(No Model.)

N. S. DRAKE.

HEEL FOR BOOTS OR SHOES.

No. 479,560. Patented July 26, 1892.

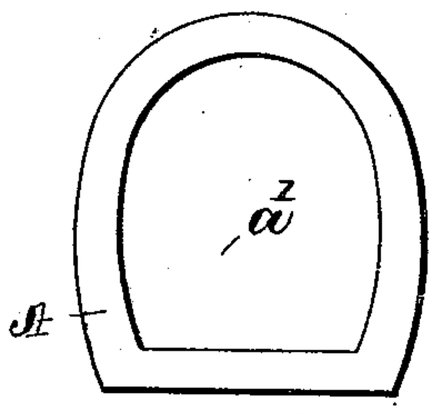

Fig. 1.

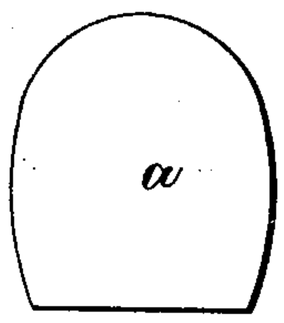

Fig. 2.

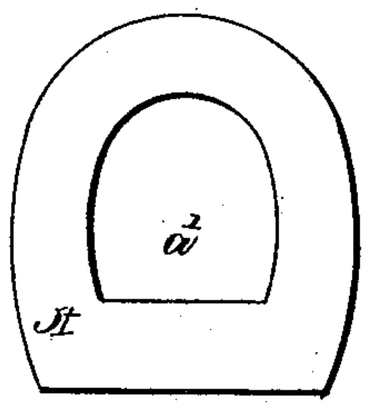

Fig. 3.

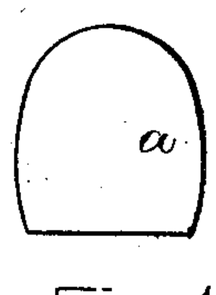

Fig. 4.

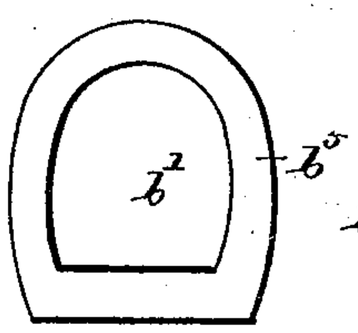

Fig. 5.

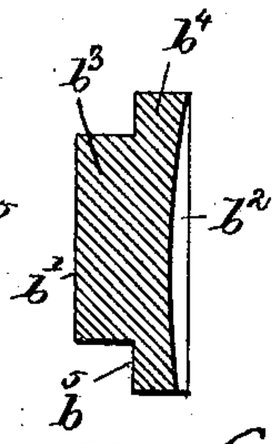

Fig. 6.

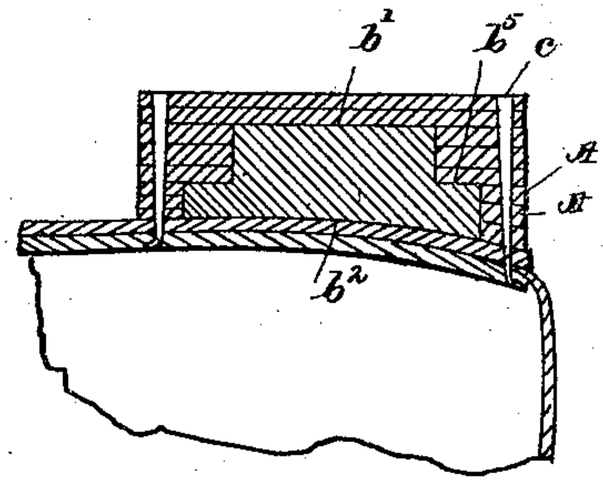

Fig. 7.

