

(No Model.)

T. LAYCOCK.

MANUFACTURE OF BOOTS AND SHOES.

No. 254,102.

Patented Feb. 21, 1882.

Fig. 1.

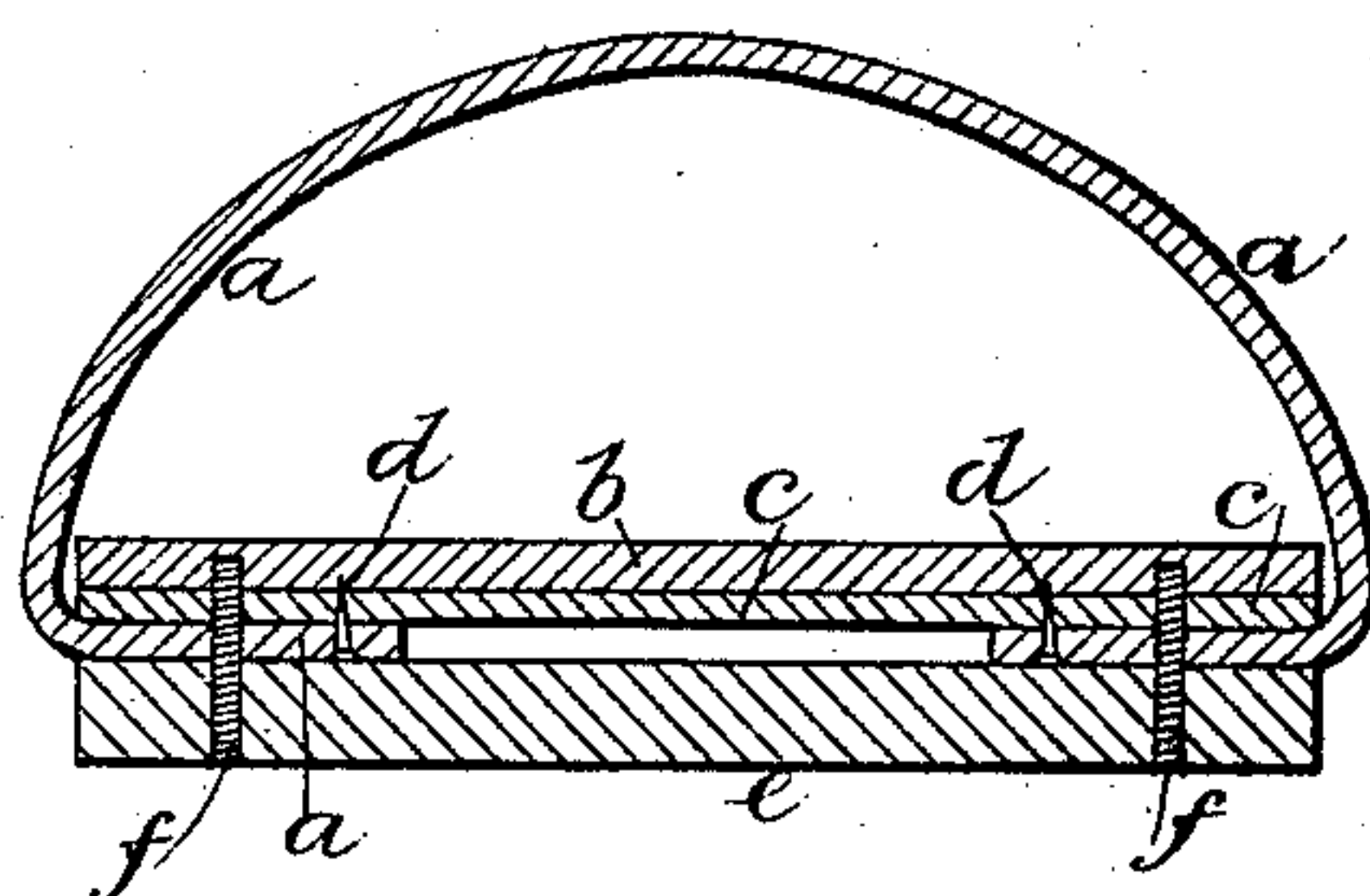
