C. W. GLIDDEN.

Tacking Machine for Boots and Shoes.

No. 197,214. Patented Nov. 20, 1877.

Fig. 1.

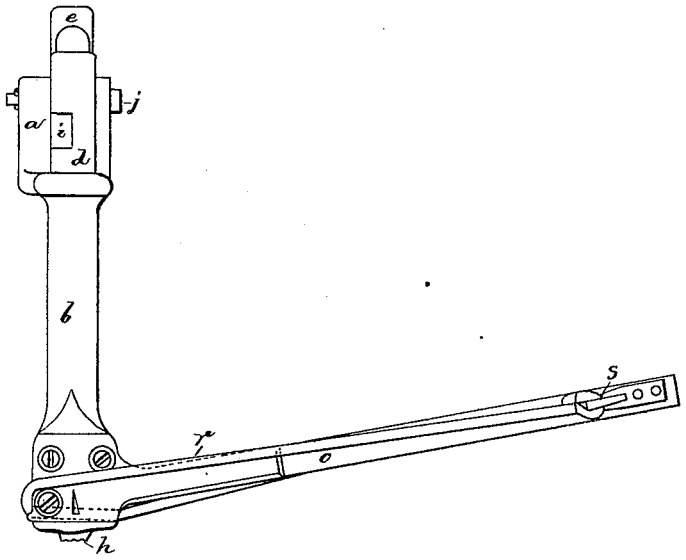


Fig. 2.

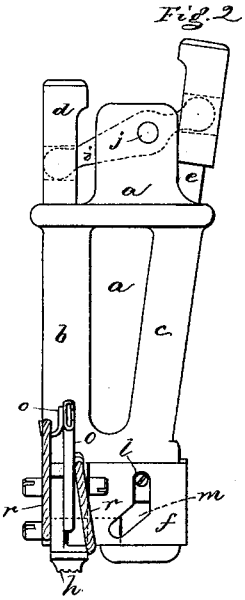


Fig. 3.

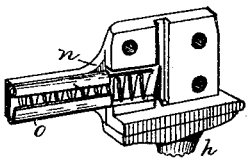


Fig. 4.

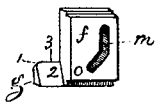


Fig. 5.

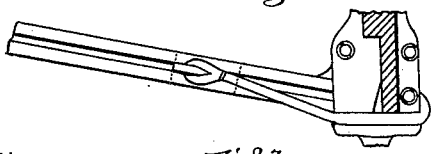


Fig. 6.

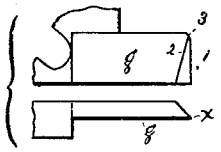


Fig. 7.

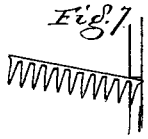
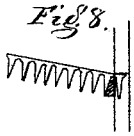


Fig. 8.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES W. GLIDDEN, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN TACKING-MACHINES FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **197,214**, dated November 20, 1877; application filed April 30, 1877.

To all whom it may concern:

Be it known that I, CHARLES W. GLIDDEN, of Lynn, county of Essex, and State of Massachusetts, have invented an Improvement in Tacking-Machines for Boots and Shoes, of which the following is a specification:

This invention relates to tacking-machines for boots and shoes, and is shown embodied in a hand-operated machine.

The tacks to be driven are severed from a comb-like tack-strip of indefinite length, properly sustained in a strip-guide, and fed automatically to the cutting mechanism and driver.

The invention has reference to the combination, with the head in which the driver operates, of a strip-guide placed at an acute angle with reference to the path of the driver, and with such relation to the tack-cutting mechanism that the body of the tack to be cut from the strip and to be driven by the driver is so removed from the adjacent connected tack of the strip that it is made to occupy a position substantially in line with the driver, whereas the other tacks of the strip stand at an angle thereto. This change of position of the body of the tack to be cut and driven from the position and inclination of the adjacent tack of the strip bends the head-forming portion of the strip between adjacent tacks, and assists in the severing operation.

