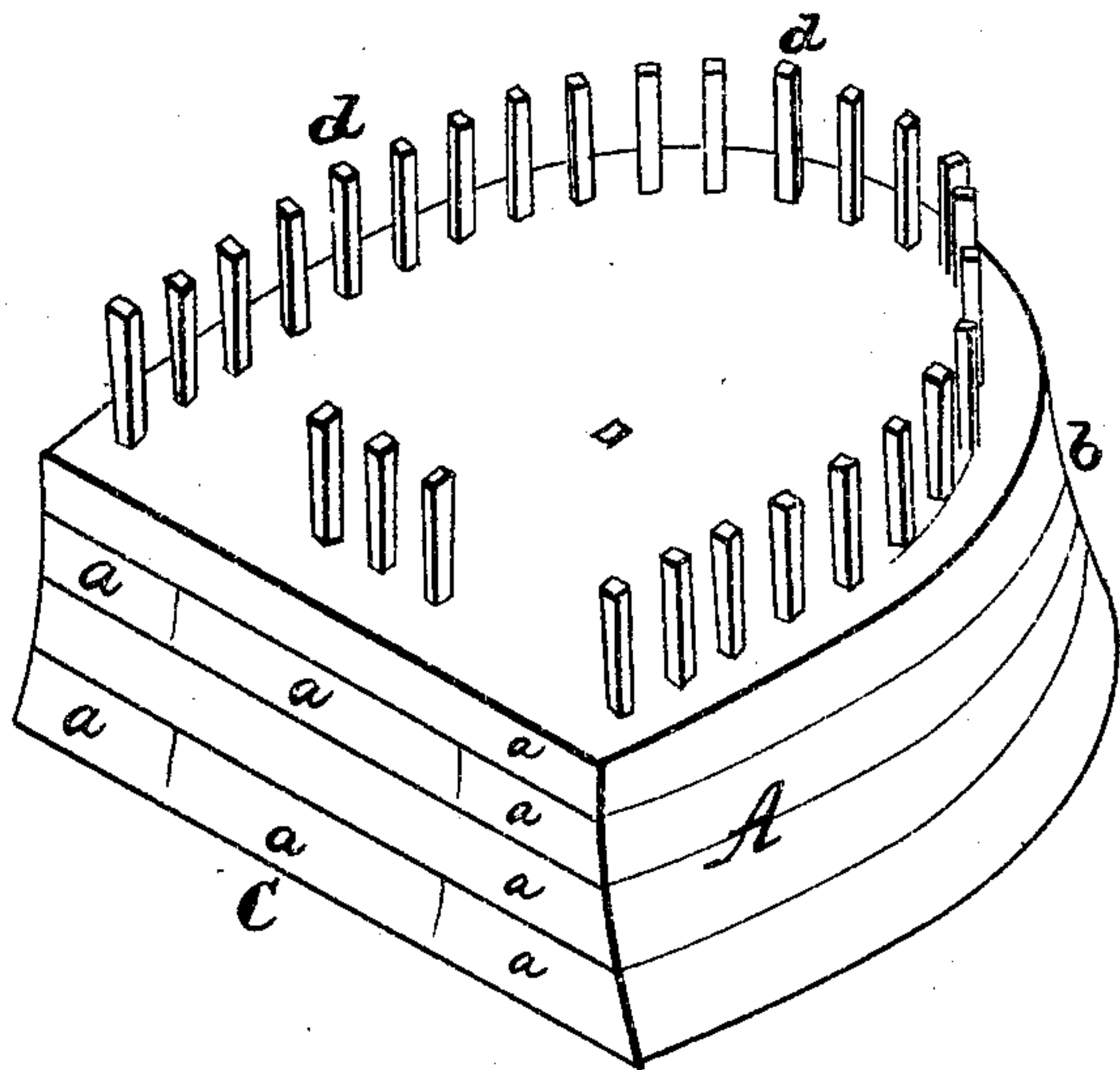


*H. H. Bigelow*

*Blank Heel*

*No 94552*

*Patented Sept. 7. 1869.*



*Witnesses*

*Thos H. Dodge*

*Albert E. Fessie*

*Inventor*

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# United States Patent Office.

H. H. BIGELOW, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 94,552, dated September 7, 1869.

## IMPROVEMENT IN BLANK BOOT-HEELS.

The Schedule referred to in these Letters Patent and making part of the same.

*Know all men by these presents:*

That I, H. H. BIGELOW, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Blank Heels for Boots and Shoes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

The drawing represents a perspective view of one of my improved blank boot-heels.

To enable those skilled in the art to which my invention belongs, to make and use the same, I will describe my said improvements more in detail.

The nature of my invention consists—

First, in a compressed blank heel for boots and shoes, composed of pieces of leather laid up in layers, and then subjected to compression on all sides, as hereinafter explained;

Second, in punching the nail-holes in the heel while the top, bottom, and edges are under pressure, as hereafter explained; and

Third, in punching the holes and inserting the nails, as indicated in the drawing, while the top, bottom, and edges are under pressure, as hereafter explained.

In the drawings—

A represents a blank heel, composed of pieces *a*, of leather.

After the pieces *a*, of leather, have been laid up, the heel is forced into a solid die, by means of any suitable mechanism, whereby the back or round part *b* of the heel, and the front or breast-part *c*, are compressed or forced in with great power, while, at the same time, by means of pistons, or a platen and bed, properly arranged, pressure is applied to the top and bottom of the heel.

It will be understood, that as the edges of the blank heel are held by a solid die, the pressure applied to the top and bottom of the heel tends to compress the fibres of the pieces of leather, or other material, in such a manner as to leave a very firm and smooth exterior surface, a result which is very important, since it obviates the necessity of much if any trim-

ming of the exterior part of the heel. Then, again, the heel is much firmer, and will wear longer than when formed by pressure applied simply to the top and bottom.

While the heel is under pressure upon its top, bottom, and sides, the nail-holes are punched, by suitable mechanism, and the nails *d* partially inserted, as shown in the drawing. In this way the leather layers of the heel are retained in position, and kept from expanding unduly after the pressure has been removed.

The blank heel, shown in the drawing, may be applied to the bottom of the boot or shoe in the usual manner.

By my invention, the heels can be made up from small pieces of leather, thereby utilizing a large amount of scrap-leather, which has heretofore been thrown away or burned up.

The small scraps or pieces of good leather, when made up into heels by my improved mode, produce heels really superior to those made from whole pieces of a lower grade of leather. Those skilled in the art to which my invention belongs will readily appreciate its great practical value and merit.

Having described my improved blank heel for boots and shoes,

What I claim therein as new, and of my invention, and desire to secure by Letters Patent, is—

1. A compressed blank heel for boots and shoes, composed of pieces of leather laid up in layers, and then subjected to compression on all sides, substantially as and for the purposes described.

2. A compressed blank heel, the nail-holes of which are punched while the blank heel is subjected to pressure upon all sides, substantially as and for the purpose set forth.

3. A compressed blank heel, in which the nail-holes are punched and the nails partially inserted while the heel is subjected to pressure upon all sides, substantially as and for the purposes set forth.

H. H. BIGELOW.

Witnesses:

THOS. H. DODGE,  
ALBERT E. PEIRCE.