

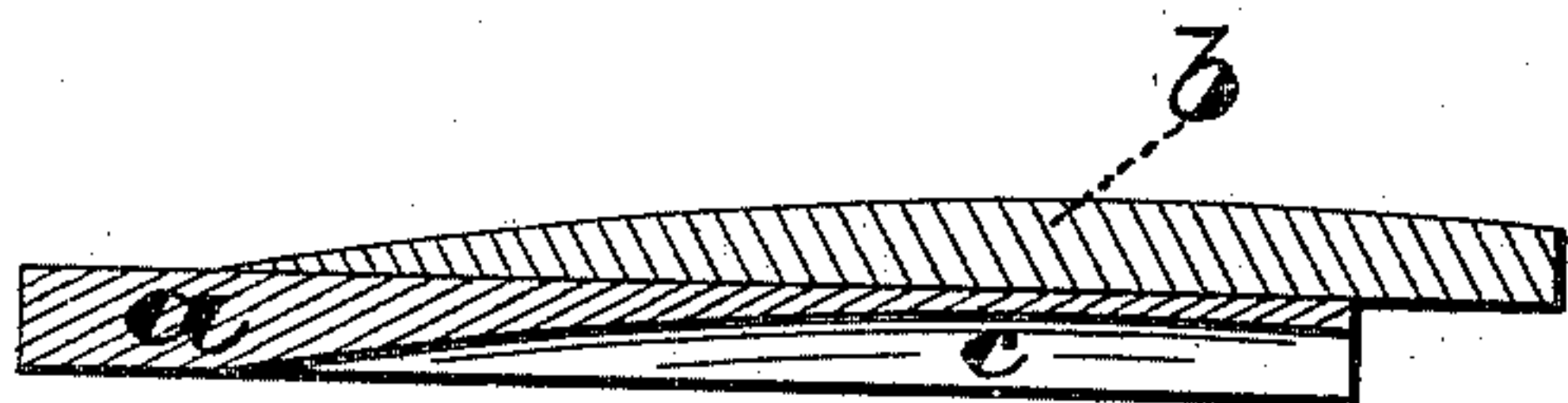
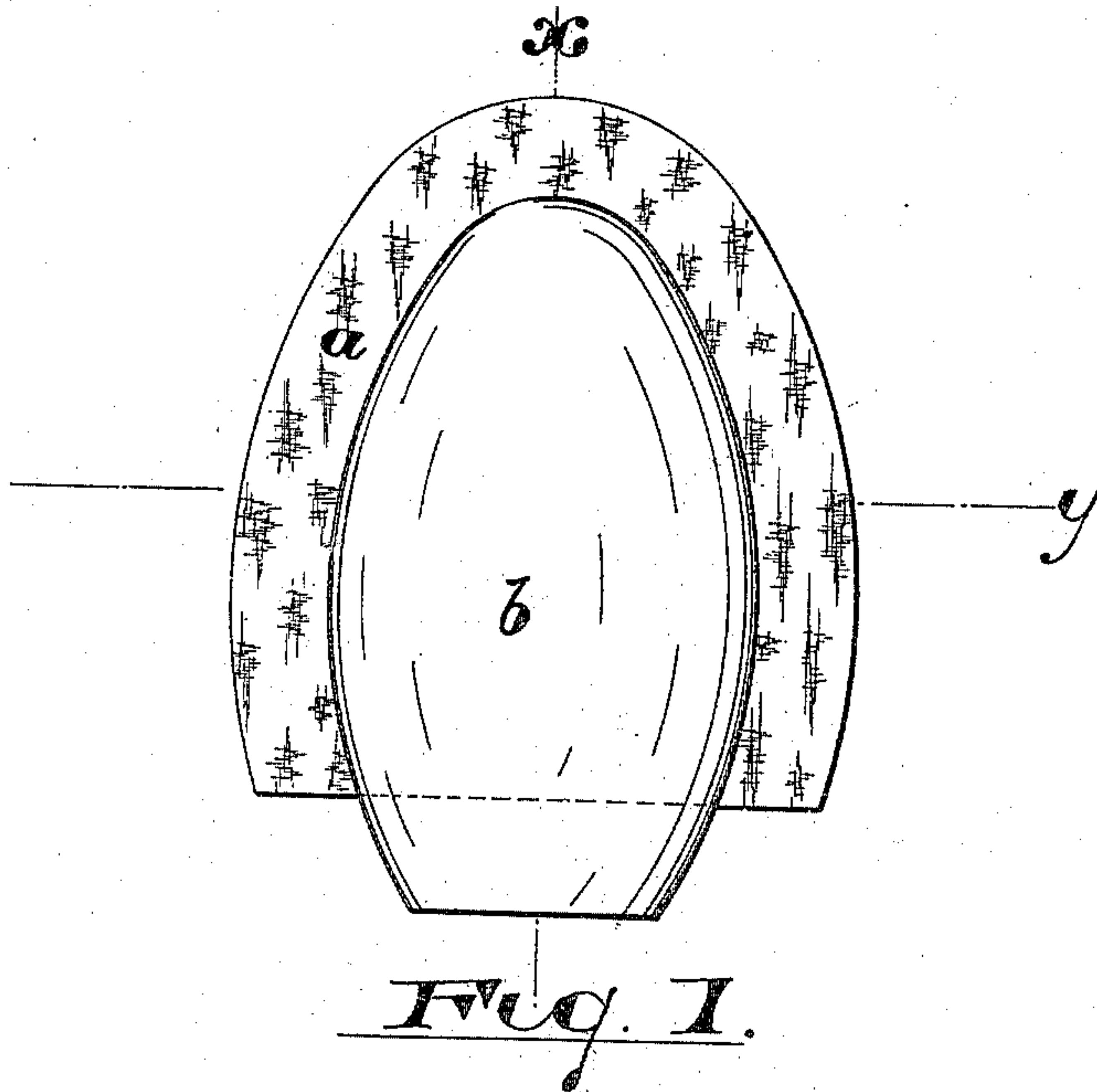
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