

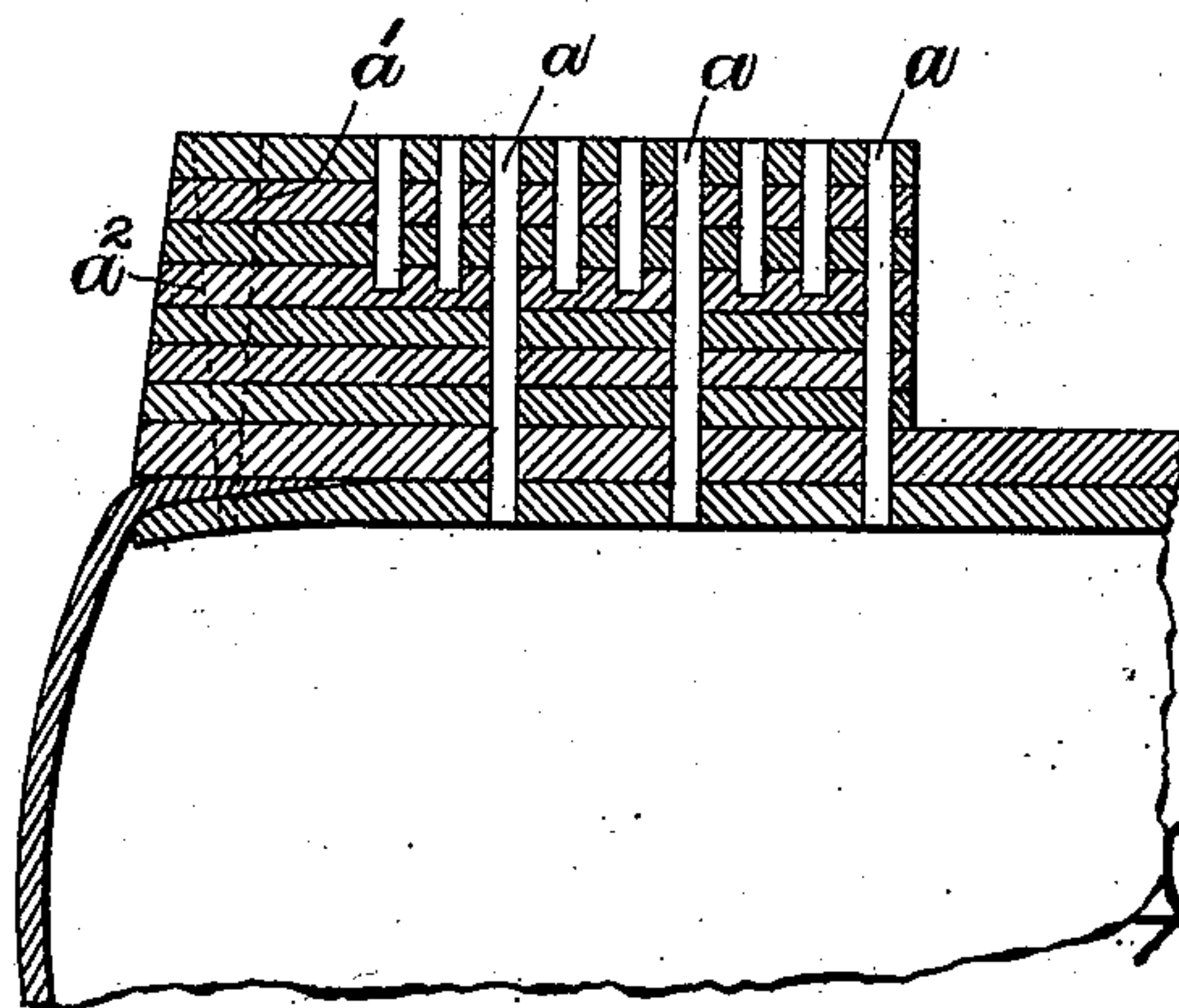
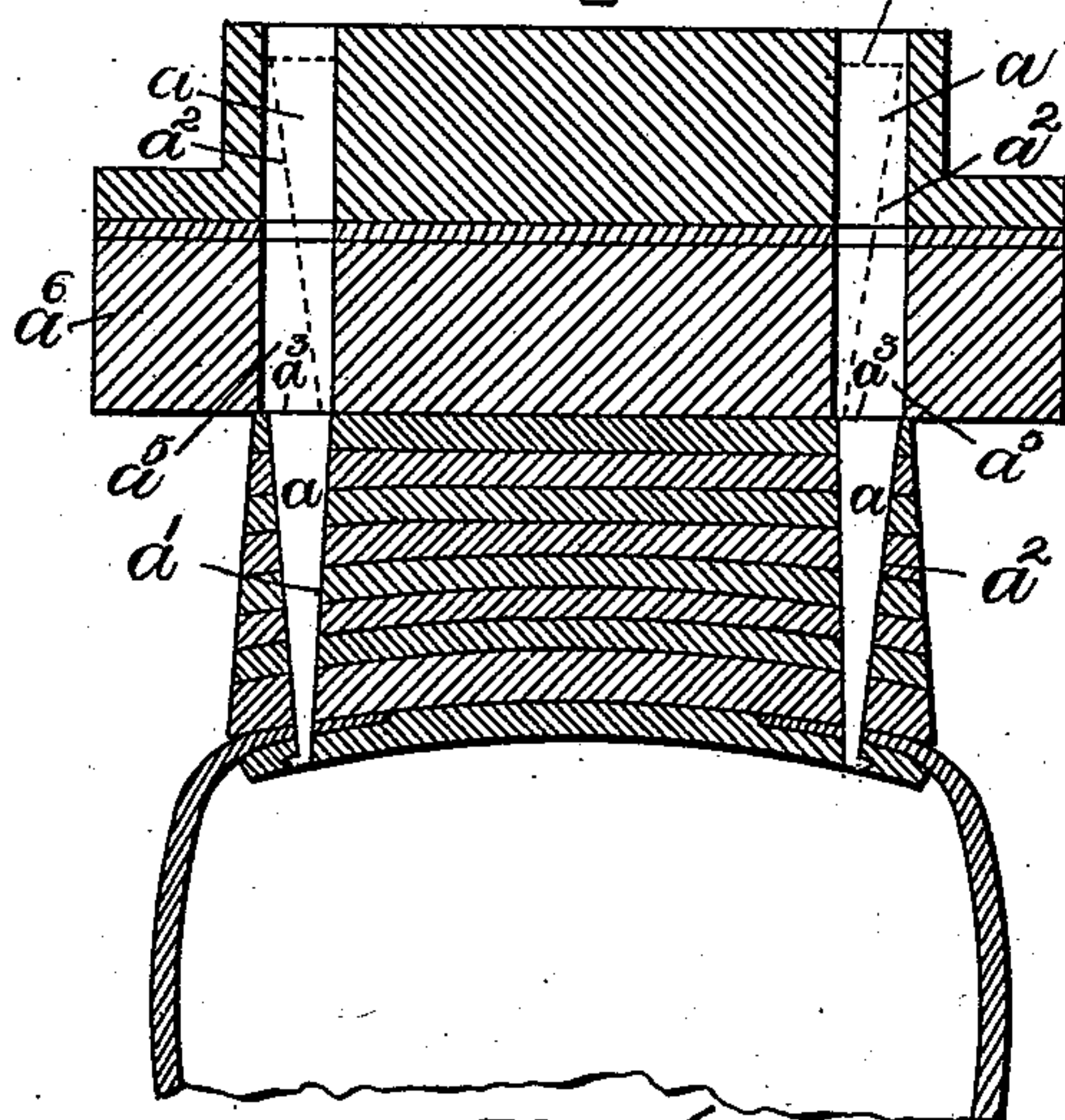
