

P. H. HOWE.
Lasting-Tools.

No. 147,640.

Patented Feb. 17, 1874.

Fig. 1.

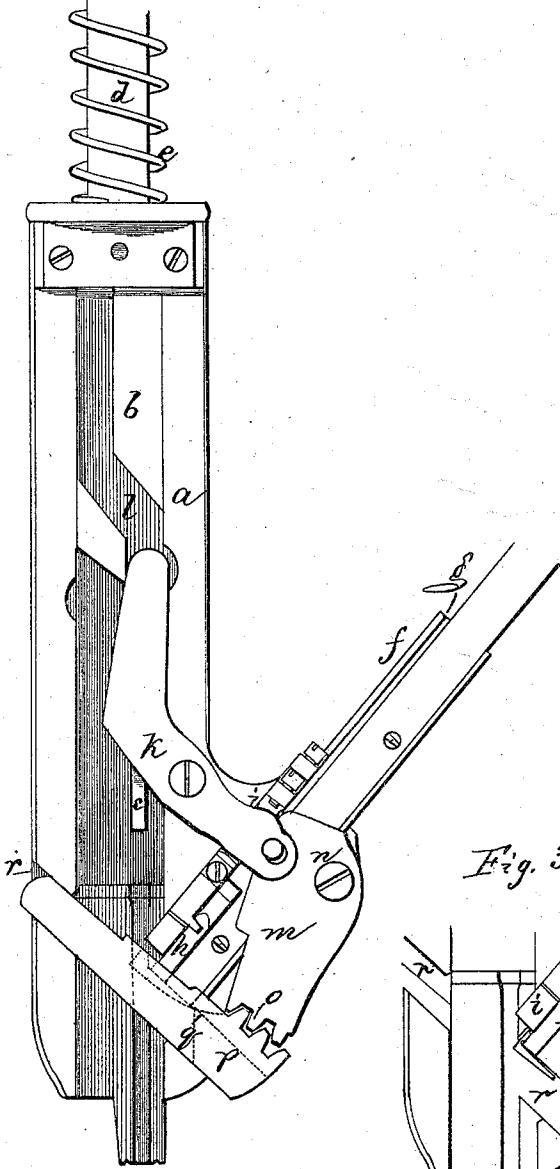


Fig. 2.

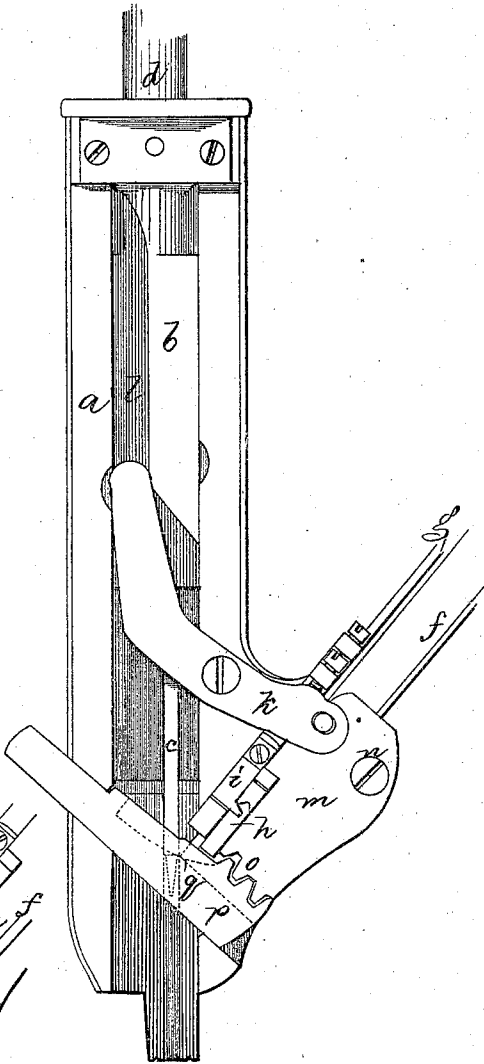
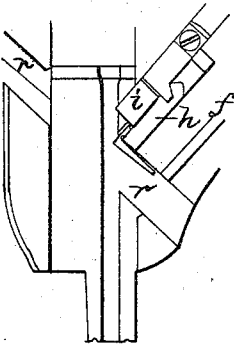


Fig. 3.



