

J. BRACKETT.
Lasting Boots and Shoes.

No. 141,420.

Patented August 5, 1873.

Fig. 1.

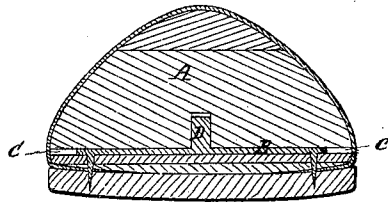


Fig. 2.

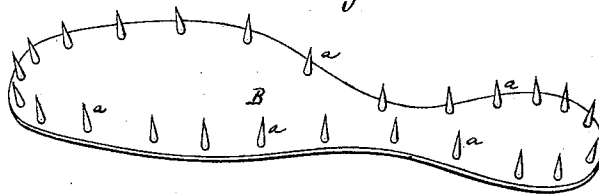


Fig. 3.

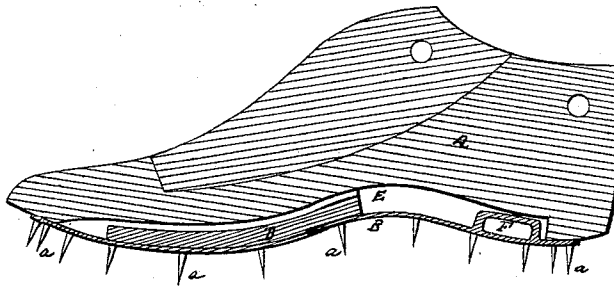


Fig. 4.

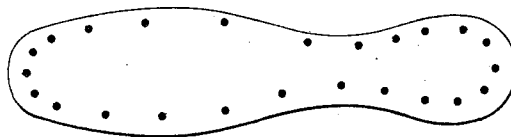
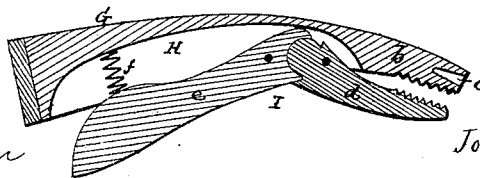


Fig. 5.



Witnesses.
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JOSEPH BRACKETT, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN LASTING BOOTS AND SHOES.

Specification forming part of Letters Patent No. **141,420**, dated August 5, 1873; application filed June 6, 1873.

To all whom it may concern:

Be it known that I, JOSEPH BRACKETT, of Lynn, in the county of Essex and State of Massachusetts, have invented a new Mode of Lasting Boots and Shoes, of which the following is a specification:

This invention includes the lasting of boots and shoes directly without the intervention of tacks, nails, stitching, or other agents outside of the last upon which such boot or shoe is lasted, and while this invention comprehends, broadly, the lasting of boots and shoes without tacks, or sewing, or other extraneous means, and with or without the use of an insole, it will be found to embody features of mechanical construction in themselves novel, by which the lasting is carried out. As one method of carrying out my object this invention consists in the employment of a plate or false bottom of the contour of the tread of a last, but of somewhat less size, this plate being supplied with a series of sharp spurs, which are arranged about its boundary, at suitable distances asunder, as hereinafter explained, and with a spline or rib to enter a channel in the tread of the last, or with other suitable means of insuring a uniformly accurate position of the plate upon the last, these said spurs serving not only to securely hold the upper of the boot when drawn down upon them tightly about the last, but of confining the outsole also securely in place, while the latter and the upper are being sewed together.

The drawings accompanying this specification represent in Figure 1 a vertical cross-section of a boot and last and adjuncts, as lasted under my system. Fig. 2 is a view of the false bottom or plate, to be explained; and Fig. 3, a longitudinal section of the last and its false bottom. Fig. 4 is a plan view of an insole perforated to meet certain requirements incident to my invention. Fig. 5 is a longitudinal section of the pinchers I employ as an aid in carrying out my invention.

In carrying out my system of lasting, as herein referred to, I proceed substantially as follows: I employ an ordinary last, A, as my system compels no marked change in this respect; and I produce a thin metallic plate, B, of the form of the tread of the last, but of a size to leave a narrow intervening space, C, be-

tween the boundaries of the two of a uniform or about uniform width, by which the sewing of the sole to the upper may be performed without the needle coming in contact with such plate. This plate and the last are to be formed or provided with means for easily and instantly bringing the two to their proper relative positions when applied together, such means, for instance, being a longitudinal central spline or rib, D, departing from the rear or inner face of the plate, and entering a central and longitudinal channel, E, created in the bottom or tread of the last, the plate or false bottom B being further provided with an eye, F, or its substitute, by means of which it (the plate) may be withdrawn from the boot after the sewing on of the outsole has been effected. Upon the outer face or tread of the plate or false bottom B, I form or attach a series of pointed spurs or teeth, *a a*, &c., these teeth being disposed near to the edge of the plate throughout its entire boundary, and being at such distances apart as practice may determine to be proper or necessary.

