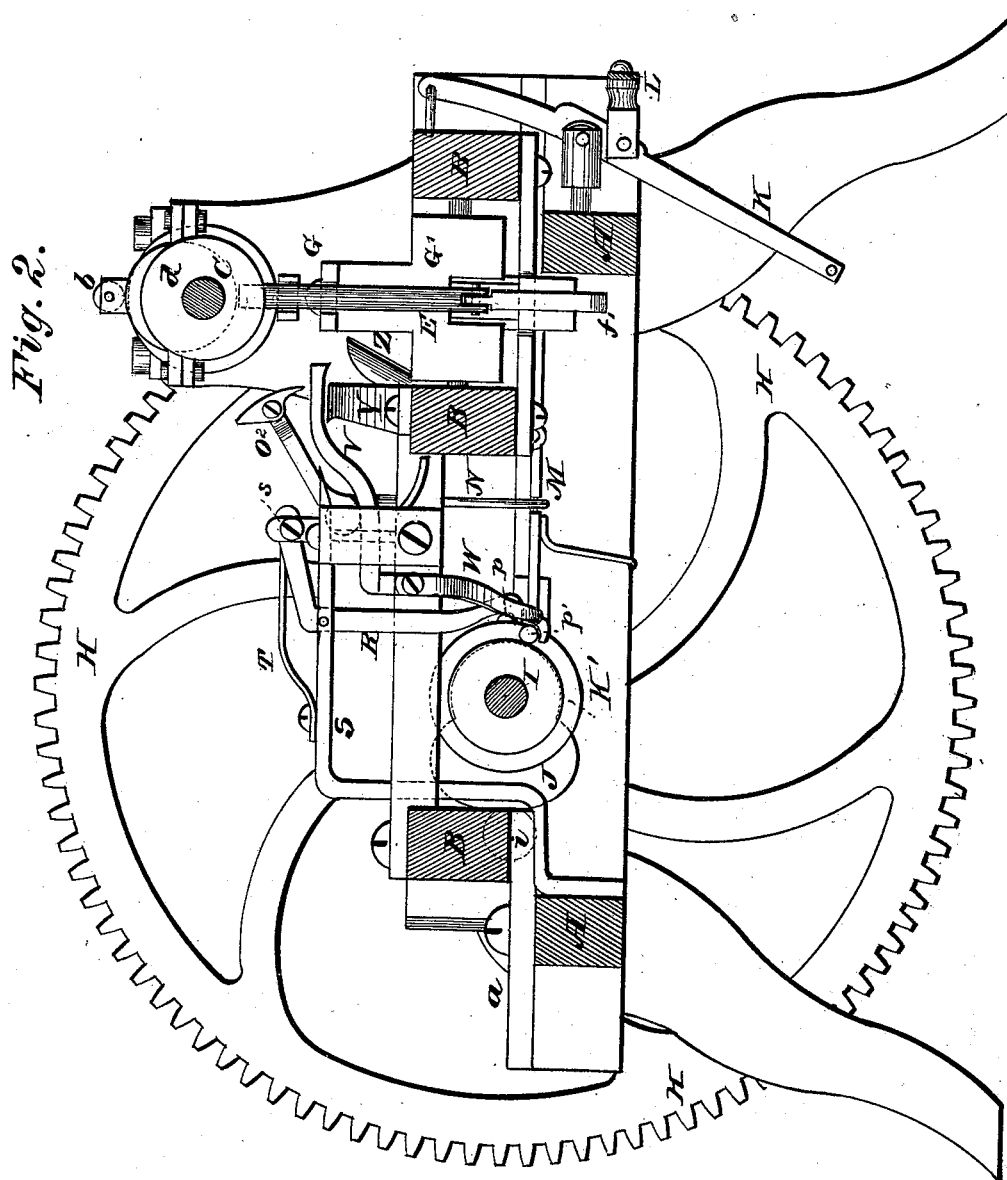


L. S. PARRÉ.

Machine for Forging Horseshoe-Nails.

No. 215,768.

Patented May 27, 1879.



