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(No Model.) 2 Sheets—Sheet 1.

G. W. COPELAND.

BOOT AND SHOE LASTING TOOL.

No. 329,278. Patented Oct. 27, 1885.

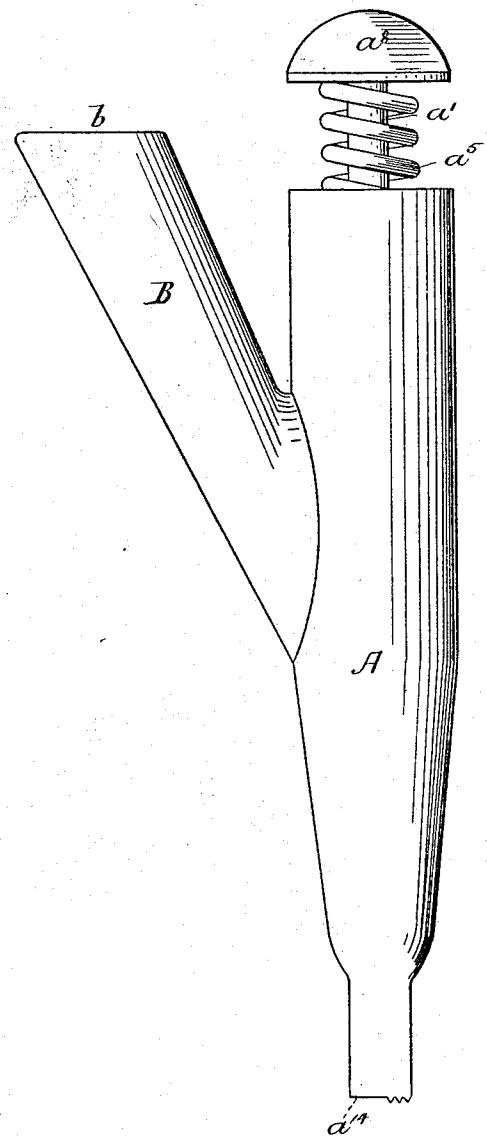


Fig. 1.



Fig. 6.

Fig. 2.

WITNESSES

J. M. Dolan.

Fred. B. Dolan.

INVENTOR

Geo. W. Copeland
by his attys
Clarke & Raymond.

N. PETERS. Photo-Lithographer, Washington, D.

Nail Driving.

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(No Model.) 2 Sheets—Sheet 2.

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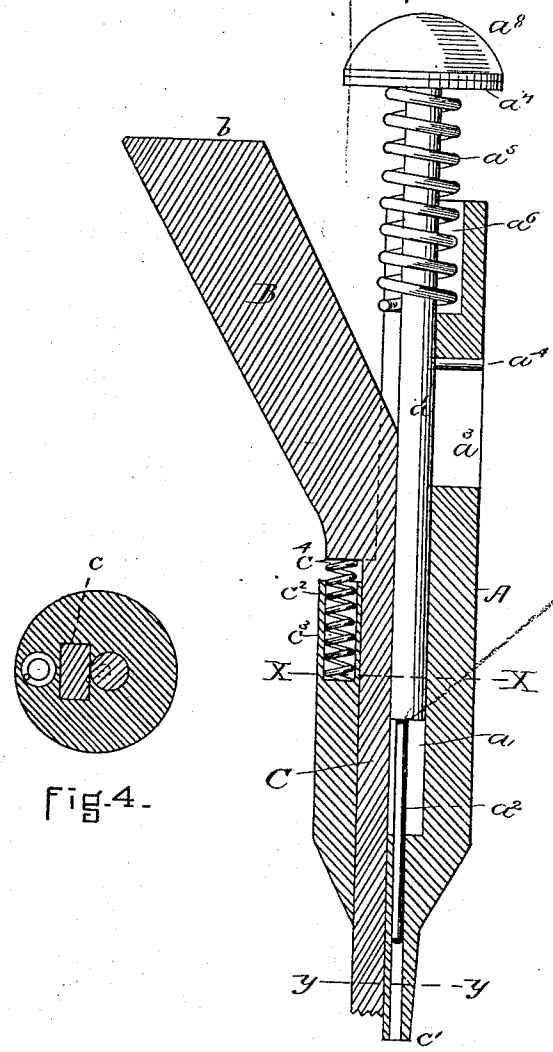


Fig. 3.

Fig. 4.

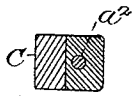


Fig. 5.

WITNESSES

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227 - 147

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G. W. COPELAND.

BOOT AND SHOE LASTING TOOL.

No. 329,278. Patented Oct. 27, 1885.

