

D. J. FARMER.

NAIL & TACK MACH.

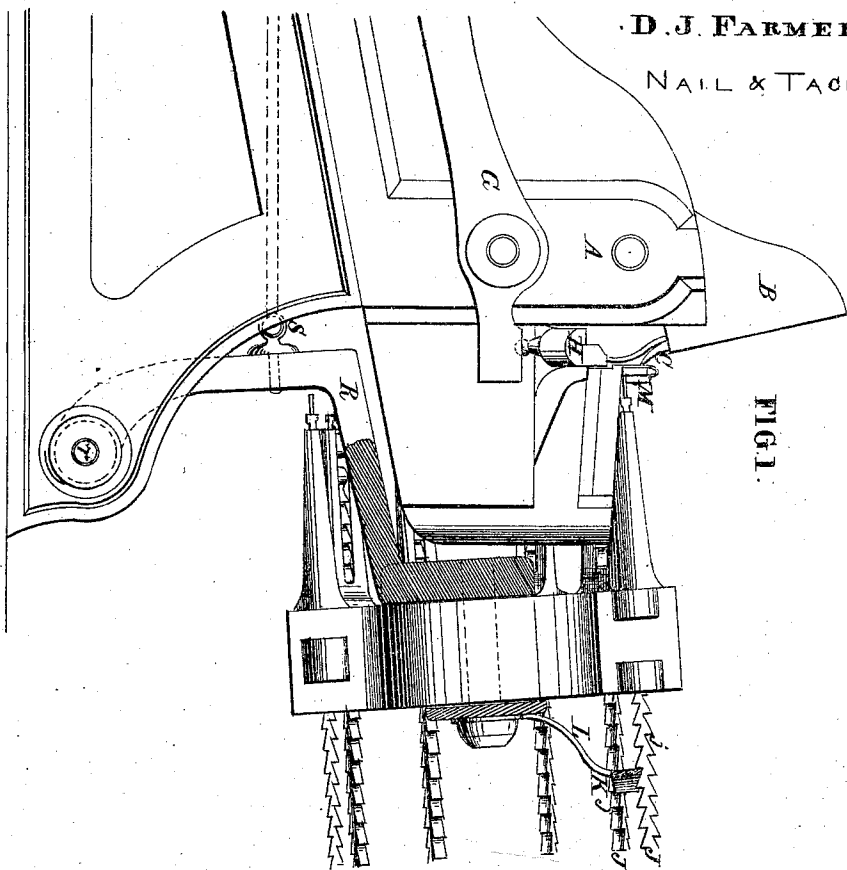


FIG. 1.

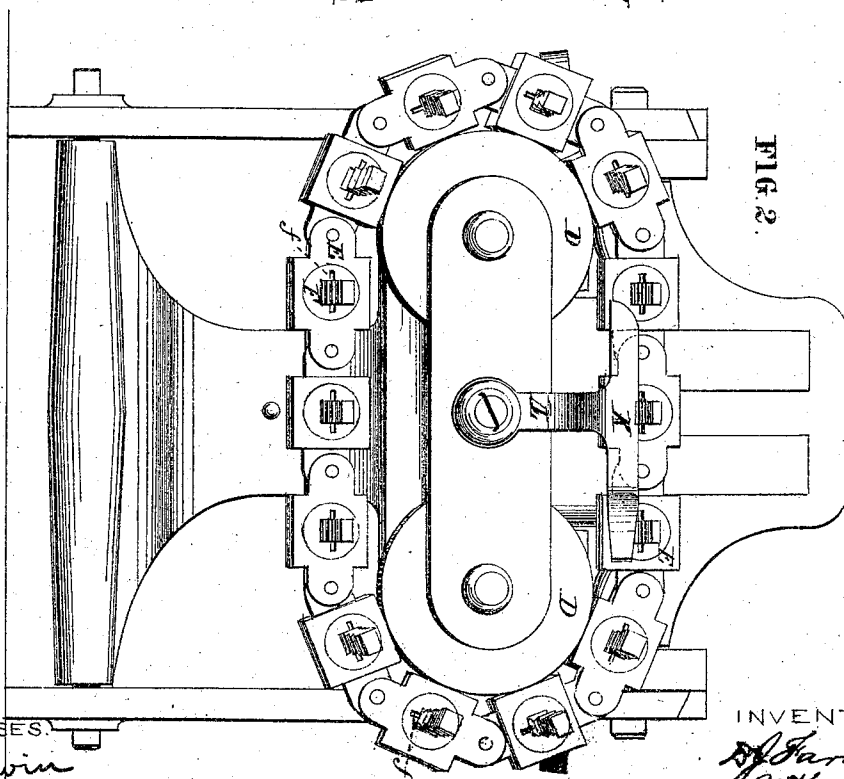


FIG. 2.