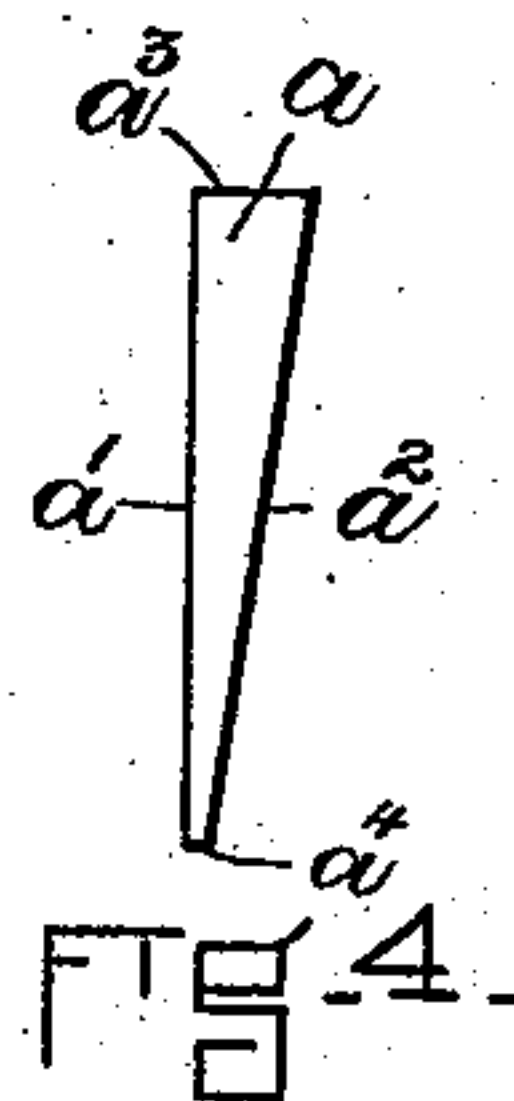
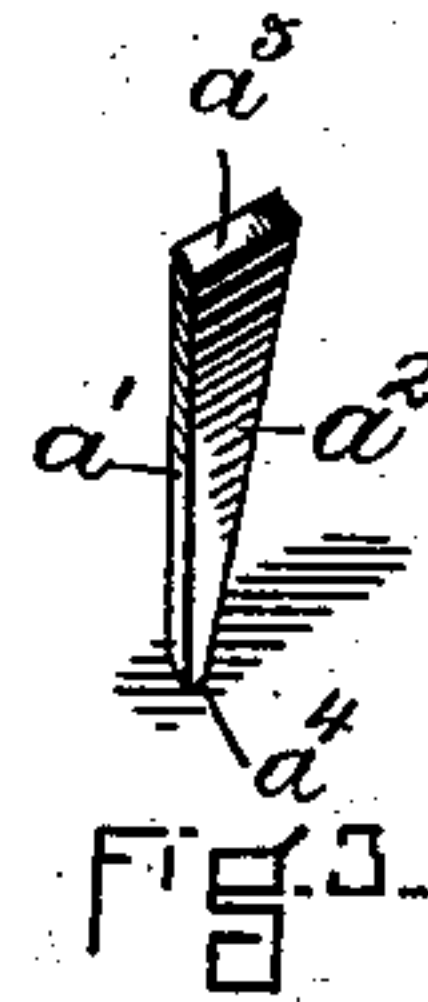