To all whom it may concern:

Be it known that I, GEORGE W. COPELAND, of Malden, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Boot and Shoe Lasting Tools, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention is especially adapted for use in connection with my heel-lasting device described in my application of even date herewith; and it comprises a combined hammer or tool for folding over and pressing down the edge of the upper, and a fastening driving device. In the said application, and another application of even date herewith for the process of lasting the heels of boots and shoes, I have shown and described a method of lasting the heels of boots or shoes, which consists in clamping the portion of the upper about the heel of a last firmly to the sides of the last, and in such a manner that when pressure is applied from above the projecting or upward, extending edge of the upper, and the parts associated therewith—namely, the lining and stiffening or counter—are caused to be folded or turned down upon the insole in such a way as to make a perfect corner or edge upon the line of the fold, and so that in the act of turning down or folding the margin of the upper is pressed inward from the edge of the insole by a direct downward movement. This is caused by extending the abutment which holds the upper to the side of the last upward above the insole, so that when the upper is folded down it cannot move outward from the last or insole, the abutment preventing it from so doing.

In the drawings, Figure 1 is a side elevation of my improved tool. Fig. 2 is a view part in side elevation and part in the vertical section thereof. Fig. 3 is a vertical central section illustrating a modified form of the device. Fig. 4 is a horizontal section upon the line $x\ x$ of Fig. 3. Fig. 5 is a horizontal section upon the line $y\ y$ of Fig. 3, and Fig. 6 is a plan view of the working-surface of the tool inverted.

A represents the stock of the machine. It has a hole, a, extending through it for the reception of the driver bar or rod a', which holds or supports the driver a^2. The extent of the movement of this rod is limited by the slot a^3 and the pin a^4. A spring, a^5, which extends into the recess a^6 in the upper end of the stock and bears against the lower edge, a^7, of the knob a^8 upon the end of the driver-bar a', serves to withdraw the driver after the fastening has been driven. The stock has at its lower end a recess, a^9, having a screw-thread, a^{10}, which receives the upper end, a^{11}, of the nozzle a^{12}. This nozzle has a hole, a^{13}, in which the driver is reciprocated, and the lower end or surface, a^{14}, of the tool is made flat and of considerable size, as represented in Fig. 6, so as to form a working-surface of sufficient extent to bear upon the margin of the upper and fold it over in large or comparatively large sections. I prefer to provide the forward edge of this surface with the roughened or the corrugated section a^{15}, in order that the edge or margin of the upper folded or turned over may be held thereby in position, and so that it shall not draw back during the driving of the fastening.

It is the intention in using the tool to apply the lower surface adjacent to the corner a^{16} to the upper adjacent the abutment, and then turn the tool from that point so that its working-surface shall be gradually brought into line parallel with the insole, and to then strike the tool a blow with a mallet or hammer, whereby the upper is forced down with considerable pressure, and then to immediately drive the fastening while it is under the influence of the pressure obtained by the blow.

In order that this blow may be delivered and the pressure obtained, I have provided the stock with the projection B, upon the upper surface, b, of which the blow of the hammer is given. Of course this striking-surface may bear any other position in relation to the stock than that shown.

The fastening driving device which I have shown employs, to hold the fastening, the magnetized driving-bar, which holds the fastening to its under or driving surface by its head through its magnetic attraction, and to load the device the driver is moved down by the driver-rod until its surface is flush with the surface a^{14}, or very nearly flush, and the tack placed thereon; but I do not confine myself to this form of feeding the tacks to the driving mechanism. I may use in lieu thereof

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any of the tack feeding and driving devices described in the various patents to Erastus Woodard, Matthias Brock, and myself, which are especially adapted for feeding and driving tacks from tack-strips.

In Figs. 3, 4, and 5 I have shown a modified form of construction, in which the striker, while forming a part of the combined tool, is independently movable in the stock. In this modification the stock A has the hole *c* formed therein, through which the arm or portion C of the stock extends, and the striker is held when not in use removed or above the lower surface, *c'*, of the nozzle by means of the spring c^2, which is held in a hole, c^3, in the stock, and bears against the shoulder c^4 of the arm B. This construction enables me to use the fastening driving device to drive the fastening a little closer to the edge of the insole. It also enables me to strike a blow of more force or effect than if the striker were placed upon the work before the blow was delivered.

In operation the tool is held in one hand and operated as above described, and the mallet or hammer in the other; and the mallet is used not only for delivering the blow for obtaining the pressure upon the upper above described, but also for striking the head of the driver-bar.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. A lasting-tool having a fastening driving device, a working-surface of the character described, and the pressure or impulse receiving surface *b*, all substantially as and for the purposes described.

2. A tack-driver consisting of the tube or cylinder provided with a suitable nose at its lower end, and containing a nail driver or plunger, in combination with the lateral impulse-receiving device connected therewith, substantially as described, and for the purposes set forth.

GEO. W. COPELAND.

Witnesses:
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