Machine.

No. 205,257. **Patented June 25, 1878.**

Fig. 1.

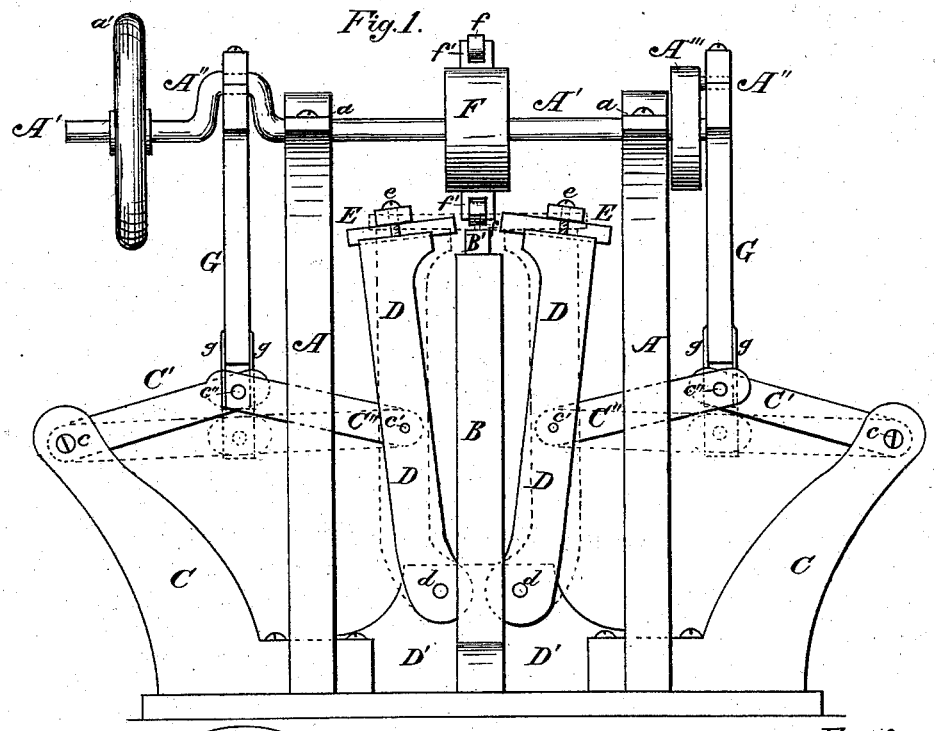


Fig. 2.

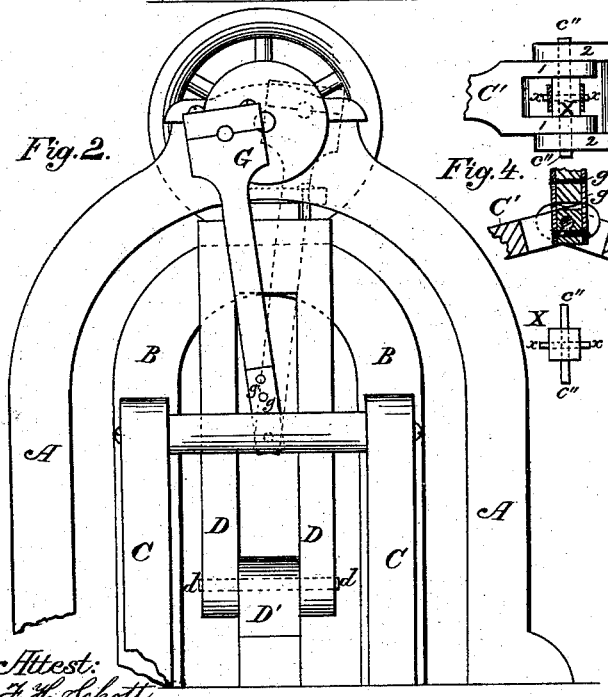
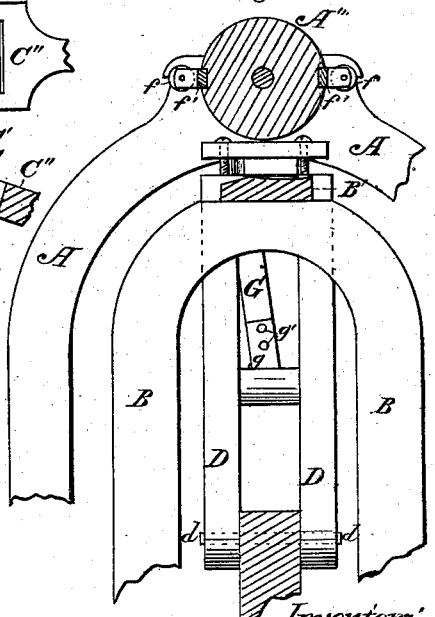


Fig. 4.