Witnesses.
M. W. Frothingham.
L. L. Latimer.

Inventor.
Philip H. Howe,
per Crosby & Gould
Attys.

UNITED STATES PATENT OFFICE.

PHILIP H. HOWE, OF LAWRENCE, MASSACHUSETTS.

IMPROVEMENT IN LASTING-TOOLS.

Specification forming part of Letters Patent No. **147,640**, dated February 17, 1874; application filed January 14, 1874.

To all whom it may concern:

Be it known that I, PHILIP H. HOWE, of Lawrence, in the county of Essex and State of Massachusetts, have invented an Improved Lasting-Tool; and I do hereby declare that the following, taken in connection with the drawings, which accompany and form part of this specification, is a description of my invention, sufficient to enable those skilled in the art to practice it.

The invention relates to details of construction of a lasting nailer or tool for cutting and driving tacks. The construction is intended particularly for the use of comb-like blanks, such as are shown in United States Letters Patent Nos. 90,650, 131,080, and 143,322, and particularly for using the T-shaped blank covered by the 131,080 patent, or the Γ-shaped blank covered by the 143,322 patent.

In my construction, I combine with the driver-tube a blank chute or guideway extending from the tube at a vertical angle, and entering the driver tube at the same angle. In combination with the driver I use a bender that plays across the mouth of the chute where it enters the driver-tube, said bender being moved forward as the driver descends, and, entering between the shank of the end nail and the next shank, forces the shank from its angle of presentation at the end of the chute into a vertical position in the driver-tube, under the driver, the action of the bender bending the head or flange of the blank, (or that part of the flange that is to form the head of the tack,) and the edge of the bender forming the bed-cutter, against which the driver in descending forces the tack-head to sever it from the blank.

The action of the bender in forcing the tack-shank into vertical position may wholly or partially separate the tack-head; but I prefer to effect the complete separation by the action of the driver.

My invention consists, primarily, in that part of the organization of the nailer thus generally described, and in details of construction connected with such organization.

The drawing represents a nailer embodying my construction.

Figure 1 shows the parts in normal position. Fig. 2 shows the parts in position for the tack to be severed.

In these figures one side of the nailer is removed to show the working parts.

a denotes the tubular handle containing the plunger *b*, to the bottom of which is fixed the driver *c*, a shank, *d*, extending from the plunger. A spring, *e*, forces the driver up, and a blow upon a knob at the top of the shank forces down the driver to sever and drive the tack. *f* denotes the chute, which extends from the handle *a* at an angle, and enters the tube, as seen in Fig. 3. The blank is run into this chute, its flange (if a flanged blank be used) entering a guide-groove, *g*, and the blank near the tube passing under a feed-pawl, *h*, the point of which enters between the teeth of the blank. This pawl is jointed to a slide, *i*, that is thrown back as the driver descends by a lever, *k*, (worked by a cam-slot, *l*, in the plunger *b*,) and is thrown forward by said lever to feed the blank as the plunger rises, the pawl being held against the teeth by a suitable spring, and dragging over the teeth as it slides back, the blank being detained by the bender when the pawl moves back. Jointed to the lever *k* is another lever, *m*, pivoted at *n*, and connected by gear-teeth *o* with a slide, *p*. This slide is the bender-stock, carrying a bender point or tooth, *q*. The slide moves in a groove, *r*, extending across the handle at right angles or thereabout to the chute *f*.

The presented end of the blank stands as shown in Fig. 3. As the driver descends, the slide *p* moves forward, and the bender *q* enters between the two end shanks, and, striking the end shank, pushes it over into vertical position beneath the driver, bending the flange over, as seen in Fig. 2. When the driver reaches the blank, it strikes the horizontal head of the tack, beneath which head is the vertical shank, and striking this head severs it over the edge of the bender, the continued descent of the driver then driving the severed tack.

I claim—

1. In combination with the driver and blank—

feed mechanism, the bender *q*, operating to bring the tack into position to be severed, substantially as described.

2. A lasting-blank nailer, having the blank-presenting, feeding, severing, and driving mechanism, arranged to operate substantially as shown and described.

3. The lever *k*, pawl *h*, slide *i*, lever *m*, and

bender-slide *p*, combined and arranged to be operated by the driver-plunger, substantially as described.

PHILIP H. HOWE.

Witnesses:

CHARLES E. HARDY,
M. V. B. PAIGE.