

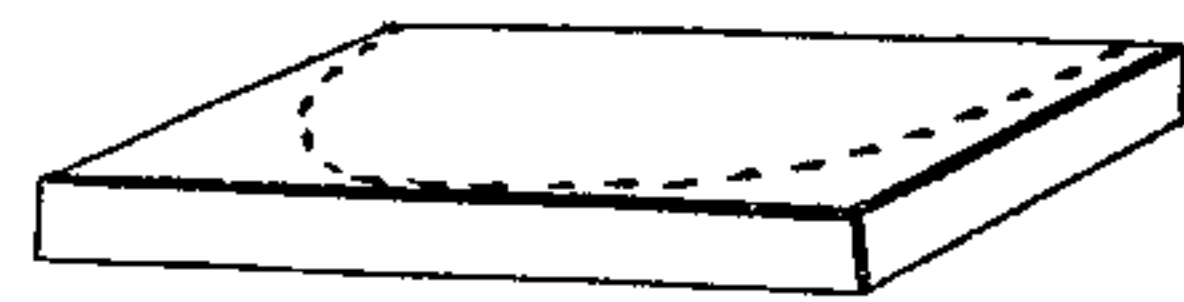
A. VAN WAGENEN.

MANUFACTURING LEATHER TIPS FOR BOOTS AND SHOES.

No. 182,002.

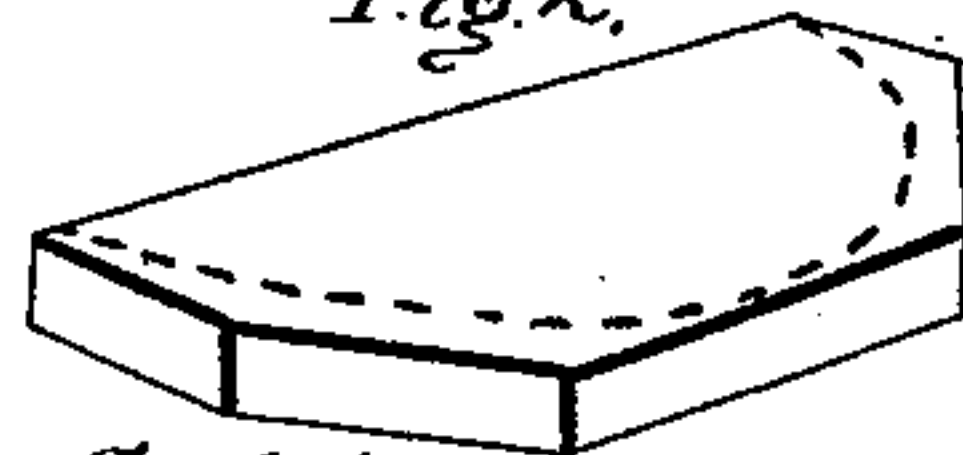
Patented Sept. 5, 1876.

Fig. 1.



Solid Blank

Fig. 2.



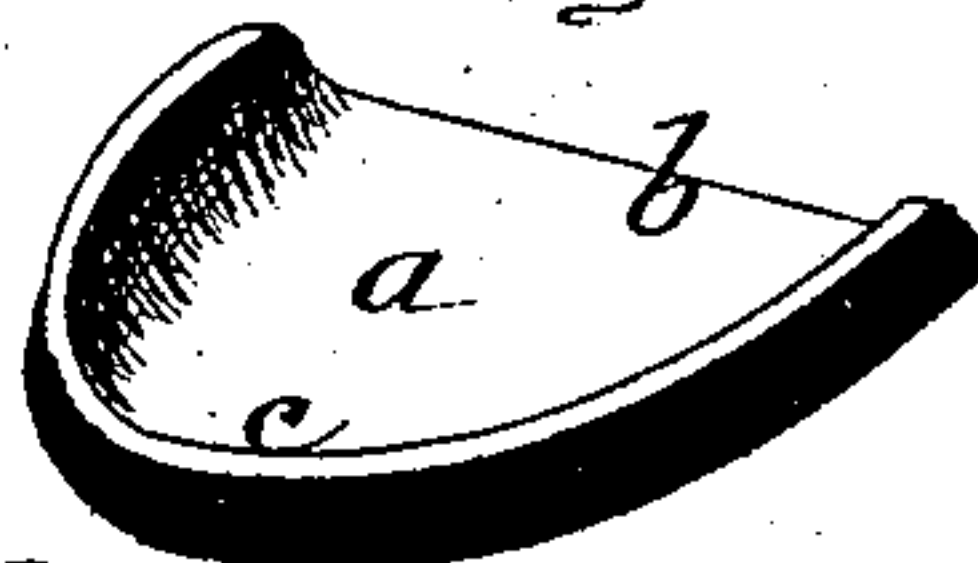
Solid Blank

Fig. 3.



Solid Blank

Fig. 4.



