

L. A. Cook,

Tegging Mach.

No. 112,554.

Patented Mar. 14, 1871.

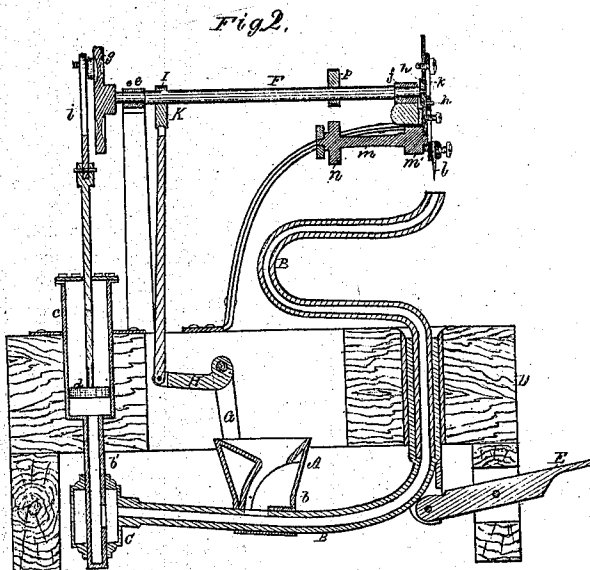
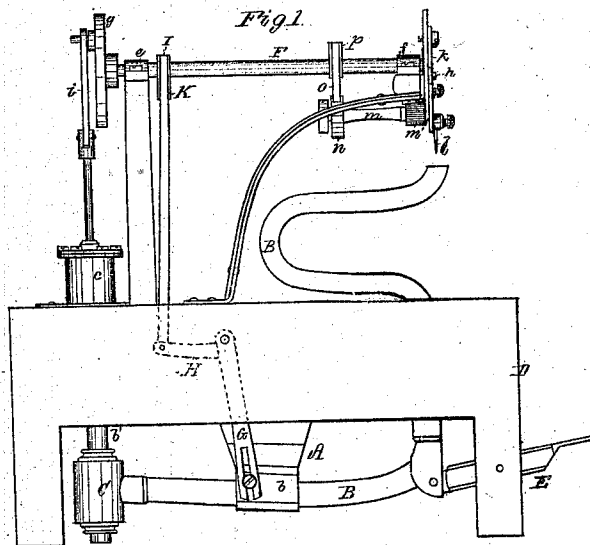
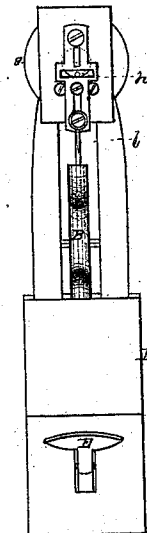


Fig. 3.



Witnesses

L. N. Piper.

L. N. Möller

L. A. Cook.

by his attorney.

R. H. Eddy

UNITED STATES PATENT OFFICE.

LYMAN ARNOLD COOK, OF WOONSOCKET, RHODE ISLAND.

IMPROVEMENT IN MACHINES FOR FEEDING RIVETS AND INSERTING THEM IN SHOES, &c.

Specification forming part of Letters Patent No. **112,554**, dated March 14, 1871.

To all persons to whom these presents may come:

Be it known that I, LYMAN ARNOLD COOK, of Woonsocket, of the county of Providence, of the State of Rhode Island, have made a new and useful invention having reference to the feeding of rivets to and inserting them in a shoe or other article; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a front elevation, Fig. 2 a vertical and longitudinal section, and Fig. 3 an end elevation, of such invention or mechanism.

In such drawing, A denotes a magazine or hopper, arranged so as to slide freely on a tube, B, and over an opening, *a*, in such tube. The part *b* of the hopper also serves as a valve to close the said opening.

The tube B extends from a hollow cylinder or box, C, arranged to slide freely on and to open into the eduction-pipe *b'* of an air-pump, *c*, whose piston is shown at *d*. The tube B is arranged to slide vertically within a frame, D, and there may be a pedal or lever, E, applied to such frame and tube, to enable a person to effect vertical movements of the tube.

Above the frame the tube is bent in manner as shown, to enable it to be inserted in a shoe or boot with the upper end of the tube against the inner surface of the sole, also so that the boot or shoe may be turned around on the tube in a manner to carry any part of the sole to be nailed or riveted directly over the upper terminus of the tube.

A driving-shaft, F, disposed over the tube, and supported in suitable boxes, as shown at *e f*, has cranked wheels *g h* at its opposite ends. One of these wheels is connected to the piston of the air-pump by a rod, *i*, and serves to work such piston. The other crank-wheel operates a vertical slider, *k*, carrying an awl, *l*, for piercing the sole or other material to be riveted. There is also another shaft, *m*, over the tube E, such shaft having a feed-wheel, *m*, and a ratchet-wheel, *n*, fixed upon it.

The ratchet is to be revolved by a pawl, *o*, worked by an eccentric, *p*, fixed on the driving-shaft, the same being to revolve the feed-wheel with an intermittent motion.

A forked lever, G, pivoted in the frame, spans the hopper slide-box C, and is connected thereto by pins or studs projecting from the

box and into slots made in the prongs of the lever.

A rod, H, leads from the upper arm of the said lever to the clasp I of an eccentric, K, fixed on the driving-shaft, all being as represented.

If we suppose the magazine or hopper to be charged with rivets, and a shoe to be arranged on the tubular horn or upper part of the tube or conduit B, with the upper end of such tube against the inner surface of the sole, and the tube to be forced upward so as to carry the upper surface of the sole against the feed-wheel, and the driving-shaft be put in revolution, the following results will take place—that is to say, the shoe-sole will be fed along with an intermittent motion, will be punctured by the awl, and, as the awl-hole may be brought over the upper terminus of the tube B, a rivet will be blown from the magazine through the tube and into such hole, the said rivet being subsequently upset or clinched by other means.

As the hopper may be moved back and forth on the tube B, the hopper A will alternately open and close the passage *a*, in order that, when it may be open, a rivet may descend into and through it from the hopper or magazine, and when the hole is closed the piston of the air-pump may descend in the pump-barrel and compress the air therein.

It should be mentioned that while the hole *a* may be open, or during a part of the time it may be so, the piston will be ascending and drawing air through the hole into the cylinder or pump-barrel.

I claim—

1. The combination of the tube or conduit B, the magazine A, the air force-pump *c*, the feeder *m*, and the awl *l*, all being arranged and applied together, substantially in manner and to operate as explained.

2. The tube B, as applied to the air-pump conduit and the frame, in manner so as to be capable of being moved to carry the work to be riveted either up to or away from the feeder, as occasion may require, all being substantially as explained.

LYMAN A. COOK.

Witnesses:

R. H. EDDY,
G. V. SHEFFIELD.