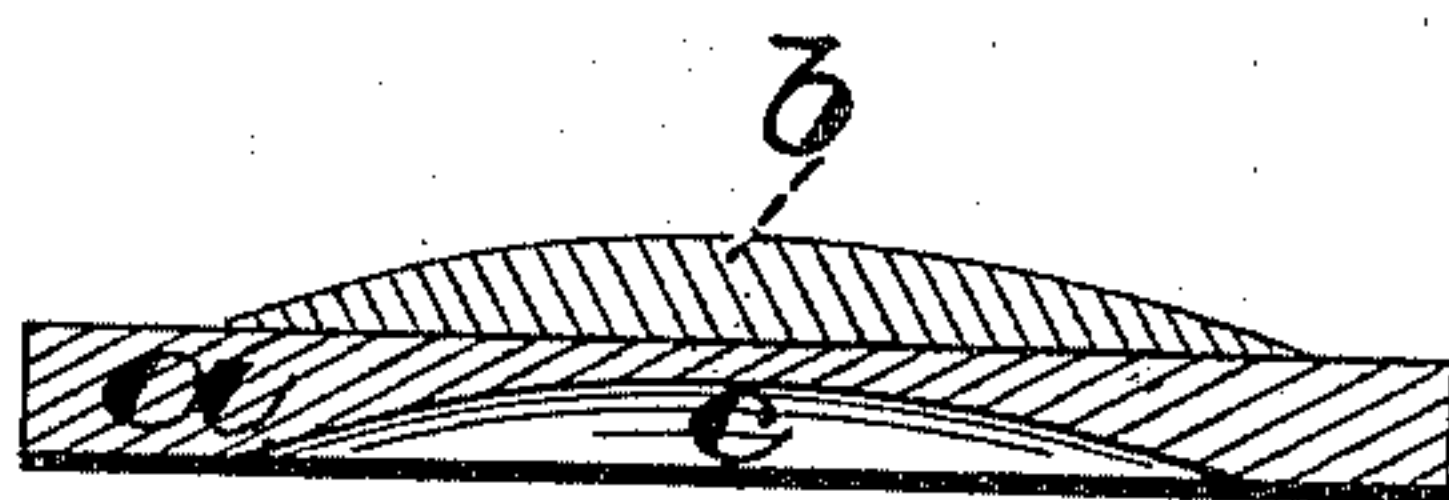
H. O. BEACH.  
METHOD OF SKIVING HEEL LIFTS.

