

A. MORRISON.
Nail-Distributors.

No. 144,407.

Patented Nov. 11, 1873.

Fig 2.

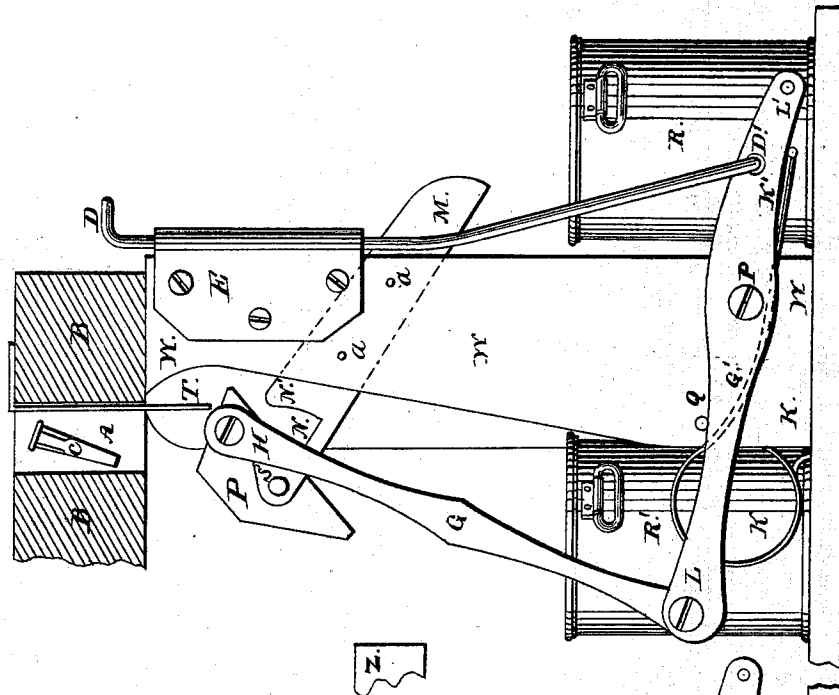
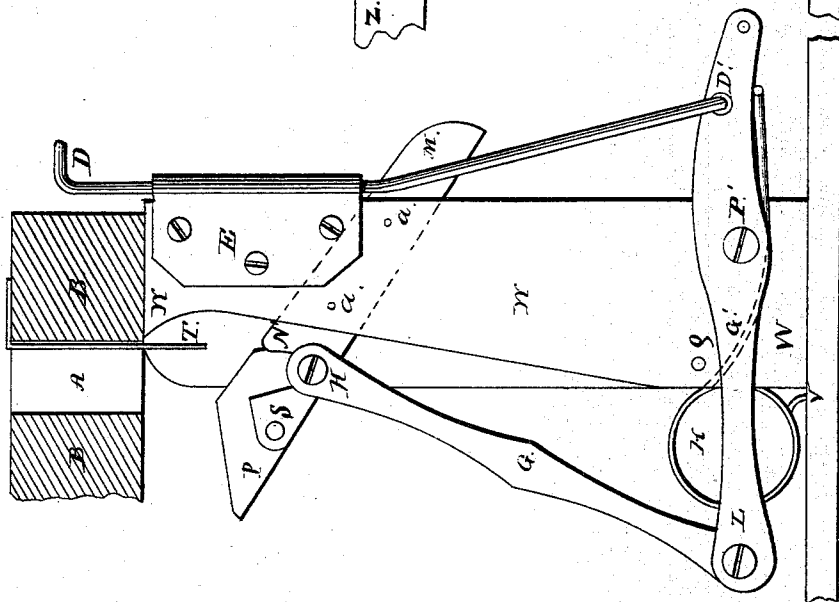


Fig 1.



Witnesses
Theophilus Weaver.
Peter Stucke,

Inventor.
Alexander Morrison.

UNITED STATES PATENT OFFICE.

ALEXANDER MORRISON, OF HARRISBURG, PENNSYLVANIA.

IMPROVEMENT IN NAIL-DISTRIBUTERS.

Specification forming part of Letters Patent No. **144,407**, dated November 11, 1873; application filed September 17, 1873.

To all whom it may concern:

Be it known that I, ALEXANDER MORRISON, of the city of Harrisburg, county of Dauphin and State of Pennsylvania, have invented an Improved Spike-Rejecter for Spike-Machines, of which the following is a full, clear, and exact description, reference being had to the drawings making a part of this specification.