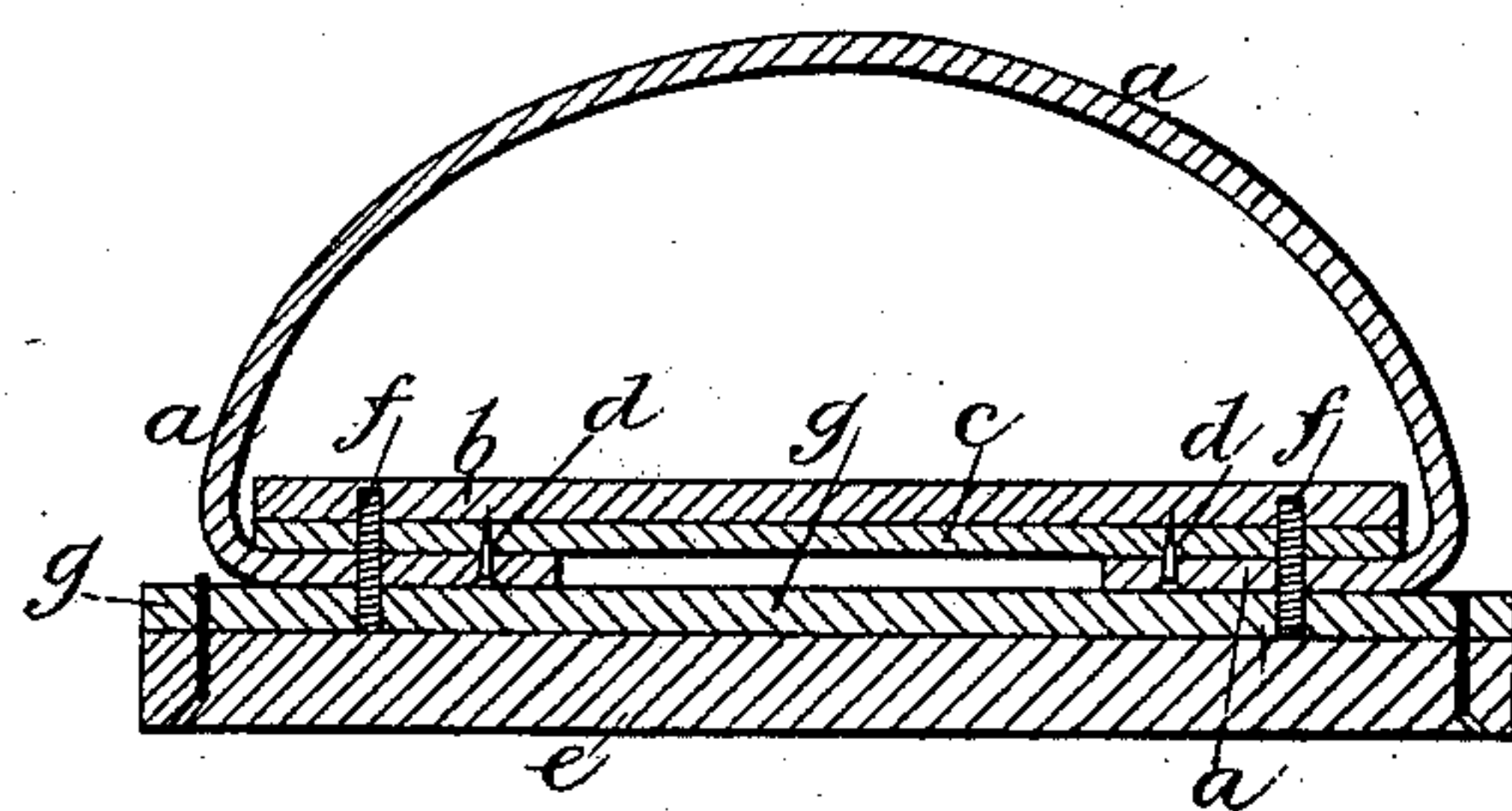


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

THOMAS LAYCOCK, OF NORTHAMPTON, ENGLAND.