No. 488,303.

Patented Dec. 20, 1892.



*Fig. 2.*



*Fig. 3.*

—Witnesses—

Oscar A. Michel.  
Anthony P. Smith

—Inventor—

*Henry O. Beach,*

By *Drake & Co.* Attys.

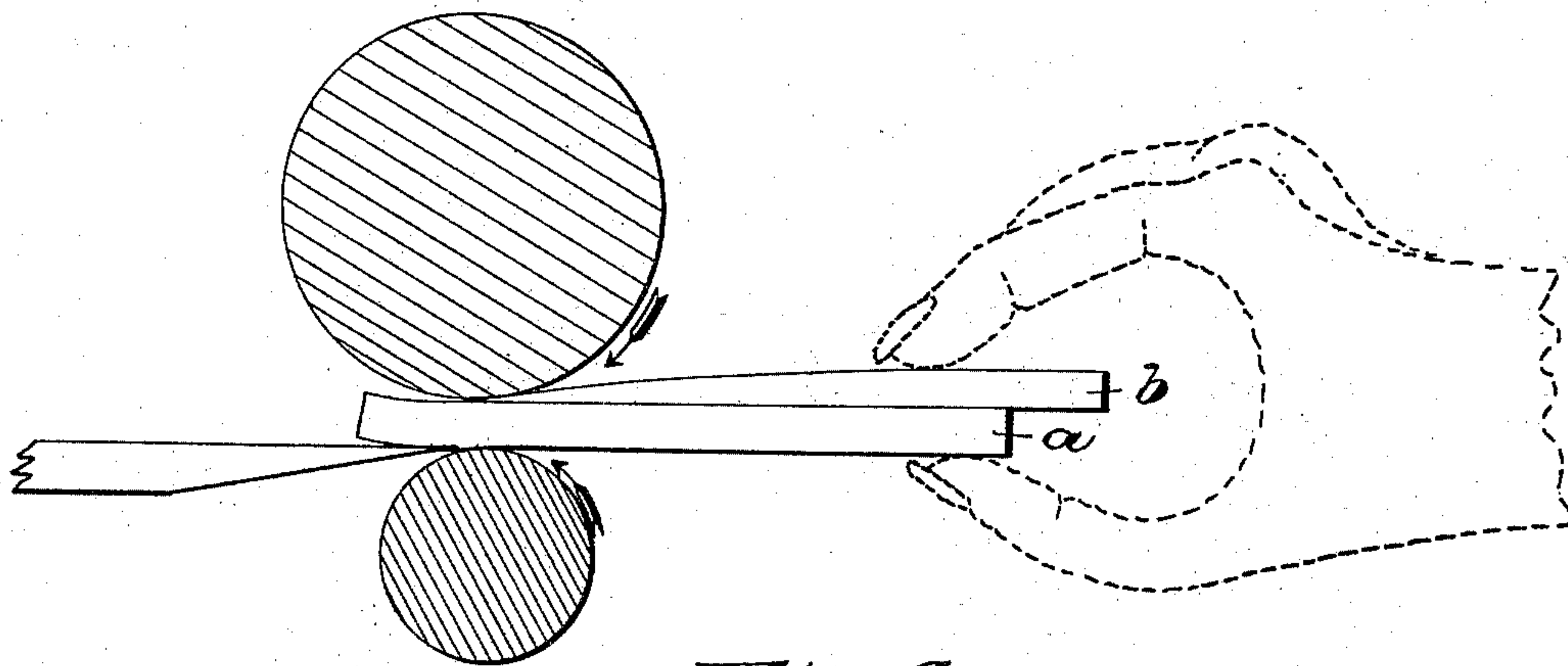
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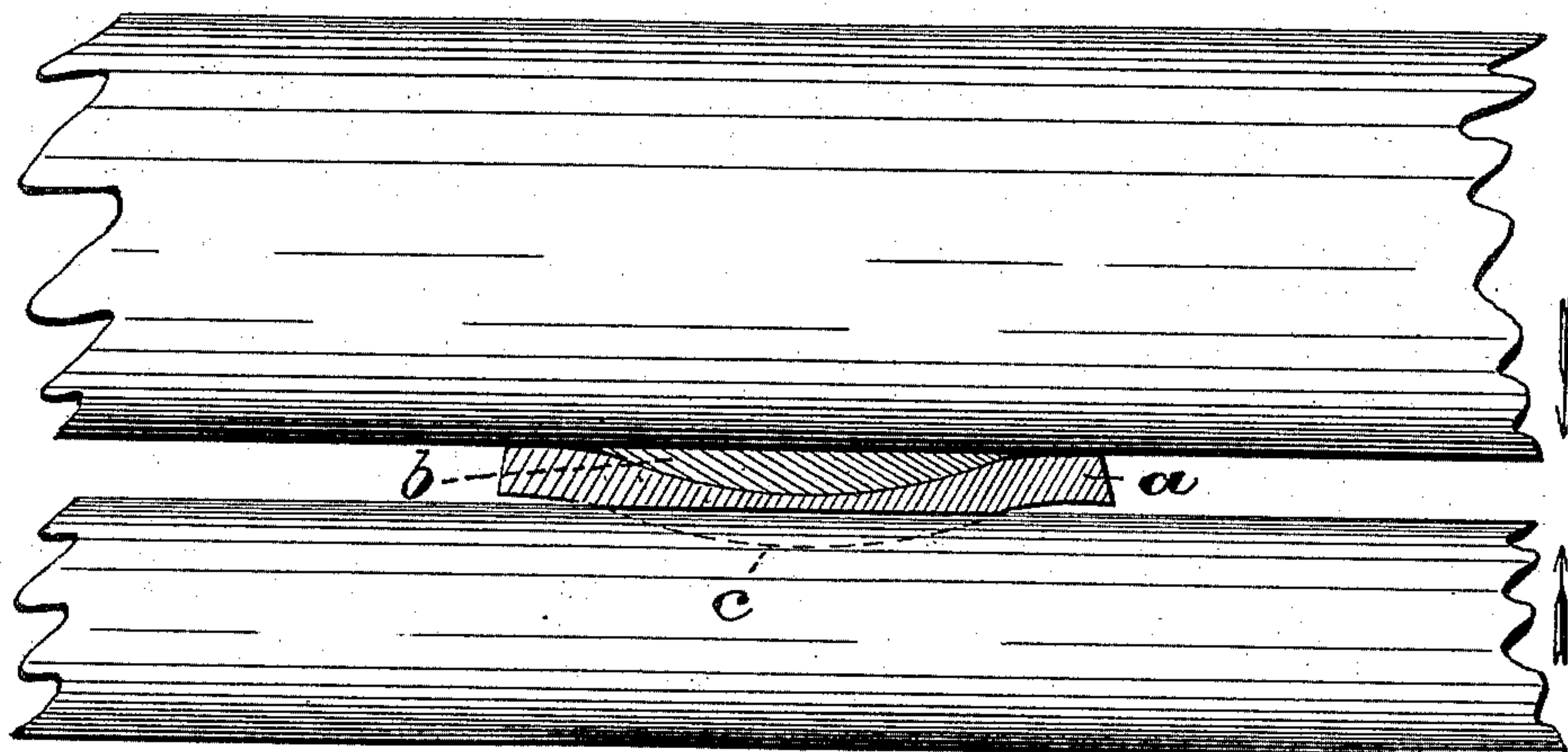
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*Fig. 4.*