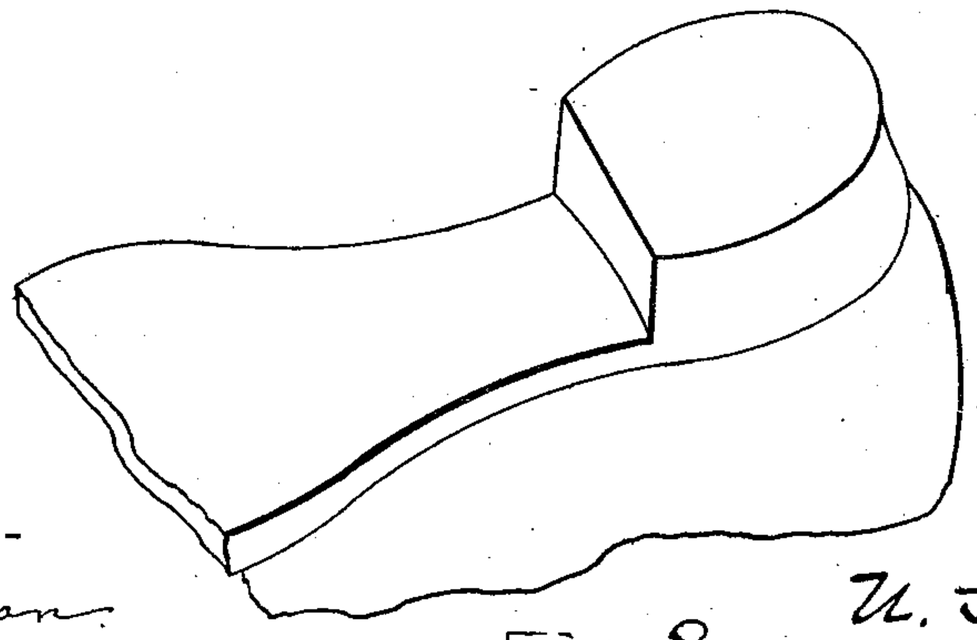

Fig. 8

WITNESSES.
J. W. Dolan.
A. F. Macdonald.

INVENTOR.
N. S. Drake
by his attys
Clarke & Raymond

UNITED STATES PATENT OFFICE.

NATHANIEL S. DRAKE, OF PITTSFIELD, NEW HAMPSHIRE

HEEL FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 479,560, dated July 26, 1892.

Application filed February 8, 1889. Serial No. 299,180. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL S. DRAKE, a citizen of the United States, residing at Pittsfield, in the county of Merrimac and State of New Hampshire, have invented a new and useful Improvement in Heels for Boots or Shoes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention relates to the herein-described improvement in boot and shoe heel-blanks, which consists in a detached heel having a number of skeleton lifts made from whole or entire lifts by the removal of interior sections, which sections are not waste, but serve for lifts in smaller heels, and a block of wood or other material inserted into the cavity of the skeleton lifts, and the exposed or upper surface of which is shaped to provide a concave heel-seat.

Referring to the drawings, Figures 1 and 3 are views of skeleton lifts. Figs. 2 and 4 represent sections removed from them. Figs. 5 and 6 are views of a core or plug used to fill the cavity of the heel. Fig. 7 is a sectional view representing a heel attached to the sole of a boot or shoe, and Fig. 8 is a view in perspective of an attached and finished heel.

In practicing the invention a number of lifts of leather or other suitable material of the central and lower part of the heel are formed in the usual way by dieing or dinking, and the interior sections then removed by dieing or dinking to form smaller lifts.

A represents one of the skeleton lifts, and *a* the section or lift removed therefrom, forming in the skeleton lift the cavity *a'*. The removed section or blank *a* is not waste, but is used to form the lift of another smaller heel, and where of good stock it may be used for a top lift. The skeleton lifts form the exterior of the central and lower parts of the heel.

B is a block or plug, preferably of wood, of a size to snugly fit the cavity *a'* of a number of lifts. This block has a flat tread or lower surface *b'* and a concave seat b^2.

The cavity in the heel-blank is extended deeper into the heel and of two sizes, and is so shaped that the block or plug of wood or other material has sections corresponding in size to the sections of the cavity—namely, the section b^3, which fits the smaller or inner part of the cavity, the section b^4, which fits the larger part of the cavity, and the shoulder b^5. The various skeleton lifts are united to each other and to the plug preferably by fish-glue or other adhesive substance under some pressure, and there is applied to the surface *b'* of the block and to the lowermost of the lifts (in Fig. 7 represented as the uppermost, because the heel is shown inverted) one or more full or solid lifts, and these are also preferably united to the remainder of the heel by glue or other adhesive material, or by nails or other fastenings. The complete heel is secured to the sole of the boot or shoe by nails *c*, driven through the lift or lifts and plug, and the seat of the heel thus brought and held against the surface of the outsole. A heel made in this way possesses the appearance of a solid leather heel, and is substantially as durable as a solid leather heel. It possesses all the features of a solid leather heel so far as the appearance and wear are concerned, and is cheaper to make and is also lighter. It is cheaper because the removed sections of the lifts are utilizable in the construction of other or smaller heels, as ordinary lifts and as top lifts, and by making the block B large near the seat I am enabled to obtain larger removed lifts or blanks from the upper lifts of the heel. The block or plug being of wood or other easily molded or worked material affords means whereby an accurate concave heel-seat may be cheaply and easily formed and before it is inserted into the cavity of the heel-blank, and by thus forming the heel-seat I am enabled to save the expense of molding the heel to form such heel-seat, also the operation of molding, or, where a molded effect is obtained by a rand, of the rand, and to obtain a heel-seat of better shape than that usually found in a molded all-leather heel-blank, the cavity of the filling block or plug accurately fitting the outsole and being practicably incompressible, while the leather about it being somewhat compressible makes a tight finish and joint at the juncture with the sole.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

As an improved article of manufacture, a heel-blank comprising a block or plug having a shoulder b^5 and an inner concave heel-seat depression b^2, skeleton lifts of varying widths surrounding said block or plug, and one or more tread-lifts applied to the block or plug and secured by fastenings passing through the tread-blanks and skeleton lifts outside of the edges of the block or plug, said skeleton lifts being arranged to bring the greatest body of leather toward the tread of the heel-blank, substantially as described.

NATHANIEL S. DRAKE.

In presence of—
HARRY C. LANCASTER,
H. E. DARLING.