The cutter or knife is made triangular or web-shaped in cross-section. By means of delivering the strip at an angle to the driver-passage, it is possible to make the knife quite thick at its base, and, consequently, very strong. The vertical side of the knife bears against the tack being cut from the strip to be driven, and the inclined face, corresponding to the hypotenuse of the triangle, bears against the edge of the tack next to be fed forward under the driver to be cut and driven.

Figure 1 represents, in side elevation, a hand-tacking machine embodying the invention herein described; Fig. 2, a rear side view; Fig. 3, a detail of the strip-guide with the tack-strip in place; Fig. 4, a detail of the cutter or knife; Fig. 5, the strip-guide at the opposite side from Fig. 1; Fig. 6, a side and bottom view of the knife; and Figs. 7 and 8, details illustrating the positions of the strip and end nail.

The head *a*, held by the operator, is provided with two guides, *b c*—one, *c*, for the tack-driving bar *d*, and the other for the slide-bar *e*, that operates the carrier *f* and the attached cutter or knife *g*. The driver-bar is provided, as usual, with a nail or tack driving rod, adapted to drive the head or upper end of the tack out through the usual opening in the nail-tube or foot *h*, preferably serrated or roughened at its lower end. The driving-bar *d* is connected with the bar *e* by means of a lever, *i*, having its fulcrum at *j*. When one bar is driven or forced down, the lever will raise the other. The bar *e* has at its lower end a pin, *l*, that extends into an irregular slot, *m*, made in the carrier *f*, adapted to slide in suitable ways formed in the head. The knife *g*, adjustably attached to the carrier, has a vertical face, 1, an inclined face, 2, and a cutting-edge, 3.

The tack-strip *n* is held in a strip-guide, *o*, attached to the head, so as to present the head-forming portion of the strip to the path of the nail-driver in an acute-angular direction. The follower *p*, connected with the elastic cord or spring *r*, attached to the strip-guide at *s*, rests against the outer end of the comb-like tack-strip, and moves the end or head forming portion of the tack-strip against one wall of the driver-passage, when permitted so to do by the removal of the knife.

The head-forming part of the tack at the end of the strip, held forward against the wall of the driver-passage, stands at an inclination to the driver-passage, as shown in Fig. 7; but when the knife is moved forward, its thin wedge-shaped end *x*, having an inclination corresponding with the opening between the adjacent tacks, as shown in Fig. 6, enters between the tack having its head stopped by the wall of the nail-passage and the adjacent tack of the strip, and removes the body of the tack from an inclined to a vertical position, as shown in Fig. 8, it then being in line with the nail-passage. In this position the knife separates the first tack of the strip from the second, and forms one side of the driver-passage. Lying between adjacent tacks, the upper edge 3 of the knife becomes the lower member of the severing mechanism for the head, the driver acting as the upper or second member. This change of position of the body

of the tack with reference to the remaining tacks of the strip assists in severing the head-forming portion, enables the knife to be made very strong, and the head to be cut off squarely.

It is evident that the acuteness of the angle of the strip-guide with reference to the driver may be changed, and instead of the inclined guide we might use a guide somewhat curved.

The knife is thicker at its base than the usual distance of the point of one tack from the adjacent tack when the strip is in its normal condition. This thickened base separates the points of the adjacent nails, and bends the head-forming portion of the tack-strip between adjacent nails before severing a nail from the strip. The point of the knife being beveled, as described, gradually removes the tack from its normal position with reference to the other tacks of the strip to a position in line with the driver-passage.

This wedge-pointed knife with thickened base is, therefore, an important requisite of this invention.

I claim—

1. In a tacking-machine, the combination, with a strip guide or holder, of a longitudinally-reciprocating wedge-pointed triangular knife, adapted to remove the body of the tack to be driven from the direction of the body of the adjacent tack of the strip, before severing the tack from the strip and driving it, substantially as described.

2. The driver and driver-passage, and strip-guide placed at an inclination therewith, in combination with a longitudinally-reciprocating wedge-shaped triangular cutter to operate upon the tack next to be severed from the strip and driven, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES W. GLIDDEN.

Witnesses:
G. W. GREGORY,
S. B. KIDDER.