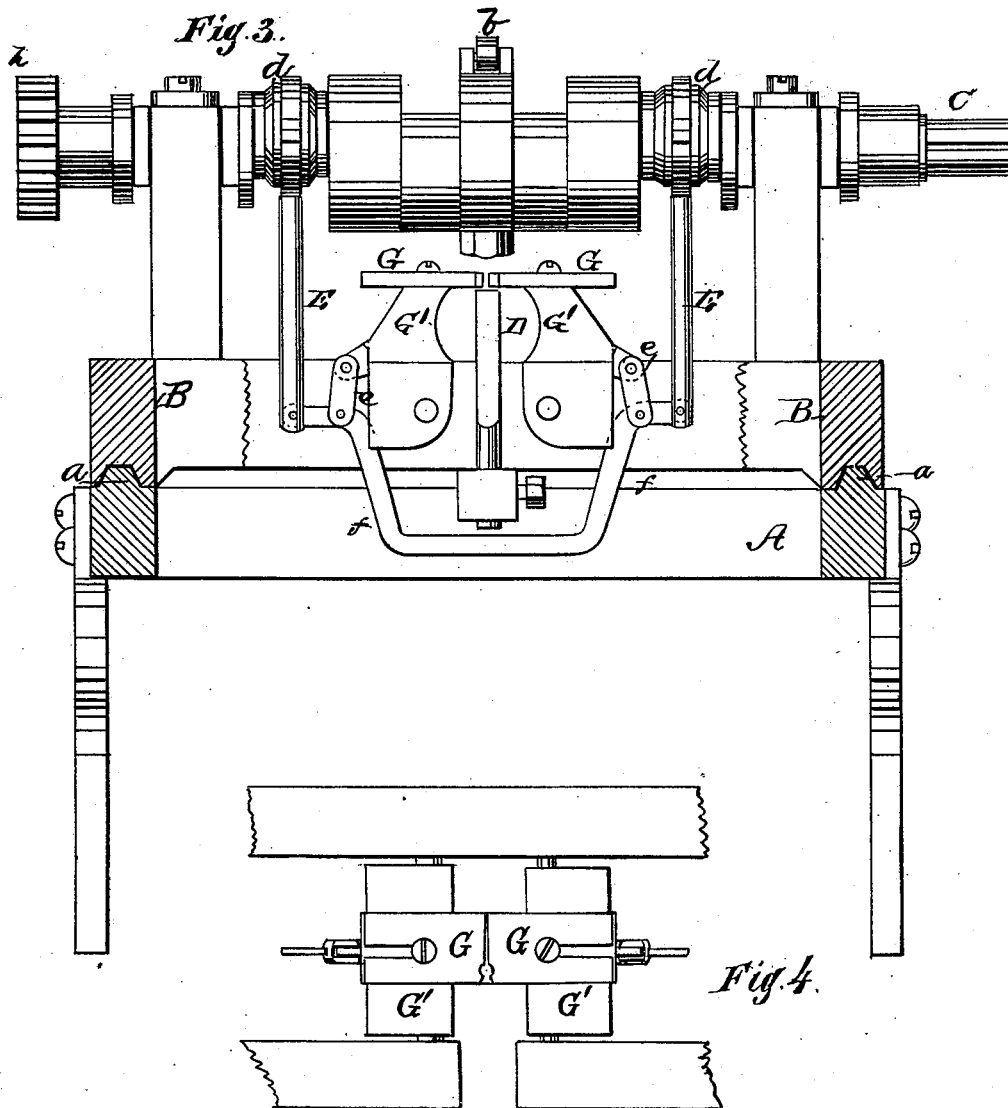
Witnesses:
A. W. Bond-
T. R. Bond.

Inventor
Louis S. Paré.

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Witnesses:

W. Bond
W. Bond

Inventor:

Louis S. Parre

UNITED STATES PATENT OFFICE.

LOUIS S. PARRÉ, OF BATAVIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO
ALVES HOFMANN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN MACHINES FOR FORGING HORSESHOE-NAILS.

Specification forming part of Letters Patent No. **215,768**, dated May 27, 1879; application filed
October 16, 1877.

To all whom it may concern:

Be it known that I, LOUIS S. PARRÉ, of Batavia, Kane county, State of Illinois, have invented new and useful Improvements in Machines for Forging Horseshoe-Nails, of which the following is a specification.

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

In the annexed drawings, to which reference is made and which fully illustrate my invention, Figure 1 is a plan view of the machine. Fig. 2 is a longitudinal vertical section of the same through the line *x x*, Fig. 1. Fig. 3 is a transverse vertical section through the line *y y*, Fig. 1. Fig. 4 is a plan view of the side hammers.