The object of my invention is to provide any ordinary spike-forming machine with a simple and efficient apparatus by which, at the option of the operator, a defective spike (also the initial and final cut of the plate from which spikes are made) may be rejected by an articulated upper division of the chute, momentarily directed to convey the refuse to a receiver under the rear end of the machine, while the normally self-restored chute conveys the accepted work to a separate receiver under the fore end of the machine. My invention, therefore, consists, first, in an articulated chute, composed of a stationary chute, and an oscillating chute at the upper end of the stationary chute, these parts being made to coalesce to form but one chute by the automatic action of the trip mechanism; second, the trip mechanism, composed of connecting-rod, joining the oscillating chute and the trip-lever, a coiled spring set to retract the said lever, and a plunger connected with the lever, by which it is made accessible either by the foot or the hand of the operator when seated or standing; third, a shield beneath the machine-bench, next the exit-opening therein, in connection with the oscillating chute when tilted to reject work, and in connection with the frames by which the apparatus is mounted.

In the accompanying drawings, making a part of this specification, Figure 1 is a side elevation of my improved spike-rejecter, the spike-machine bench being shown in vertical section, and the apparatus is shown adjusted to reject work. Fig. 2 is a side elevation of the same with the chute directed to accept work.

I mount my apparatus connectedly on two uprights, W, which are joined at top and bottom box form, and are of proper height to reach from the floor on which the machine stands to the under side of the machine-bench B, which is provided with the usual exit-passage A, to let work C pass downward from the dies, (not shown.) A vertical shield, T, on the

front side of said opening, curbs condemned work from jumping forward in the act of tilting the oscillating chute P to reject the same. The stationary chute M is of pan form, and is permanently attached to the uprights W by rivets or screws *a*, and is obliquely directed forward and downward toward a receiver, R, placed to collect the accepted work, and is provided with notches N in its opposite sides N', as shown in Fig. 2, to admit freely the pivots H of the connecting-rod G into place when the chute P is returned to its normal position, as shown in Fig. 1, in which position the two chutes P and M coalesce to form a long forward chute. The chute M, above the cuts N, terminates in rounded ears, which are perforated for bearings for the pivots S, upon which, as on a transverse axle, the oscillating chute P swings when operated by the trip mechanism. The chute P is in form as shown, and is sufficiently narrow to lie in the trough of chute M, and long enough to close the cuts N therein when returned, as shown in Fig. 1. The pivots S are located directly beneath the rear side of the opening A in the machine-bench. The trip mechanism consists of the connecting-rod G, pivoted at H to chute P, and at L to the operating-lever G', which is pivoted at P' to the upright W, and the coiled spring K, which is fastened, at one end, V, either in the floor, or in the cross-piece between the uprights W, and its loose end is extended to K', where it is crooked to reach under the fore part of lever G', which it retracts, from position shown in Fig. 2 to position shown in Fig. 1. The spring is added to quicken the return of the chute P to its normal position, which would be too slow if left to gravity alone, as spikes are cut at the rate of one hundred and twenty per minute; therefore, to reject a defective one, which can be known to be such by a skillful feeder, the apparatus must be susceptible of instantaneous manipulation. The lever G' is manipulated by the foot of the operator, first, when he is standing, by the pedal or cross-head L'; second, when he is seated on a stool, by the plunger D, connected to lever G' at D', and guided and held upright by an enveloping clasp or sheath, E, arranged on the upright W, as shown.

Depressing the fore end of the lever G', ei-

ther the plunger or pedal tilts the chute P to catch and reject an initial cut or blank, Z, as shown in Fig. 2, which is, by this means, pitched into the receiver R' under the rear end of the machine, and the instant pressure is withdrawn from the lever-pedal the spring K K' returns the chute P to receive accepted work, as C, and conveys it to the receiver R placed under the front part of the machine.

In the art of spike-making the practice has hitherto been to let the initial and final cuts or ragged blanks, as well as defective work, pass with the perfect work, and to be put upon the market unseparated. My apparatus is, therefore, designed to eliminate these crudities from this species of merchandise in a more convenient manner than can be done by unassisted hand-labor.

Having thus fully described my invention, what I desire to secure by Letters Patent of the United States is—

1. The arrangement of the transverse articulation of the parts M P of the compound chute directly beneath the forward end of the exit-

opening leading from the dies of the spike-machine, substantially as and for the purpose herein shown and described.

2. The trip mechanism composed of the connecting-rod G, the operating-lever G', the coiled spring K K', or its equivalent, in combination with the oscillating chute P, these parts being arranged to operate conjointly, substantially as and for the purpose set forth.

3. The combination of the chute P, connecting-rod G, lever G', plunger D D', and sheath E, or its equivalent, all constructed and arranged to operate as and for the purpose herein set forth and described.

4. The oscillating chute P, in combination with the shield T, for the purpose herein set forth.

In testimony that I claim the foregoing as my invention I have hereunto set my hand this 13th day of September, 1873.

ALEXANDER MORRISON.

Witnesses:

THEOPHILUS WEAVER,
PETER STUCKER.