In Fig. 5 of the accompanying drawings I have represented a pair of pinchers, which will be found highly useful if not indispensable in carrying out my present mode of lasting. In producing these pinchers I provide a stout metallic bar or handle, G, hollow or channeled for a greater part of its length, the outer end or jaw *b* of such handle being formed with a small cell or recess, *c*, into which one of the spurs *a* may easily enter. Within the channel or chamber H of the handle G I dispose the auxiliary jaw I of the pinchers, which is composed of a smaller portion, *d*, and a longer portion or lever-handle, *e*, the two being pivoted to the stock G, as shown, and united by a knuckle or other suitable joint, whereby an inward movement of the handle *e* toward the handle or stock G will cause a meeting of the jaws *b* and *d*, such jaws being forced asunder by a spring, *f*, interposed between said handles *e* and G.

In lasting a boot under my system, and with means shown in the plate B, I place this plate upon the bottom of the last, and insert the whole within the upper of the boot, in the usual manner. With the aid of the pinchers, hereinbefore explained, I seize the edge of the

upper, and draw the latter over upon the plate or false bottom B, and press such edge down upon the spurs *a* in succession, the under jaw of the pinchers serving as a fulcrum to facilitate this drawing over of the upper, and the recess or pocket serving to receive the spur and enable the workman to press the upper forcibly down upon and about such spur. As the upper is drawn forcibly inward by the workman, when being pressed over upon the spur, the return tension of such upper compels it to retain a firm hold upon the spur, and maintain itself securely in place thereupon.

It might, perhaps, appear to the casual observer that sufficient relaxation of the stretch of the upper would take place as it was brought down over the spur to cause a loose fit of the boot about the last; but, in practical use, quite the contrary is the result; and I am now lasting boots under my system more perfectly and smoothly than has ever heretofore been accomplished.

The spurs *a a*, &c., are to be of such length as to protrude through and above the upper a short distance; and when the entire upper has been drawn over and secured about these spurs the outsole is to be pressed or hammered down upon their protruding points, which hold the sole to the upper with sufficient tenacity to enable the sewing to be effected.

The upper having been lasted as explained, the main body A of the last is removed from the boot, and the sewing of the sole to the upper performed, the plate B remaining in the boot until the sewing is completed, when it is withdrawn.

If an insole is to be employed it is to be placed upon the plate B, as shown in Fig. 1 of the accompanying drawing, before the upper is applied, and this insole is to be punctured with a series of small holes to receive the spurs *a a*, &c., as shown in Fig. 4. These holes *a a*, &c., are to be or may be punched at the time the sole-blank is cut out, and for this purpose multiple punches may be secured to the sole-cutting die to do the whole at one operation. It will thus be seen that I am enabled to last a boot or shoe with or without an insole with equal facility, but it will undoubtedly be found desirable or necessary, as a precaution against defacement of the outsole, to provide two series of false bottoms with teeth of variable lengths, as the teeth of a plate adapted to last a boot with an insole would be too long for one without an insole, and vice versa. The spurs *a a* maintain a hold upon the upper equally as powerful as the strongest stitching, while by

their use I am enabled to last a boot in much less time than has heretofore been possible. The cost of tacks or nails on the one hand or of thread on the other, and the time consumed in their use, are saved. I also avoid defacing the outsole by nailing it to the last or insole, as now practiced, and I produce a boot or shoe absolutely without a tack or nail, as none are used in its manufacture.

Various modifications may be made in the mode of applying the spurs *a a* (or the same and their support) to the last; and, in fact, I have myself applied them in various ways in the many experiments I have made. Therefore, I do not limit myself to the employment of the spurs as applied to the plate B, but consider my invention to embrace their use in connection with a last.

It has been deemed necessary to a full understanding of my system of lasting and explanation of the best way of carrying it into effect, to represent and describe pinchers adapted to be used in conjunction with the holding-spurs. These pinchers, however, I intend to make the subject of a separate application for Letters Patent, and no claim is therefore here made on them.

I claim—

1. A last provided with a bottom armed with spurs or holding devices, over and upon which the edges of the upper are stretched and by which they are held, whether in conjunction or not with an insole or outsole or both, with out the aid of extraneous devices, substantially as set forth.

2. The combination, with a last of otherwise ordinary or suitable construction, of a removable bottom adapted to be fitted to the bottom of the last, and provided on its outer face with a series of spurs or holding devices, substantially as and for the purposes shown and set forth.

3. In the herein-described process of lasting boots and shoes, an insole perforated with a series of small holes coinciding with the teeth or spurs on the last which confine the upper in place about such insole, substantially as and for the purposes shown and set forth.

4. For lasting purposes a plate or false bottom employed with a last, and containing a series of spurs or their equivalents for seizing hold of and retaining the upper and sole in place, substantially as and for the purposes stated.

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Witnesses:

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