WITNESSES.

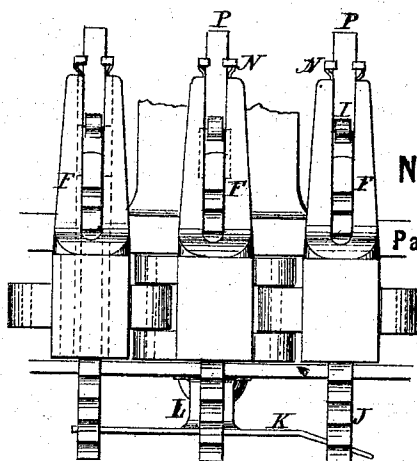
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INVENTOR.

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FIG. 3.

No. 118,357.



D. J. FARMER.

Nail and Tack Machines.

Patented Aug. 22, 1871.

FIG. 4.

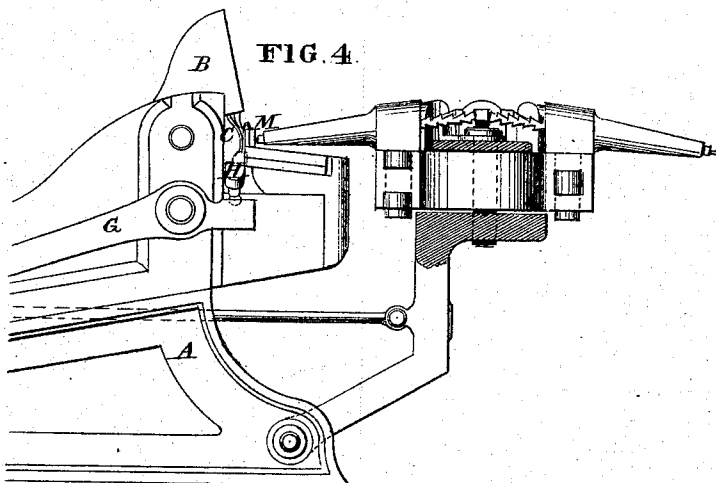
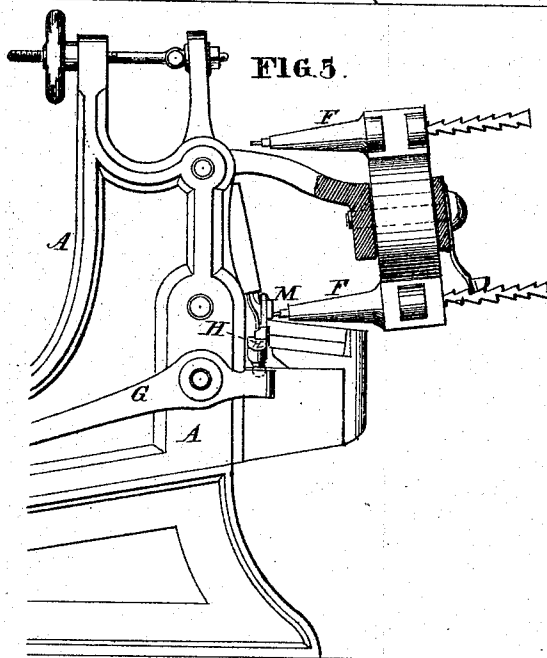


FIG. 5.



WITNESSES

Gas L. Ewin
Walter Allen

INVENTOR.

D. J. Farmer
By [Signature] Attorney

UNITED STATES PATENT OFFICE.

DAVID J. FARMER, OF WHEELING, WEST VIRGINIA.

IMPROVEMENT IN NAIL AND TACK-MACHINES.

Specification forming part of Letters Patent No. 118,357, dated August 22, 1871.