*Fig. 5.*

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# UNITED STATES PATENT OFFICE.

HENRY OSCAR BEACH, OF LIVINGSTON, NEW JERSEY.

## METHOD OF SKIVING HEEL-LIFTS.

SPECIFICATION forming part of Letters Patent No. 488,303, dated December 20, 1892.

Application filed February 25, 1891. Serial No. 382,729. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY OSCAR BEACH, a citizen of the United States, residing at Livingston, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Heeling Boots and Shoes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The objects of this invention are, to facilitate the operation of heel "stacking," to avoid the use of metallic parts where they are liable to come into contact with the leather cutting or finishing knives to dull the same, to secure more uniform and perfect concavities in the "foundation" lifts as compared with those ordinarily produced by hand labor and to secure other advantages and results some of which may be hereinafter referred to.

Referring to the accompanying drawings in which similar letters of reference indicate corresponding parts in each of the views, Figure 1 is a plan of a heel-lift upon which another piece, preferably of leather, has been superimposed prior to passing the said parts through a skiving machine to effect or produce a concavity in the said lift adapted to enable said lift to conform to the unheeled under surface of the shoe body. Figs. 2 and 3 are sectional views taken at lines *x* and *y* respectively but showing the lift after it has passed through the skiving machine the piece approximating the shape of the pattern piece has been removed from the side opposite said pattern piece, and said lift, relieved of the pressure of the skiving machine has assumed its normal condition, as will be hereinafter made more plain. Fig. 4 is a sectional view showing the rolls and knife of an ordinary skiving machine in connection with a lift and superimposed pattern piece, at the moment they are passing through the machine and Fig. 5 a sectional view of the pattern piece and lift taken forward of said rolls and parallel therewith.

In said drawings, *a* indicates a first or foundation lift of a shoe or boot heel, consisting

of leather and of a shape in plan common to the ordinary heel of a boot or shoe. This is gouged out on one side, or concaved to conform to the convexity of the heel portion of an un-heeled boot or shoe, as will be clearly understood by one skilled in the art.

Heretofore it has been a common practice, in preparing the first or foundation lift used in stacking the heel, to employ what has been termed a "split lift" which has been tacked to said first lift to secure the desired concavity, the tacks being hastily disposed and driven and thus frequently made to project into or lie in close contiguity to the lateral surfaces of the stack, so that in trimming and finishing the heels, the finishing knives were brought into contact therewith and dulled and rendered unserviceable. By my improvements such tucking operations are dispensed with, and the danger of dulling the knives referred to is avoided.

In the concaved foundation or first lift, *a*, the concavity is formed on the under or flesh side of the leather so that both the new surface produced in removing the skiving scrap and the adjacent surfaces toward the lateral edges of the lift will be adapted to receive the paste and produce a proper adhesion in certain of the subsequent operations of applying the heel to the shoe.

In carrying out the invention, I take a plain blank lift and apply, to the grain side thereof, a pattern piece, *b*, of non-metallic material such as leather. This said piece is narrower than the lift but the outlines approximate those of said lift as will be understood upon reference to Fig. 1. The said pattern piece is thicker toward the center and tapered or gradually becomes thinner toward the curved edges, as shown in Figs. 2 and 3, and one of the faces is convexed to correspond more or less closely with the desired concavity to be produced in the lift. The said pattern piece is disposed centrally between the lateral edges of the blank, as in Fig. 1, the greatest thickness of said pattern piece being at or about the center, so that when the two said parts are passed through the skiving machine the greatest compression will be at the center of the blank and the least toward the curved edges thereof, owing to the convexity of said pattern piece, as will be



clearly understood. The two pieces are then fed through the skiving machine, which is one used for ordinary skiving purposes and not especially constructed for the purpose, whereby cost of special machinery is avoided. The result of this operation will be evident. The greatest compression being at the center of the blank, when said blank is brought to the skiving knife, where it is released to some extent from the pressure of the lower roll of the machine, it will be forced out of its normal plane at the center or where it is affected by the pressure of the upper roll bearing down upon the convexed or centrally thicker piece *b*. The blank is thus caused to assume a curved shape, so that the skiving knife will skive off the convexed flesh side of the blank opposite that on which the pattern piece is bearing, as will be clearly understood by one having a knowledge of the art herein referred to. After leaving the skiving knife, the skived lift *a*, being relieved of the pressure of the skiving machine, because of the elasticity inhering in the leather assumes a shape illustrated in Figs. 2 and 3, the concavity *c*, on the

flesh side of the lift corresponding more or less closely with the pattern *b*. The first or foundation lift is thus in a condition for the market. By making the pattern piece of leather all danger of dulling the skiving knife is avoided.

Having thus described the invention, what I claim, is:—

In the art of stacking heels for boots and shoes, the method which consists in subjecting a blank heel lift to graduated compressing force, the compression being greatest at the center and least toward the curved sides and rear of the lift, and, while the lift is under such compression, skiving the same and then removing the pressure and allowing the lift to assume a concavous shape conformable to the heel substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of February, 1891.

HENRY OSCAR BEACH.

Witnesses:

OLIVER DRAKE,  
OSCAR R. MICHEL.