

(No Model.)

A. G. GARDNER.

INNER SOLE FOR BOOTS OR SHOES.

No. 301,226.

Patented July 1, 1884.

Fig. 1.

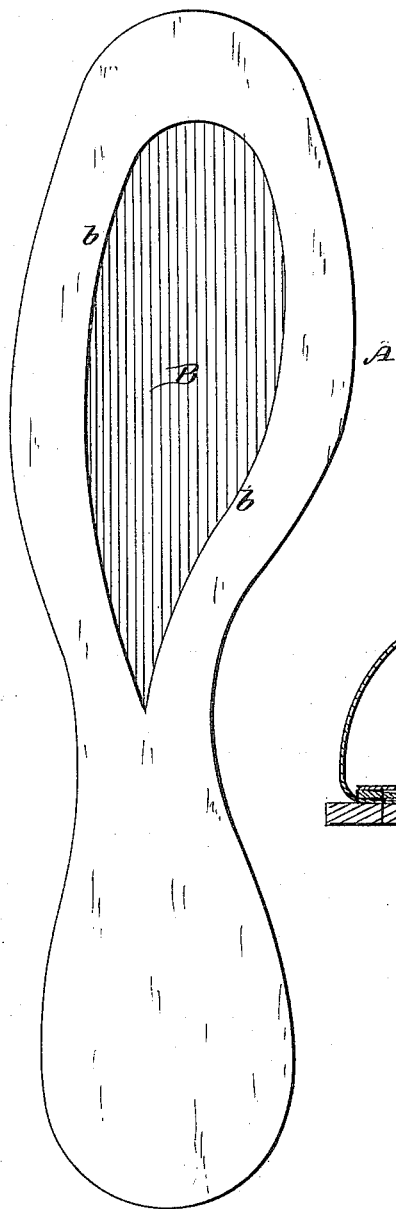


Fig. 2.

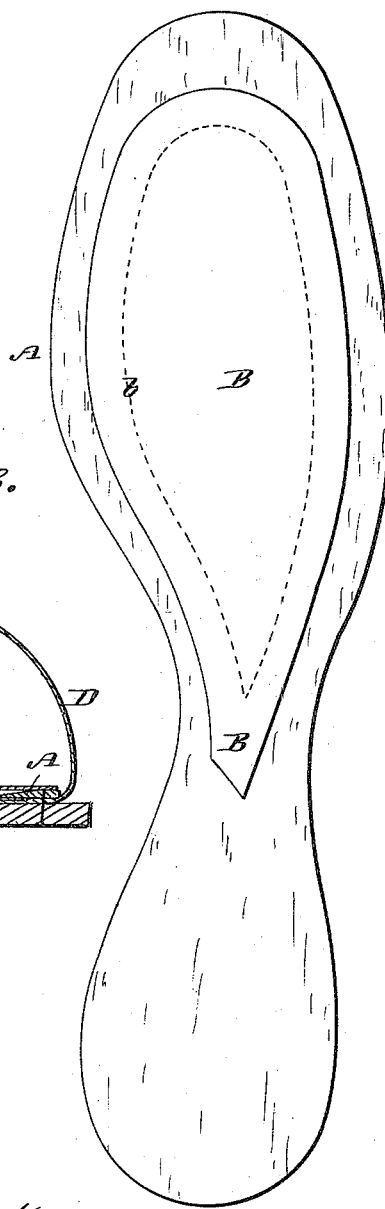


Fig. 3.

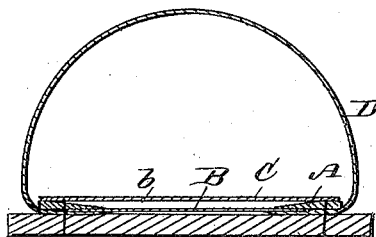
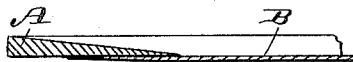


Fig. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

ALBERT G. GARDNER, OF PORTSMOUTH, OHIO.

INNER SOLE FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 301,226, dated July 1, 1884.

Application filed April 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALBERT G. GARDNER, of Portsmouth, in the county of Scioto and State of Ohio, have invented a new and Improved Flexible Inner Sole for Boots and Shoes, of which the following is a full, clear, and exact description.

This invention consists in a flexible inner sole for boots and shoes, having a flexible filling in its center for any portion of its length, substantially as hereinafter described, and whereby the "brace" is taken out of the inner sole against the outer sole without damaging the wear of the boot or shoe, or interfering with its manufacture or repair, and a heavier outer sole may be used, and a flexible boot or shoe is obtained by its relief of such strain or brace.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents an upper face view of my improved flexible inner sole, and Fig. 2 an under view of the same. Fig. 3 is a transverse section through the upper and sole portion of a shoe, with my improved inner sole secured to its place; and Fig. 4, a transverse section, upon a larger scale, of a portion of the inner sole.

A indicates the inner sole or main part thereof, and which may be made of leather of the usual stoutness of ordinary inner soles, but which is cut out in its center, leaving an enlarged longitudinal opening, *b*, through it, the marginal configuration of which may correspond with the shape of the portion of the sole in which it is made. A filling, B, of soft and flexible leather or other material, is then applied to this opening *b*, and may be stitched or connected to its place therein from the under side of the sole, so as to form a flexible closing-piece to said opening, the marginal portions of the leather around which may be chamfered to give a varnishing finish at the edges. Over this filled inner sole may be the usual or any suitable sole lining or cover, C.

A flexible inner sole constructed as above

described will take out the brace of the inner sole against the outer sole, C, with which and the upper D it may be united by stitching or otherwise. This it will do without damaging the wear of the shoe, and it admits of a heavy outer sole being used, the relief from strain or brace, as specified, making a flexible shoe of the whole.

The flexible filling is here only shown applied to the whole length of the "bend of the foot," where flexibility is required, said inner sole being left solid in the shank to stay the heel and keep the shank from breaking down.

It is not necessary that this flexible inner sole should be made out of whole stock, as it might be made cheaper in the form of a pieced one from narrow strips of leather gotten out of small pieces of scrap-leather glued or cemented together to make a pieced flexible inner sole. Such improved inner sole is applicable to all boots and shoes having inner soles. It even would improve a hand-made shoe, and is applicable to all others, making them more closely resemble a hand-sewed shoe than any or most other flexible ones in use, nor would it entail any more cost to "last" the shoe than ordinary or regular work does, and there is no increase of work in sewing by machine. The expense of constructing and fitting such inner sole need be but a trifle more than what any ordinary inner sole requires, as the central opening in the main part or leather of said sole may be cheaply done by dies, and the filling be readily stitched or cemented to its place. The shoe, too, can be sewed if it rips, and half-soles be sewed, nailed, or pegged on, or the shoe generally can be repaired as easily as any ordinary shoe which is not flexible, whereas most other shoes having flexible inner soles cannot be so repaired with facility.

By the use of this flexible inner sole, a machine-made shoe will be deprived of that stiffness and hardness which is so objectionable in shoes so made.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The inner sole, A, cut out or recessed

to form the opening *b*, and a soft and flexible filling, *B*, secured within said opening, substantially as set forth.

2. In an inner sole for boots and shoes,
5 having a central longitudinal filling of greater flexibility than the main or remaining portion of said sole, the main part of the sole having a central longitudinal opening made

in it, in combination with a flexible filling or covering piece applied to said opening, and 10 stitched or cemented to the main part of the sole, essentially as described.

ALBERT G. GARDNER.

Witnesses:

ALEX. C. WOODROW,
N. W. EVANS.