A represents the bed of the machine, formed or provided with suitable guide-rails *a a*, upon which the sliding frame or carriage B is moved back and forth. In standards at or near the front end of the carriage B is placed the driving-shaft C, to which the power is applied. This shaft carries in the center the ordinary rolling hammer *b* to operate upon the top surface of the nail-rod, which is laid upon the anvil D, said anvil being attached to and forming part of the carriage B.

The driving-shaft C is further provided with eccentrics *d d* near the ends, which, by means of pitmen E E, communicate the necessary motion to the side hammers G. These hammers are adjustably attached to two levers, G' G', pivoted in the carriage, one on each side of the anvil, and their middle portions connected by links *e e* with a bail, *f*, which latter connects the lower ends of the pitmen E E together.

On one end of the shaft C is a pinion, *h*, which meshes with and drives a large cog-wheel, H, upon the end of a shaft, I, that has its bearings in and moves with the carriage B. Upon the shaft I is secured a cam, J, which works against a roller, *i*, mounted in the base or frame A for forcing the carriage forward. The cam is held against the roller and the carriage moved backward by means of a lever, K, actuated by a spring, L, substantially as shown in Fig. 2.

On the side of the cam J is a projecting pin or lug, *k*, which, once during each revolution of the shaft I, strikes a lever, M, for operating the cutter of the machine. This lever M is pivoted or hinged under the carriage B, and is supported in a hook, N, depending from a lug or pin, *m*, on the side of a rocking shaft, O. This shaft is provided with an arm, O', to which the cutter O² is secured. The cutter is raised again by means of a spring, P, bearing upon another lug or pin, *n*, projecting from the rock-shaft O.

On the shaft I is further secured a wheel or disk, K', having a cam or lug, *p*, on the periphery, and a similar one, *p'*, on the side near the periphery. The cam *p* operates an L-shaped lever, R, which is pivoted in a slot at the forward end of the table S, over which the rod is fed to the machine, said table being firmly attached to the bed-frame A and projecting upward above the carriage B.

On the side of the lever R, at the front end, above the table, is pivoted a block, *s*, for holding down the rod on the table. A spring, T, bears on a lug projecting from the opposite side of the lever R at or near the front end.

The cam or lug *p'* operates an angular pivoted gage, V, to throw the same inward a suitable distance in front of the cutter O². W is a spring to return the gage to its position as soon as the cam *p'* has passed.

Y is a stationary bent adjustable blade, against which the cutter O² works for cutting off the blank. Between this blade and the anvil is a spout, Z, through which the finished nails drop down under the machine. The table S is attached to the bed or main frame, so that it does not move with the carriage and hammering devices, and, while the gage and the locking devices are operated by the movements of the machine, the nail-rod is fed up by hand.

The operation of the machine is as follows: The rod is placed on the table S under the block *s*, which holds the same firmly thereon. The carriage B being moved forward, and the cutter operated to cut off one nail, the lug *p* at this moment strikes the lever R, raising the block *s*, and almost at the same instant the gage V is thrown inward by the lug *p'*. The

operator then pushes the rod inward against said gage, when the gage moves outward again, and the block *s* is pressed down upon the blank by the action of the spring *T*. The carriage now moves backward, which brings a portion of the rod sufficient to form a nail on top of the anvil *D*, where the same is hammered by the rolling hammer *b* and side hammers *G G*. The carriage then moves forward again, which withdraws the anvil from under the nail and brings the cutter up to the hammered portion of the rod. The cutter *O*² then descends and cuts off the completed nail, which falls down through the spout *Z* under the machine.

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

1. The combination of the shaft *C*, provided with the eccentrics *d d*, the pitmen *E E*, bail *f*, links *e e*, and pivoted levers *G' G'* with the

adjustable side hammers *G G* and the anvil *D*, all constructed and arranged upon a movable carriage, *B*, substantially as and for the purposes herein set forth.

2. The rock-shaft *O*, with arm *O*¹, carrying the cutter *O*², in combination with the shaft *I*, cam *J*, with pin *k*, lever *M*, hook *N*, spring *P*, and pin *n*, all constructed and arranged substantially as and for the purposes herein set forth.

3. The combination of the shaft *I*, disk *K'*, with cams *p p'*, lever *R*, with pivoted block *s*, the gage *V*, and spring *W*, all constructed and arranged to operate substantially as and for the purposes herein set forth.

LOUIS S. PARRE.

Witnesses:

O. W. BOND,
E. T. BOND.