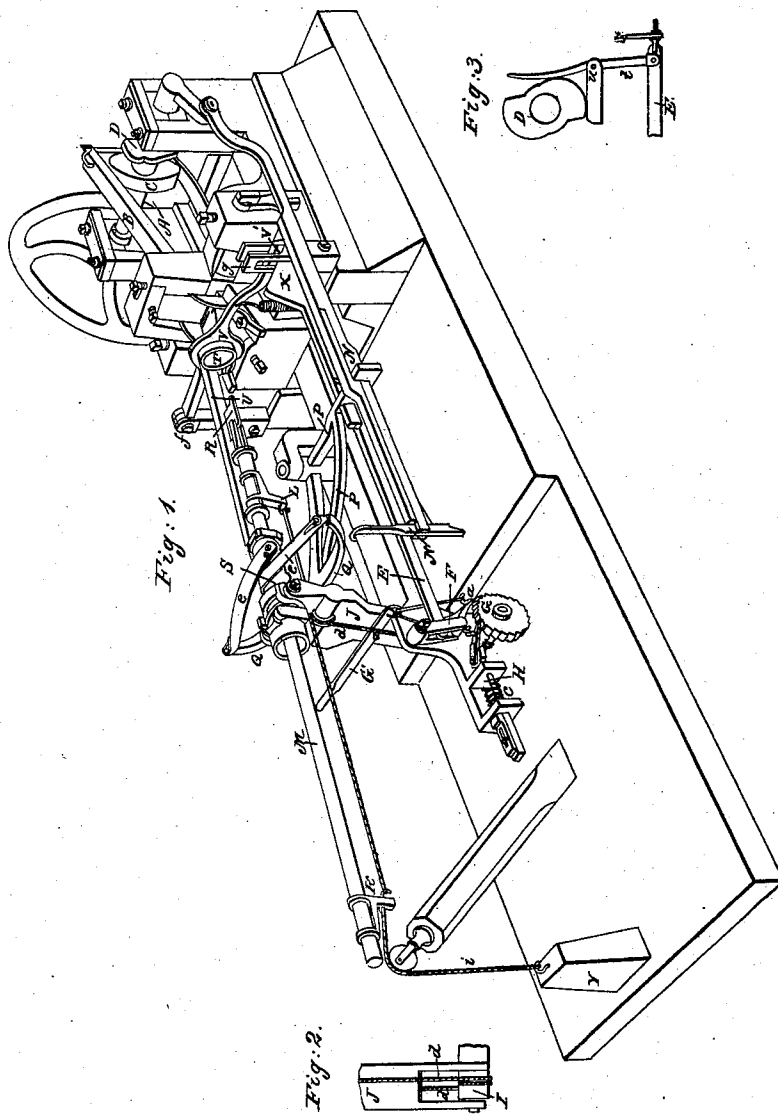


A. L. REED.
Making Cut Nails.

No. 4,657.

Patented July 24, 1846.



UNITED STATES PATENT OFFICE.

ALMOS L. REED, OF PITTSBURGH, PENNSYLVANIA.

FEEDING NAIL-PLATES.

Specification of Letters Patent No. 4,657, dated July 24, 1846.

To all whom it may concern:

Be it known that I, ALMOS L. REED, of the city of Pittsburgh, in the State of Pennsylvania, have invented certain new and useful improvements in apparatus for feeding nail plates to machines for cutting the same in the process of manufacturing nails, brads, and other articles of a like character; and I do hereby declare that the following is a full and exact description thereof.

My machine as the foregoing title indicates performs the office of feeding the nail-plates to the cutters and it may be applied to machines generally for the manufacturing of nails, &c. In some of its features it bears a resemblance to that for which Letters Patent were obtained by Caleb Ibbester, on the 31st of December 1844 but I have made certain new and useful improvements thereon by which it is rendered effective in its operation.

In the accompanying drawing Figure 1, is a perspective view of the whole machine represented as combined with the cutting part of a nail machine.