Fig. 3.



Attest:
F. H. Schott.
J. Mason Boszler

Inventors'
John P. Flanders
Nelson W. Goodrich
By N. Crawford, atty.

UNITED STATES PATENT OFFICE.

JOHN P. FLANDERS AND NELSON W. GOODRICH, OF VERGENNES, VERMONT.

IMPROVEMENT IN HORSESHOE-NAIL MACHINES.

Specification forming part of Letters Patent No. **205,257**, dated June 25, 1878; application filed December 24, 1877.

To all whom it may concern:

Be it known that we, JOHN P. FLANDERS and NELSON W. GOODRICH, both of Vergennes, in the county of Addison and State of Vermont, have made certain Improvements in Machines for Making Horseshoe-Nails, of which the following is a specification:

The object of this invention is to improve the working parts and cause the machine to operate with less friction; and it consists in the construction of the actuating parts that produce such results, as will be fully hereinafter described.

In the drawings, Figure 1 represents an end view of the machine; Fig. 2, a transverse view; Fig. 3, a part-sectional view of Fig. 2; and Fig. 4 represents detached parts.

A A are the upright supports to the driving-shaft. A′ is the driving-shaft, revolving in bearings *a*, attached to supports A; and A″ A″ are cranks or eccentrics, revolving with the shaft A′, which is driven by the pulley A‴. *a′* is a fly-wheel, fast on and revolving with shaft A′.

B is the support to anvil B′, and is centrally located in the machine. The anvil B′ is concave on its face, so as to have the circular face parallel, or nearly parallel, with the orbit of the revolving rollers that form the face of the nail, and is beveled at one edge, as seen at Fig. 3, to form the head of the nail.

C C are the pairs of supports for the rock-shafts, having arms C′ C′, which rock-shafts are pivoted to partially rotate on the pivots *c* between the supports C.

C″ C″ are arms, pivoted at their inner ends, at *c′*, to upright vibrating hammer or edger stocks D, while the arms C′ and C″ are divided at their inner meeting ends to have a space between the limbs—that is, arm C′ is slotted at its inner end to have the two sides 1 1 and a space between them to receive the noddle-pin X; and arm C″ is wider, so that the opening between the limbs 2 2 will receive the inner end of arm C′ when both vibrating arms C′ and C″ are pivoted to the noddle-pin X by the projecting pins *c″* at opposite ends of the pin X.

D D are two upright vibrating hammer or edger stocks, pivoted at *d* to fixed support D′.

E E are hammers or edgers, adjustably attached to the upper ends of stocks D, and are of the height to just clear the top of anvil B′ in their vibrations with the stocks D, and are adjustable toward or from each other, to give the width and shape the edges of the nail shall have, and, when adjusted to the proper position, are secured by clamping device *e*, or other known manner of holding them in place.

F is a revolving stock, fast upon shaft A′, and revolves with it, and has two drawing-rollers, *f f*, secured in proper holders *f′*, so that they will freely revolve upon their own axes when in contact with a nail-rod on the anvil and the shaft A′ in revolution. These rollers *f* revolve above the anvil far enough to give the thickness of the nail.

G G are pitmen, attached at their upper ends to the cranks or eccentrics A″, and are bifurcated and pivoted at their lower ends to the sides of the noddle-pin X by pins *x x*, projecting at right angles with, and on the same plane with; pins *c″*, and going through straps *g g*, that are secured to the sides of the pitman G by bolts *g′ g′*, or other secure means.

By thus constructing the vibrating arms C′ and C″, and connecting them together and to the pitman G by the noddle-pin X, provided with the pivot-pins *c″* and *x*, and the inner ends of the inner arms C″, pivoted to the vibrating edger or hammer stocks, to give the hammers or edgers the proper position to form the edges of the nails when in action, no binding of parts will result, but all will act harmoniously and nearly free from friction.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

In a machine for making horseshoe-nails, the combination of the revolving shaft A′, having cranks or eccentrics A″ A″, revolving stock F, and drawing-rollers *f f*, pitmen G G, noddle-pins X X, provided with projecting pins *c″ c″* and *x x*, bifurcated and pivoted arms C′ C′ and C″ C″, with the pivoted and vibrating hammer or edger stocks D D, having the edger-hammers E E, constructed, arranged, and operating substantially as described.

JOHN P. FLANDERS.
NELSON W. GOODRICH.

Witnesses:
WM. S. HOPKINS,
JOHN D. SMITH.