F. TOEPFER.

NAIL FEEDING MACHINE.

No. 181,376. Patented Aug. 22, 1876.

Fig. 1.

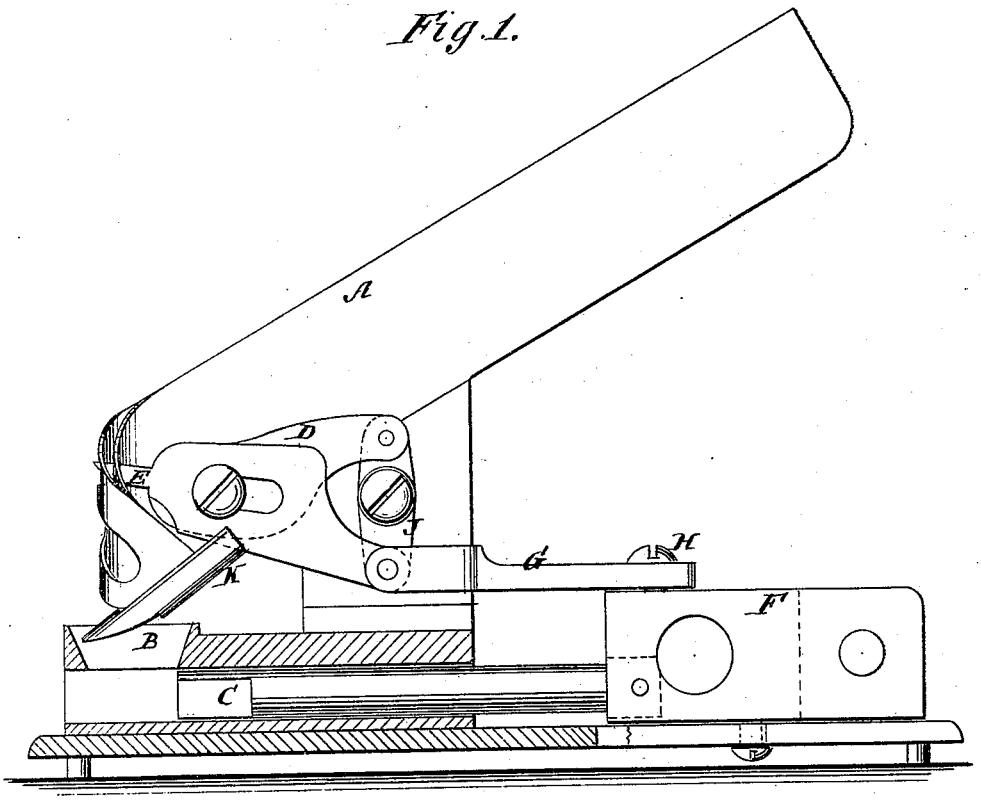


Fig. 2.

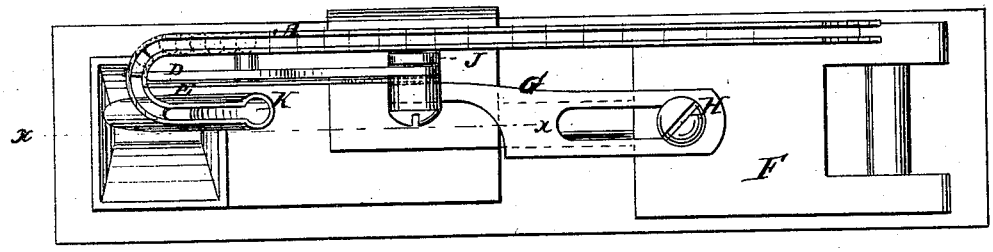


Fig. 3.

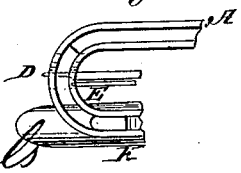
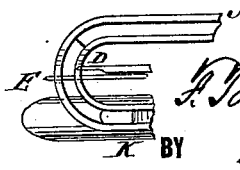


Fig. 4.



WITNESSES:

E. Wolff.

John Goethals

INVENTOR:

F. Toepfer

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

FRANK TOEPFER, OF MILWAUKEE, WISCONSIN.

IMPROVEMENT IN NAIL-FEEDING MACHINES.

Specification forming part of Letters Patent No. **181,376**, dated August 22, 1876; application filed May 22, 1876.

To all whom it may concern:

Be it known that I, FRANK TOEPFER, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented an Improvement in Nail-Feeding Machines, of which the following is a specification:

The invention consists of a descending trough, in which the nails hang by the heads, points downward, arranged so as to drop the nails horizontally into a hopper in advance of the sliding driver, on which trough are a couple of blades, arranged side by side, with space for one nail between them, which are so geared to the driver that when it goes forward to drive the nail in advance of it the upper blade draws back, and the lower one goes forward to receive the lowest nail in the trough against it, and when the driver goes back the upper blade goes forward, separating the lowest nail from the others above, and the lower one goes back, letting the nail fall into the hopper, ready to be driven by the next forward movement of the driver.

The driver is to be worked by a foot-treadle, and, in practice, a number of drivers, each having an automatic feeder, as above described, will be connected to a cross-head or slide of suitable form to work as many drivers as there are nails to be driven into one side of the box to be nailed, and the drivers will be adjustably connected for shifting toward and from each other, according as the nails are to be driven more or less distant from each other.

Figure 1 is a longitudinal sectional elevation of the machine, in line *x x*, Fig. 2. Fig. 2 is a plan view, and Figs. 3 and 4 are details.

Similar letters of reference indicate corresponding parts.

A represents the trough, in which the nails hang side by side by the heads, and slide down into the hopper B in advance of the driver C, being delivered one by one by the blades D and E, the blade D being pushed forward by the driver-stock F, which goes back between the nail lying against blade E and those above it, and the blade E being driven back at the moment the driver arrives at the limit of the back stroke, to let the nail fall down into the hopper B, in front of the driver.

At the forward movement of the driver, the blade E is again pushed forward to arrest the nails, which are then let down against it by the withdrawal of the blade D.

The blade E is connected to the driver-stock by the slotted link G and stud-pin H, so that it rests while the driver-stock is moving through the greater part of its travel, but afterward moves in the same direction, while the blade D is connected by the lever J and said link G, so that it moves in the reverse direction.

The trough terminates at the lower end in a slanting tube, K, onto the lower side of which the nails drop, so as to slide out at the lower end, and drop sidewise into the hopper, with the head next to the driver, said tube being suitably located above the hopper for that purpose.

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

1. The combination of the reversely-sliding cut-off plates E D with the feed-trough A, hopper B, and driver C, substantially as and for the purpose set forth.

2. The combination of the slotted link G, lever J, and driver-block F, having stud-pin H, with the feed-trough A, hopper B, and driver C, substantially as and for the purpose set forth.

3. The combination of the inclined guide and nail-delivery tube K with the trough A, hopper B, and driver C, as and for the purpose set forth.

FRANK TOEPFER.

Witnesses:

TH. O. HARTMANN,

CHARLES TOEPFER.