A is the main shaft from which motion is communicated to the cutting and feeding machines. The lever B of the movable cutter being operated by a cam C in the usual manner.

D is a double cam on the same shaft. This cam works the rod E that is connected with the arm F, having a pawl *a* on it that moves the ratchet wheel G; a second, or holding pawl *b* is attached to a sliding bar H; this bar is forced forward by means of a spiral or other spring *c*; by this arrangement the pawl *b* is allowed to recede when the ratchet wheel G, receives a backward motion, which takes place at the time of turning the nail-rod so as to free it from bearing against the cutter. The rod E is kept in contact with the cam D by the action of a spring S, or of a weight (see Fig. 3) when *t*, is a lever working on a fulcrum *u*, and operating the rod E.

The ratchet wheel G, carries a drum I, shown distinctly in Fig. 2 which is a front view of the lower part of the piece J that supports it, and which constitutes a part of the frame. Around this drum passes the cord, or chain, *d*, *d*, which is made fast to it by a staple that prevents its slipping. One end of this chain is attached to the swiveling arm K, and the other to a simi-

lar arm L on the feeding rod M. The wheel, G, may be thrown out of gear by depressing the handle G', which raises the pawls *a*, *b*.

N is an arm that is made to slide back and forth, by its embracing the crank pin O on the main shaft; this arm may be thrown out of gear by the latch N'; it carries, and vibrates, the quadrant P, the arms Q, Q, from which, serve to turn the feeding rod M, and the nail plate R that is held by nippers at its end.

e e, are straps that are attached to the arms Q Q and these passing around the barrel S turn the feeding rod. The manner of doing this makes no part of my invention, a similar apparatus having long been in use for this purpose. The barrel S is connected to the socket piece T by the rod U firmly attached thereto, and these two parts consequently turn together.

The nail plate R is shown as not within the socket piece T but when the machine is in use it is constantly within it, its end passing out through a narrow opening at the rear end of the socket piece, and entering between the cutters.

V is a collar within which the socket piece T makes its semi-revolution. This collar is hung on a joint pin at *f* and slides up and down at its opposite end within a guide slot in the standard *g*. When the nail plate is to be turned the socket piece T is to be lifted up to cause it to turn unobstructedly, and the nail plate is drawn back from the cutters for a like purpose for lifting it I employ a sliding bar *h* *h* that is carried back and forth by the vibration of the quadrant P to which it is attached at its fore end by a joint pin while its rear end slides through the standard *g* immediately below the end of the socket piece.

X is an angular projection on the sliding bar *h* and as this projection passes back and forth under the end of the arm V' projecting from the collar V it will cause it to rise; and this of course, takes place immediately after a cut has been made.

When the nail plate is being turned it is not only to be raised up by the apparatus described, but it is also as before observed to be drawn back clear of the cutter; this is an operation which has not been attempted in any feeding apparatus heretofore made the nail plate having been allowed to bear against the cutter producing friction and impeding the free action of the machine.

The drawing back is effected by the action of the weight Y, and the action of this weight is assisted by the friction of the pawl *a* on the ratchet wheel G, as this friction
5 tends to turn the drum I, around which the rope *d*, is wound; and when said pawl is forced back by the bar E, as the cam D ceases to act upon it, it bears on the wheel G and the weight Y by means of its chain, or
10 cord, *z z* attached to the arm K, on the feeding rod will draw said rod to the required distance the holding pawl *b* being made to slide back by the yielding of its spring to the action of the weight.

Having thus fully described the nature of 15 my improvements in the apparatus for feeding nail-plates, what I claim therein as new and desire to secure by Letters Patent is—

The manner herein described of combining the apparatus for withdrawing and 20 turning the nail-plate with that of raising the feeder; this being effected by an arrangement of parts substantially the same with that herein fully made known.

ALMOS L. REED.

Witnesses:

THOS. P. JONES,
EDWIN L. BRUNDAGE.