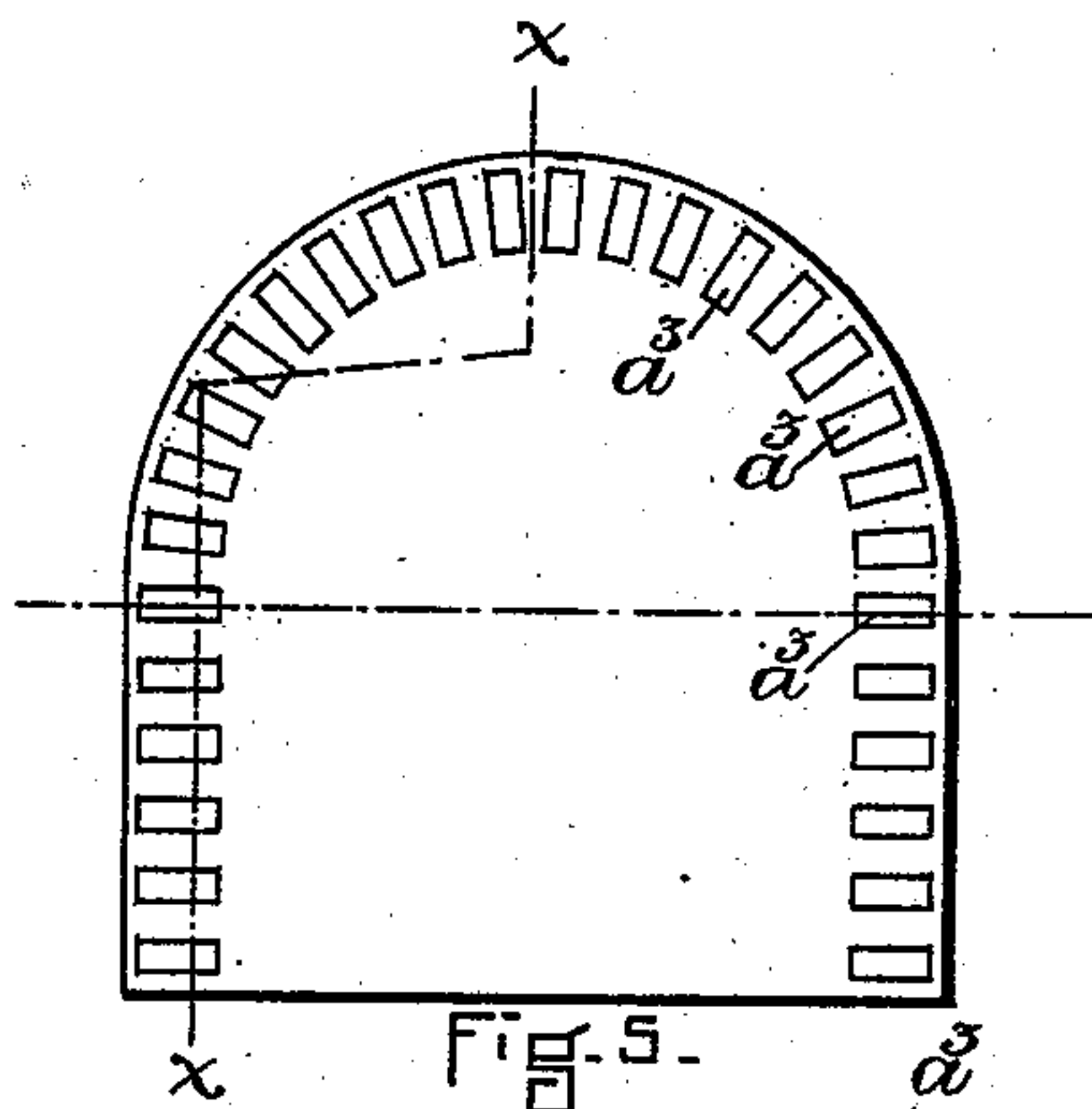
