

L. R. BLAKE.
Lasting-Tools.

No. 136,300.

Patented Feb. 25, 1873.

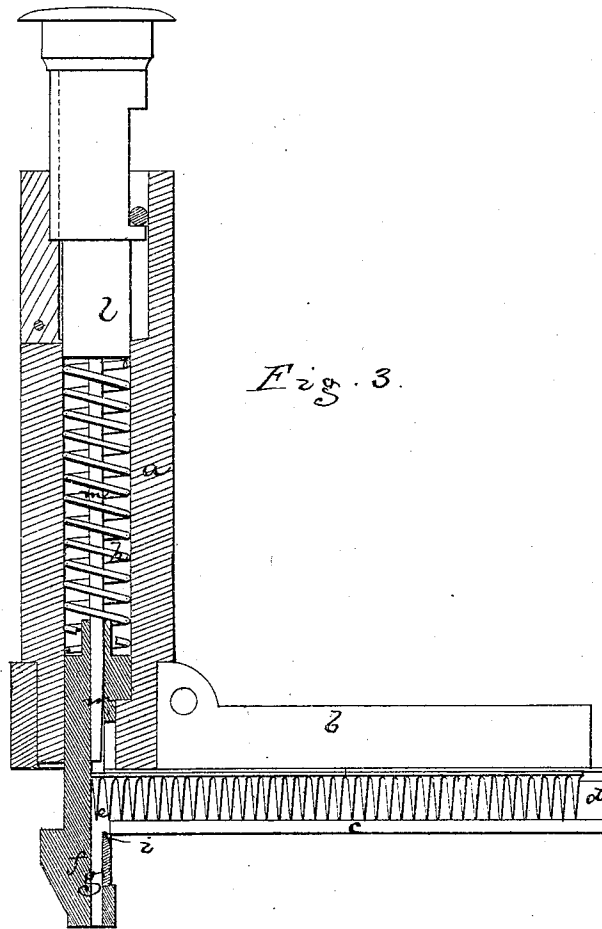
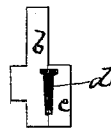


Fig. 3.

Fig. 4.



Witnesses,
M. W. Frothingham.
S. H. Latimer.

Inventor
Lyman R. Blake,
By his Atty.
Crosby & Gould

L. R. BLAKE.

Lasting-Tools.

No. 136,300.

Patented Feb. 25, 1873.

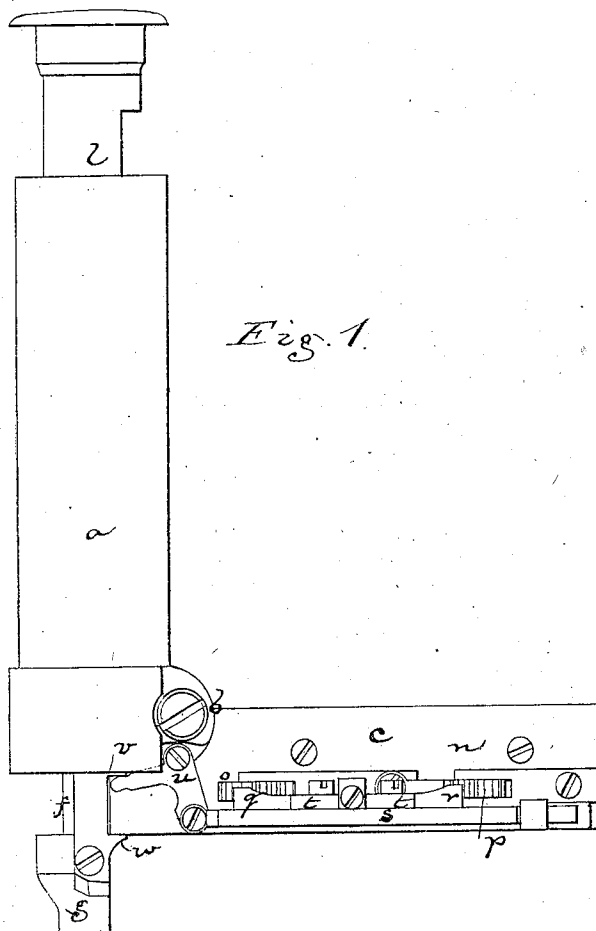


Fig. 1.

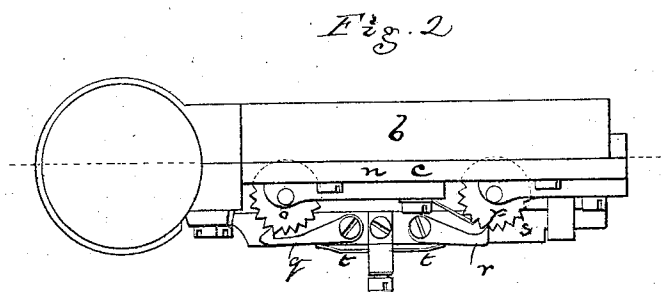


Fig. 2.

Witnesses.
M. W. Frothingham.
E. H. Bates.