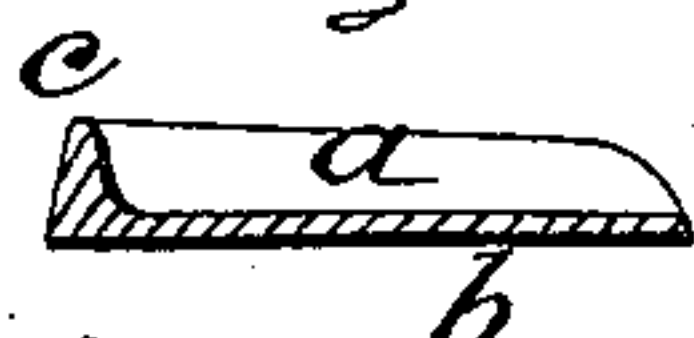
Excavated Tip

Dotted line shows
extent of excavation



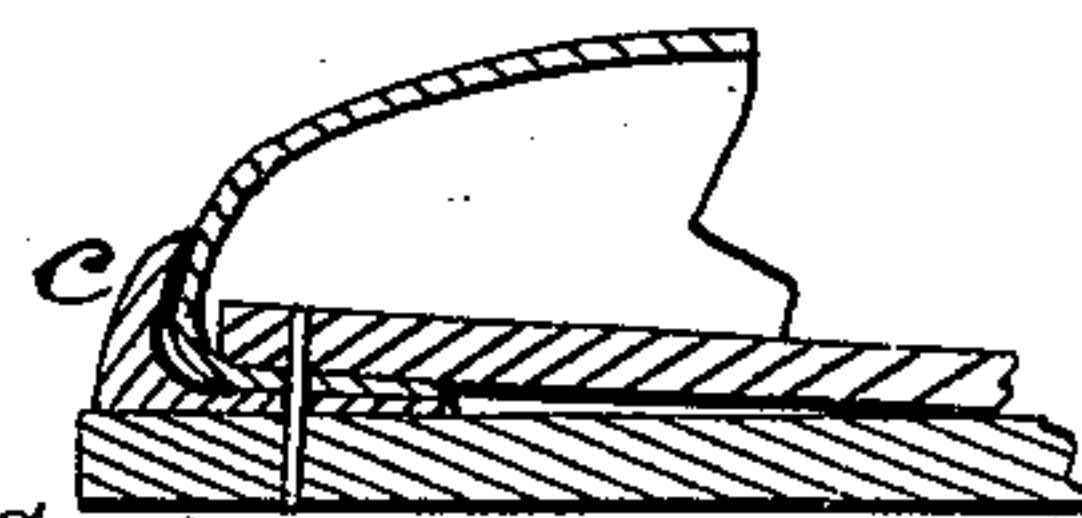
Solid Blank

Fig. 5.



Excavated Tip

Fig. 6.



Section Showing
Tip applied.

Witnesses.

F. B. Townsend,
J. A. Rutherford

Inventor

Albert Van Wageningen
By Johnson and Johnson
His Attys.

UNITED STATES PATENT OFFICE.

ALBERT VAN WAGENEN, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MANUFACTURING LEATHER TIPS FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. 182,002, dated September 5, 1876; application filed August 6, 1875.

To all whom it may concern:

Be it known that I, ALBERT VAN WAGENEN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Leather Shoe-Tips; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

My tip or protector is not formed in the sense in which the leather is compressed and consolidated in dies, but by a new process in which the exterior edge to form the protection is made on a solid piece of leather by burnishing the front portion of the solid blank, and finishing it before cutting out the top surface of the base to reduce its thickness. This saves the use of expensive dies, as the burnishing and finishing of the front edge of the thick blank give the required solidity to that portion of the blank which is to form the protection, and the blank being the full thickness, gives much greater facility for holding the piece while burnishing the front edge, because, if it was cut out before burnishing it, the piece would be too soft and pliable, and would be liable to double up when made in such manner. This gives a cheap and quick way of producing the tip, as shown in the accompanying drawings, in which—

Figure 1 represents a solid piece of sole-leather forming the blank. Fig. 2 shows the same with the front corners removed; Fig. 3, the blank, burnished and finished on the front edge to form the protection; Fig. 4, the excavated blank; Fig. 5, a section of the same, and Fig. 6 a section showing the tip as applied.

I am aware that a blank piece of leather of sufficient thickness to produce when finished a tip with an abrading edge, by cutting out the surface of the blank back of the abrading edge to form the thin base of the tip, has been made, and in which the protecting-rim has been subsequently reduced to its mini-

mum size by being compressed and hardened by the action of dies, of the shape which it is desired to give the tip, and which process requires the tip to be placed in a female die, and pressed therein by a follower with sufficient force to give the tip its desired form, and to condense and harden the leather.

My process is designed to avoid the use of such dies, and to save the expense of having dies, which are required to be of different sizes to make different-sized tips.

The blanks are pieces of sole leather, of sufficient thickness to allow of a suitable depth of excavation to make the protection of the required height, as shown in Figs. 1 and 2, and these are trimmed to the required shape, as shown in Fig. 3, and the trimmed edge is burnished and finished to harden the front edge and receive the coloring. The excavation shown at *a* is then made to form the base *b*, to secure the tip between the upper and the outer sole when fastened thereto. This excavation leaves the toe-protection *c*, which has already been rendered smooth, hard and finished, so that no subsequent operation in dies is necessary to give the required solidity to the protecting-rim. This process of finishing the edge of a thick blank before the tip is formed is new, so far as I know, and the rim *c* (shown in Fig. 4) is so formed at a great saving in expense over all leather-formed tips which require the operation of molding and compression in dies or molds.

I claim—

The process herein described of manufacturing leather tips for boots and shoes, consisting in first cutting the blank from a sheet of leather, then hardening and finishing its outer edge, and, lastly, excavating the top surface to leave the hardened protecting portion, substantially as and for the purpose described.

In testimony that I claim the foregoing I have affixed my signature in presence of two witnesses.

ALBERT VAN WAGENEN.

Witnesses:

A. E. H. JOHNSON,

J. W. HAMILTON JOHNSON.