(No Model.)

J. F. HUDSON & J. BURRILL.

Horn-Bearing for Boots and Shoes.

No. 227,631. **Patented May 18, 1880.**

Fig. 1.

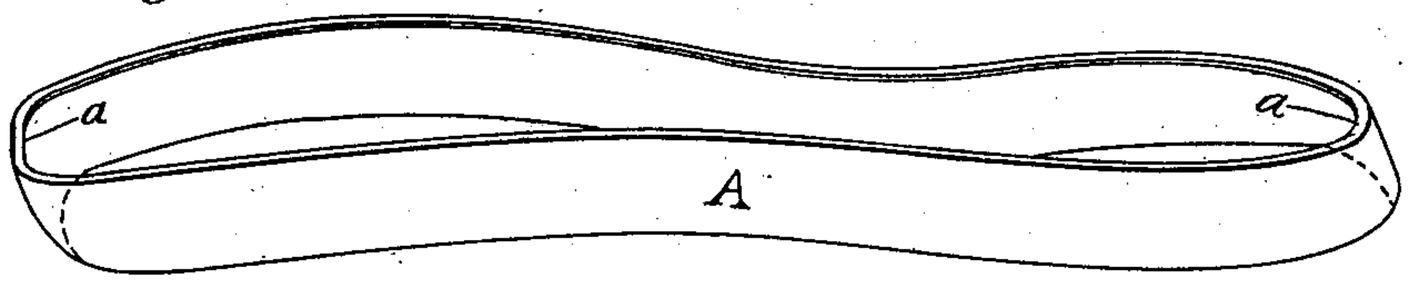


Fig. 2.