Inventor
Lyman R. Blake.
By his Attorneys
Crosby & Gould

UNITED STATES PATENT OFFICE.

LYMAN R. BLAKE, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN LASTING-TOOLS.

Specification forming part of Letters Patent No. 136,300, dated February 25, 1873.

To all whom it may concern:

Be it known that I, LYMAN R. BLAKE, of Brooklyn, in the county of Kings and State of New York, have invented an Improved Tool for Lasting, &c.; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

United States Letters Patent No. 131,080, dated September 3, 1872, have been granted to me for an improved blank for lasting tacks or nails; and my present invention relates particularly to the organization of mechanism in a tool for carrying any suitable length of such blank, keeping its end presented in position for the action of severing mechanism that severs each tack in succession from the blank, the severed tacks being also in position for the action of mechanism by which it is driven, the tool being designed particularly to be used in lasting, and the whole mechanism being so arranged that at each blow of a plunger operated by hand, or which may be operated by hand, (the nail-tube being pressed against the surface into which the nail is to be driven,) a tack or nail is cut from the end of the blank and driven. My invention consists primarily in an organization of mechanism by which nails are cut from such blank one by one, and are driven one by one as they are cut.

The drawing represents a tool embodying my invention.

Figure 1 shows a side elevation of the tool. Fig. 2 shows a plan of it. Fig. 3 shows the mechanism in sectional elevation. Fig. 4 shows an end view of the blank-holder.

a denotes a tubular handle, at the foot of which is a horizontal arm or plate, *b*. To the front of this arm is fastened the nail-blank holder *c*, this holder having a horizontal and T-shaped passage, *d*, opening to the outer end of the plate, for admission of the blank. The opposite end of this passage extends under the tube *a*, and opens into a socket, *e*, of a nail receiver and holder, *f*. This holder has below the socket a nail-tube, *g*, preferably square or rectangular in shape in cross-section, and of a size to admit and pass the head of the severed tack, the bottom of this foot resting upon the material into which the tacks

are to be driven. The holder *f* is forced down by the stress of a suitable spring, *h*, or, the nail-tube foot being stationary, the handle *a* is forced down against the stress of the spring, and by this relative movement the shank of the unsevered tack at the end of the blank, projected into the socket *e*, is carried into the nail-tube *g*, bringing the head part (between it and the next shank) over an edge, *i*. The point of the tack will then be about at the bottom of the tube, and the tack is in position to be severed and driven. Into the top of the tube *a* extends a plunger, *b*, having fixed in its lower end a driver, *m*. This plunger is held up by the spring *h*, and is forced down against the stress of the spring.

When the shank of the tack is in the tube *g*, and the driver is ready to be forced down against the tack-head, to sever it from the blank and drive the tack, the point of the driver stands just above the head. The plunger being then driven down by a blow, the driver strikes the head and severs it at the cutting-edge, and at the same time drives it into the surface or material beneath. After the tack is thus severed and driven, the springs restore the parts to their normal positions, as seen at Fig. 3, and in their movement toward such position the blank is fed forward to again project its end into the socket *e*, beneath the nail-driver, as follows: Through the wall *n* of the blank-holder the teeth on the inner sides of two spur-wheels, *o p*, project into the passage *d*, and these teeth enter between adjacent teeth of the comb-like blank. Engaging with the outer teeth of these two wheels are two pawls, *q r*, which are jointed to a slide, *s*, and are pressed against or toward the teeth by springs *t*. At one end of this slide is jointed one arm of a lever, *u*, whose other arm extends between two projections, *v w*, of the nail-holder *f*.

When the tool is operated to drive the nail, the projection *w* strikes the lever-arm and draws the pawls forward over the spur-teeth, one or more suitable retainer-pawls preventing the spur-wheels from rotating. The nail having been driven, and the socket emptied, the tube *a*, in being thrown up by the spring, brings the projection *w* into contact with the lever-arm, and the slide *s* is thrown back, turning the spur-wheels, and causing the teeth

to feed forward the comb-like blank or blanks, bringing the end of the blank into the nail-socket in position to be severed to form the next nail.

By these means lasting-tacks may be rapidly formed and driven (no attention being given to the mechanism, except to press the tool down to the work and drive the plunger *l* by a blow) so long as blanks are supplied to the passage.

I claim—

1. The combination, with the nail-socket *e*, head supporting and severing edge *i*, and nail-tube *g*, of a driver, *m*, which, in conjunction with edge *i*, severs the nail-head, and then drives the nail.

2. In combination with the severing and driving mechanism, the straight arm *b*, with its T-shaped passage *d* for the blank, and the blank-feeding mechanism, all substantially as shown and described.

3. The spur-wheels *o p*, pawls *q r*, slide *s*, and lever *u*, operated and operating to intermittently move the blank forward, substantially as described.

4. The construction and arrangement of the mechanism, substantially as shown and described.

LYMAN R. BLAKE.

Witnesses:

FRANCIS GOULD,
M. W. FROTHINGHAM.