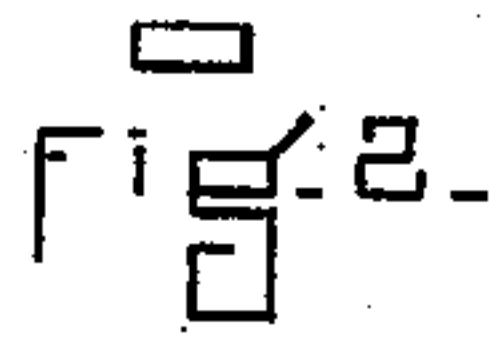
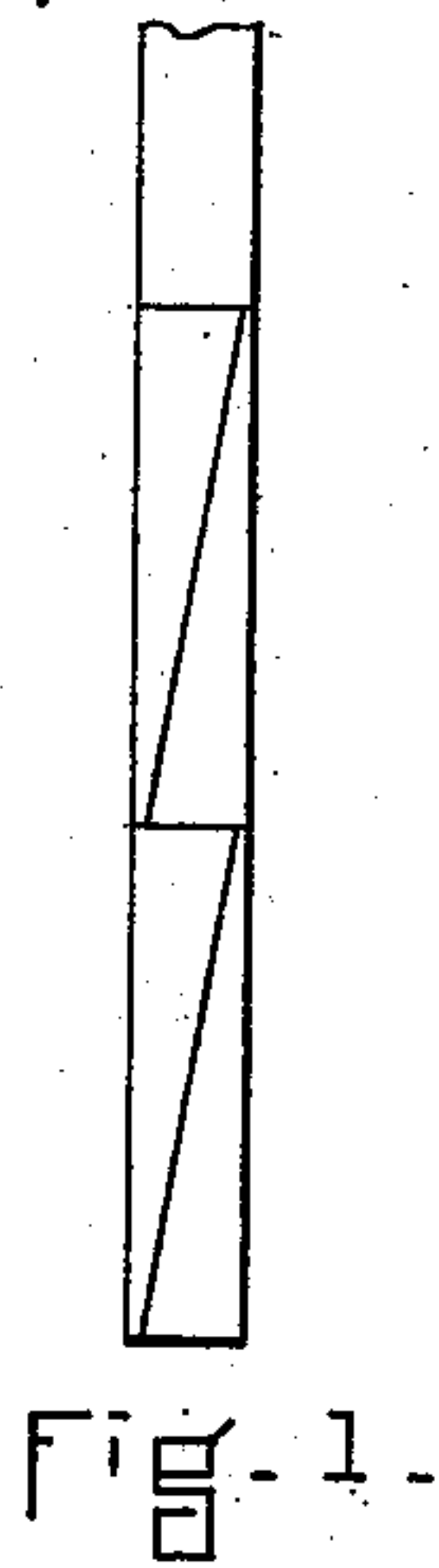
(No Model.)