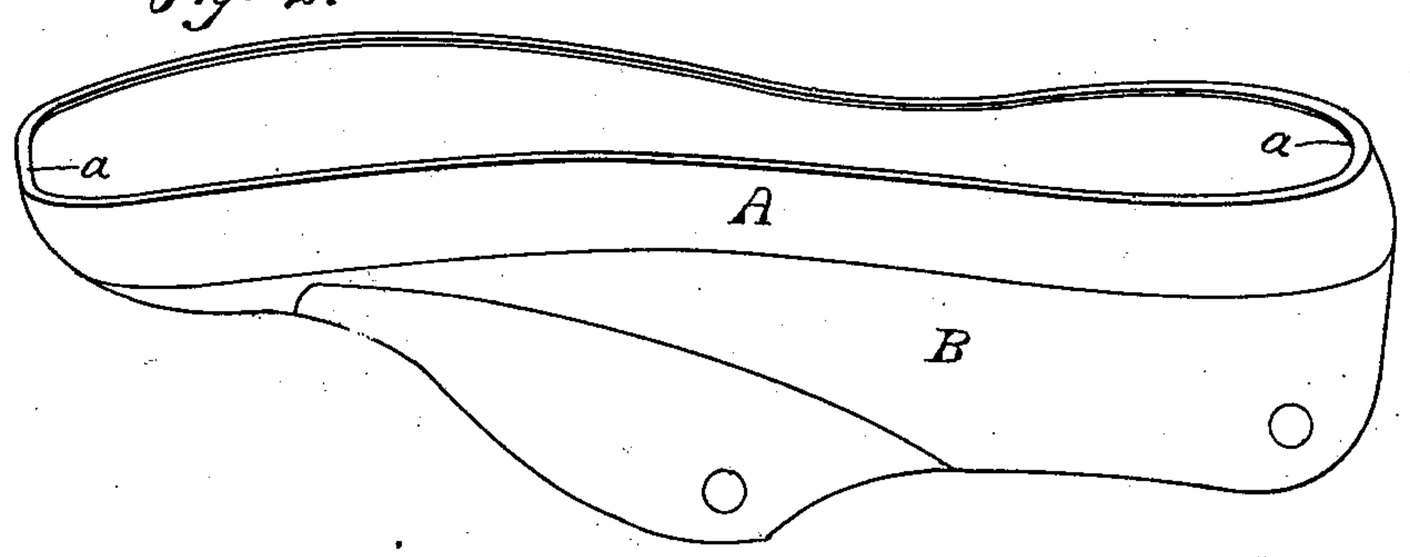
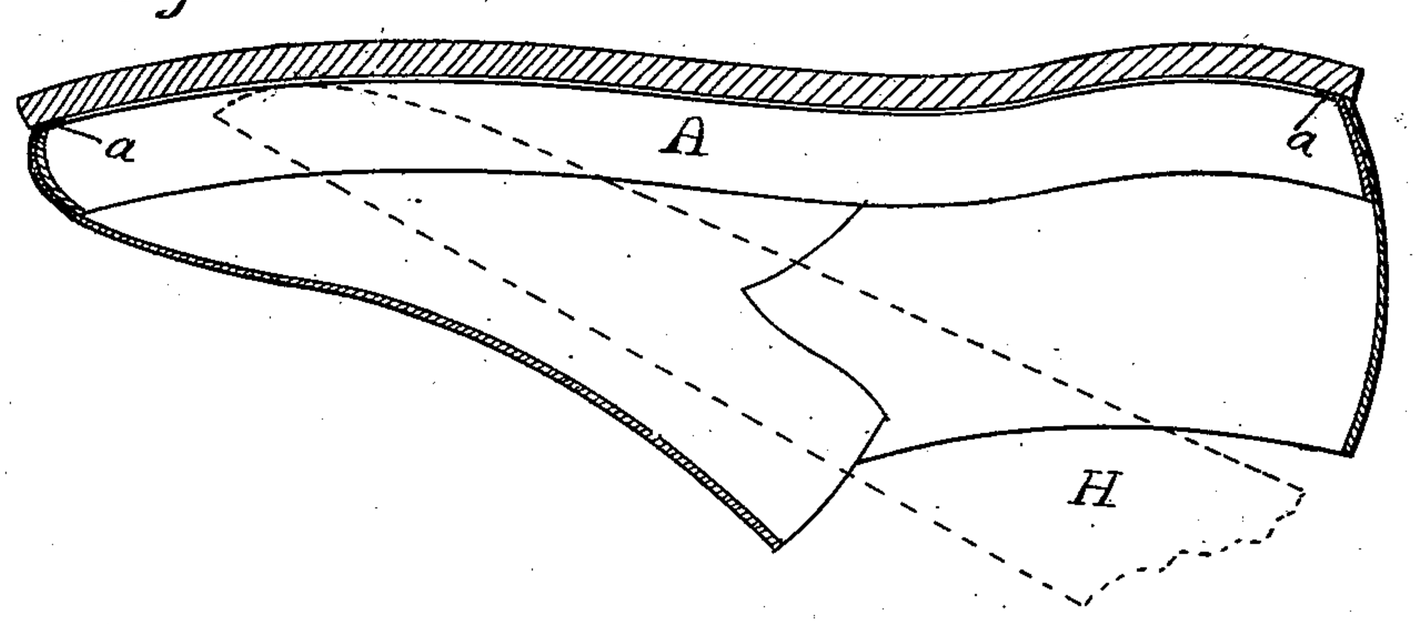


Fig. 3.



Witnesses:
W. G. Wadlin
Geo. W. Pierce

Inventors:
J. F. Hudson.
J. Burrill
by Wright & Brown Attys.

UNITED STATES PATENT OFFICE.

JAMES F. HUDSON AND JOSEPH BURRILL, OF LYNN, MASSACHUSETTS, ASSIGNORS OF ONE-HALF OF THEIR RIGHT TO GEORGE W. LASCELL AND ALONZO H. WHITTEN, OF SAME PLACE.

HORN-BEARING FOR BOOTS AND SHOES.

SPECIFICATION forming part of Letters Patent No. 227,631, dated May 18, 1880.

Application filed March 15, 1880. (No model.)

To all whom it may concern:

Be it known that we, JAMES F. HUDSON and JOSEPH BURRILL, both of Lynn, in the county of Essex and State of Massachusetts, have invented certain Improvements in Horn-Bearings for Boots and Shoes, of which the following is a specification.

This invention has for its object to provide a smooth metallic surface on the interior of a boot or shoe, to serve as a bearing for the work-supporting horn of a McKay or other sewing-machine while the sole is being sewed.