MANUFACTURE OF BOOTS AND SHOES.

SPECIFICATION forming part of Letters Patent No. 254,102, dated February 21, 1882.

Application filed November 7, 1881. (No model.) Patented in India November 4, 1881.

To all whom it may concern:

Be it known that I, THOMAS LAYCOCK, a subject of the Queen of Great Britain, residing at Northampton, England, have invented new and useful Improvements in the Manufacture of Boots and Shoes, of which the following is a specification.

This invention relates to improvements in the manufacture of boots and shoes, whereby the sock now usually employed in machine-made boots for covering the tacks, tingles, and the like projecting from the surface of the insole is not required; and the improvements consist in manufacturing boots and shoes with what I term a "double insole," forming a combined insole and sock, in the manner substantially as hereinafter described.

In carrying out my invention the upper is manufactured in the usual manner; but instead of employing the usual insole, I employ an insole made of two thicknesses or parts. The upper is lasted to one of these parts of the insole in the usual manner, and the middle and outer soles tacked on. The boot is then removed from the last, and the second part of the insole (which takes the place of the ordinary sock) is placed over the first part of the insole in the inside of the boot. The soles are then screwed to the double insole, the screws passing through the outer sole, upper, and inner sole and into the insole or sock.

In cases where the outer sole is sewed to the middle sole or welt the middle sole or welt is screwed to the double insole in a similar manner to that hereinbefore described.

Where the outer and middle soles are sewed to the insole the second part of the insole (taking the place of the usual sock) is subsequently fixed by a sufficient number of screws, either from the middle sole or welt or from the outer sole.

In the accompanying drawings, Figures 1 and 2 represent cross-sections of boots manufactured according to my invention, similar letters in both the figures representing similar parts.

In Fig. 1, *a* is the usual upper; *b* and *c*, the two parts or thicknesses forming my improved insole. The upper *a* is lasted to the part *c* by the tangles *d* in the usual manner, and the outer sole, *e*, tacked on. The boot being then removed from the last, the second part, *b*, of

the insole (which takes the place of the ordinary sock) is then placed over the first part, *c*, of the insole. The outer sole, *e*, is then screwed (by the Standard screw-machine or any other suitable screwing-machine) to the double insole, the screws *f* passing through the outer sole, *e*, the upper *a*, and the part *c* of the insole, and into the part *b* of the insole, so as to secure the latter to the lower part, *c*, of the insole.

Fig. 2 shows a section of a boot in which the outer sole is sewed to the middle sole or welt. In this case the middle sole or welt, *g*, is screwed to the double insole in a similar manner to that shown for the outer sole in Fig. 1. The outer sole, *e*, is then sewed to the middle sole, *g*, in the usual manner.

By the employment of this improved or double insole it will be evident that the ends of the tacks, tingles, and the like projecting from the surface of the under portion of the double insole will be covered by the upper portion of the insole, so that the sock usually employed will not be required, and boots and shoes manufactured according to my invention will be smoother on the insole than those made by hand.

Having thus described the nature of my said invention and the best means with which I am acquainted for carrying the same into effect, I would have it understood that what I claim is—

1. That improvement in the manufacture of boots and shoes provided with a double insole or combined sock and insole, consisting in lasting the insole to the upper as usual, then removing the last and placing within the lasted shoe an additional insole or sock, and then attaching an outer sole and securing all the parts together by screws passing through the outer sole, upper, inner sole, and into the second inner sole or sock, all substantially as set forth.

2. A boot or shoe having its outer sole, upper, and double inner sole connected together by screw-fastenings passing through the outer sole, upper, and inner sole and into the insole or sock, all substantially as set forth.

THOMAS LAYCOCK.

Witnesses:

G. F. REDFERN,
F. PRICE.