F. F. RAYMOND, 2d.

METHOD OF FLUSH NAILING THE HEELS OF BOOTS OR SHOES.

No. 380,133.

Patented Mar. 27, 1888.



WITNESSES.

J. W. Dolan.

E. P. Small.

INVENTOR

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# UNITED STATES PATENT OFFICE.

FREEBORN F. RAYMOND, 2D, OF NEWTON, MASSACHUSETTS.

## METHOD OF FLUSH-NAILING THE HEELS OF BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 380,133, dated March 27, 1888.

Application filed January 19, 1888. Serial No. 261,236. (No model.)

*To all whom it may concern:*

Be it known that I, FREEBORN F. RAYMOND, 2d, of Newton, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Method of Flush-Nailing the Heels of 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.

It is desirable in flush-nailing the heels of boots or shoes to set the attaching nails and slugs so that their outer edges shall be placed as closely to the edge of the heel as possible. As a rule, especially in machine-nailing, it has been found impracticable to set the heads of the nails as closely to the edge of the heel as desired, partly because of the shape of the nail and partly because of the necessity of placing the nail so that in the subsequent trimming of the edge of the attached heel they shall not extend into the portion of the heel-blank, which is removed by the trimmer, and thereby injure the knife or knives thereof; and the object of my invention is to provide a method of attachment which shall enable the heads of the attaching nails and slugs to be placed as closely to the edge of the top lift of the heel-blank as desired without any danger or liability of the nails extending outward into the path of the trimmer, and also so as to permit the heel-blank to be undercut to some extent in trimming, if desired. This result is obtained by using for attaching the heel-blank a nail which has a straight edge extending from its head to its point and an inclined edge extending from its head to its point, and in placing the nail thus shaped in the holes of a templet, so that the straight edges of the nails shall be innermost and their inclined edges outermost; and I also prepare the heel-blank for the reception of these nails by forming therein holes for the reception of the nails which have a general direction inward from the top lift, or which, at any rate, are straight upon their inner edges and are inclined from the top lift inward upon their outer edges, and in attaching the heel-blank

nails of this shape thus arranged are simultaneously driven into the heel-blank and soles of the boot or shoe. On account of the shape of their edges, if driven straight, there is a greater amount of stock left between their outer edges and the edge of the heel-blank than if the ordinary heel-nail were used; but on account of their shape the tendency in driving is for the point to run inward to some extent as it is being driven, and especially if inclined awl-holes are used. This inward direction of the nail is not sufficient to bend it, as the point and shank of the nail are quite stiff and sufficient, even if driven straight, to prevent it from throwing outward into the path of the trimmer.

In the drawings, Figure 1 represents in plan the manner of forming the nails from a wire nail-plate. Fig. 2 is a section of the plate. Fig. 3 is a view in perspective of a nail formed therefrom. Fig. 4 is a view in elevation of a nail formed therefrom. Fig. 5 is a view in plan of a flush-nailed heel. Fig. 6 is a view in section through nail-carrier, heel-blank, and part of a shoe, showing in full lines the nails as driven into the heel-blank and soles. Fig. 7 is a section of the attached heel-blank upon the line  $xx$  of Fig. 5.

The attaching-nails  $a$  have the straight edge  $a'$ , the inclined edge  $a^2$ , and parallel sides, and the inclined edge extends from the head  $a^3$ , which is rectangular in shape, to the point  $a^4$ . In driving the nails they are arranged in holes  $a^5$  of the templet  $a^6$ , so that their inclined edges  $a^2$  are outermost, (see Fig. 6,) and they are driven, preferably simultaneously, from these holes into the heel-blank and soles of the boot or shoe; and because of their inclined edges  $a^2$  the nails are caused to be driven inward—that is, their inner straight surfaces are either straight in the heel-blank and soles after being driven, or are inclined inwardly therein, so as to remove the point and shanks of the nail farther from the edge of the heel-blank than would otherwise be the case. Of course the nails are held from turning in the holes  $a^5$  while they are being driven by the shape of said holes.

Having thus fully described my invention, I

claim and desire to secure by Letters Patent of the United States—

The method of flush-nailing heels, comprising the forming of attaching - nails with a  
5 straight edge,  $a'$ , and an inclined edge,  $a''$ , and  
arranging said nails in guiding-holes of the  
templet or pressure-plate with the inclined

edges outermost, and driving said nails from  
said guiding-holes into the heel-blank, sub-  
stantially as described.

FREEBORN F. RAYMOND, 2D.

Witnesses:

J. M. DOLAN,  
E. P. SMALL.