To all whom it may concern:

Be it known that I, DAVID J. FARMER, of Wheeling, in the county of Ohio and State of West Virginia, have invented a new and useful Improvement in Nail and Tack-Machines, of which the following is a specification:

My machine is provided with a revolving endless chain, carrying one or more nail or tack-plate feeders, which may be mounted in or upon the said chain in any suitable manner, so as to be carried by it in its revolution, and thereby advanced to the cutters. My invention consists: First, in the combination of an endless-chain carrier with the feeders, cutters, griping-dies, and headers of a nail or tack-machine. Second, in a peculiar device for imparting the endwise movement to the feeders.

Figure 1 is a side view of a nail-machine illustrating my invention. Fig. 2 is a front view thereof. Fig. 3 is a plan of a part of the endless-chain carrier with three feeders and plate-holders. Fig. 4 is a side view of the machine, showing the feeders in a different position. Fig. 5 is a side view of the machine, showing a modification in the relative positions of the feeders and cutters.

A A represent parts of the stationary frame of the machine, in or upon which work the cutter-frame B carrying cutters C and the header-levers G operating headers H. Gripers are also provided for catching the severed blanks and holding them for the action of the headers in forming nails or tacks.

These parts may be constructed and arranged as described in my application for patent for nail-machines filed April 1, 1871, or in any well-known and proper manner, and do not require specific description here.

The feeders F, of which one or any desirable number may be used, are carried by an endless chain, E, driven by any suitable motor, and carried by rollers D D, adapted by their size, number, and relative arrangement to conduct the said chain clear of any obstructions that it may be necessary to avoid, and properly present the nail-plates to the cutters. The said nail-plates are held by nippers I in the ends of rods J, which are advanced within the feeders F by the movement of the chain E.

In my application filed April 1, 1871, I have described one device by which the plate-holders

may in their revolution receive the necessary endwise movement. In my present application I have shown a more simple device, consisting of an oblique feeding-bar, plate, or flange, K, mounted on an arm, L, and adapted to engage with one or another of the notches on the nipper-rods J as the latter are carried over the said feeding-bar. This bar K and its supporting-arm L are either or both of them made elastic, so that as the nail-plates are brought near the cutters they may be held with a gentle pressure against the guard-plate or flange M, from which they escape through a notch or aperture therein at the proper instant to be caught by the cutter-gauge c, which determines the width of the blank to be severed. These gauges are constructed and operate as described in my patent dated May 31, 1870.

The feed-bar K may extend over any desired part of the circuit of the chain E, and by making said bar or its attachment elastic it is rendered unnecessary for the notches in the nipper-rods to correspond in distance with the width of blanks to be severed, the obliquity of the feed-bar and the elasticity of it or its attachment adapting it to engage, if necessary, several times in succession in the same notch of the nipper-rod and still advance the plate each time as far as may be permitted by the gauges M and c.

P P represent the nail-plates. The feeders F are constructed with grooves *f f* to receive the edges of the said plates, so as to properly guide the same, and carry at their forward ends springs N N, which further hold and steady the plates. The function of these springs is more especially necessary when the plates are so nearly used up that they can no longer be guided by the grooves *f* within the feeders.

The entire frame R, in which the feeding apparatus is mounted, may be pivoted at *r*, and adjusted in position by a screw-rod, S, as described in my application filed April 1, 1871, in order to withdraw the feeding apparatus from the cutters or advance it toward them.

The operation of this machine is to make complete cut-nails or tacks directly from the strip or plate; or the feeding and cutting mechanism can be used without the griping-dies and headers for cutting nails without heads, such as shoe-nails or brads.

The rotation of the belt may be effected through the shaft of either of the carrying-pulleys, or by

gearing applied directly to the chain in a well-known manner.

A machine may be made on this endless-chain principle with a reciprocating movement and with rotating or semi-rotating feeders.

I do not claim under this application the distinctive peculiarity of such a machine, but reserve the right to make a separate application therefor.

I claim as my invention—

1. The endless-chain feeder-carrier E, in com-

bination with the cutters, griping-dies, heading-tools, and feeders of a cut-nail or tack-machine, substantially as herein described.

2. The combination of the oblique and yielding feed-bar K and the notched nipper-rods J, as herein described.

DAVID J. FARMER.

Witnesses:

SAMUEL FARMER,
JOHN P. FARMER.