In the operation of the McKay sewing-machine (so called) the stitching of the sole commences at the shank on one side, and is continued around the sole to the other side of the shank, or to the starting-point, the operator pressing the upper of the boot or shoe inwardly against the horn to keep the stitches in the channel of the sole, and the feed of the machine moving the boot or shoe along as the stitching progresses, so that the horn is in rubbing contact with the lining of the boot or shoe, and is liable to displace the lining and cause it to gather or pucker, particularly in the region of the toe. Moreover, the upper is liable to yield too much when it is pressed against the horn by the operator, so that the line of stitching will sometimes be irregular or wavy.

Our invention is designed to obviate these difficulties; and it consists in a sheet-metal shell formed to fit snugly against the sides of the last on which the boot or shoe is made, and provided, preferably, with a narrow inwardly-projecting flange formed to fit snugly against the margin of the bottom of the last. Said shell is placed on the last without being attached thereto, and the boot or shoe is lasted upon the shell, the latter remaining in the boot or shoe when the last is withdrawn, and constituting a smooth frictionless track or surface to move upon the horn and prevent the lining and upper from being displaced or puckered, and the boot or shoe from being moved too far by the lateral pressure exerted by the operator, all of which we will now proceed to describe.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of our improved shell. Fig. 2 represents a similar view of the same applied to a last. Fig. 3 represents a longitudinal section of a shoe containing our improved shell, showing the relation of the latter to the horn of a sewing-machine.

The same letters of reference indicate the same parts in all the figures.

In the drawings, A represents our improved device, which consists of a shell of sheet metal, formed to fit closely against the sides of an ordinary last, B. The sheet metal comprising the shell is sufficiently thin to render the shell elastic or springy and to prevent it from adding materially to the bulk of the last on which it is placed. The shell is preferably provided with a narrow inwardly-projecting flange, *a*, formed to fit closely upon the margin of the bottom of the last without projecting far enough to come within the path of the needle in the subsequent operation of sewing on the sole.

The shell may be formed in any suitable manner. We prefer to strike it up with dies from a single piece or blank, so that it will have smooth surfaces without seams.

The shell is placed on a last, as shown in Fig. 2, and a boot or shoe is lasted upon it in any suitable manner. The last is then withdrawn, leaving the shell in the boot or shoe, as shown in Fig. 3, the flange being in close proximity to the sole, and the shell bearing against the upper. The boot or shoe is then placed upon the horn H of a sewing-machine and sewed in the usual manner, the shell sliding easily along the surface of the horn, keeping the lining in place and preventing any local displacement of the upper by the pressure exerted by the operator against the horn. The flange *a* bears upon the upper surface of the horn outside of the needle-hole, and prevents the horn from touching the bottom of the boot or shoe. The narrowness of the flange precludes the possibility of the metal ever getting in the track of the needle, as the flange cannot possibly reach the needle-hole in the horn on account of the shell resting against the end of the horn, keeping the edge of the flange back from the path of the needle at all times.

We have found that the flange enables us to dispense with an inner sole, which has heretofore been deemed essential as a bearing for the horn, and by dispensing with the inner sole we increase the elasticity of the bottom.

It will be seen that the shell is pressed against the upper by the horn, and forms a guide which prevents the stitches from deviating from the proper line, and prevents such local outward pressure as is produced by the limited surface of the horn when the latter bears directly against the lining and upper, as heretofore. The shell also enables the sole to be channeled and stitched nearer the edge than it could otherwise be done, the reason being that in pressing the shoe against the horn the shell crowds the shoe-upper outward evenly along a considerable distance, which renders it practicable to stitch very near the edge.

The elasticity of the shell enables it to be readily removed from the boot or shoe after sewing, and to expand to release the last when the latter is withdrawn.

We claim—

The sheet-metal shell A, provided with the flange *a* and adapted to removably fit the sides of the last, whereby, when the last is withdrawn for the purpose of sewing, the shell may be left in position within the shoe to serve as an angular bearing for the top and side of the horn, as set forth.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, this 11th day of March, A. D. 1880.

JAMES F. HUDSON.
JOSEPH BURRILL.

Witnesses:
WARREN FOWLER,
PHEBE A. BLOOD.