

(No Model.)

2 Sheets—Sheet 1.

F. F. RAYMOND, 2d.

METHOD OF ATTACHING HEELS TO BOOTS OR SHOES.

No. 413,963.

Patented Oct. 29, 1889.

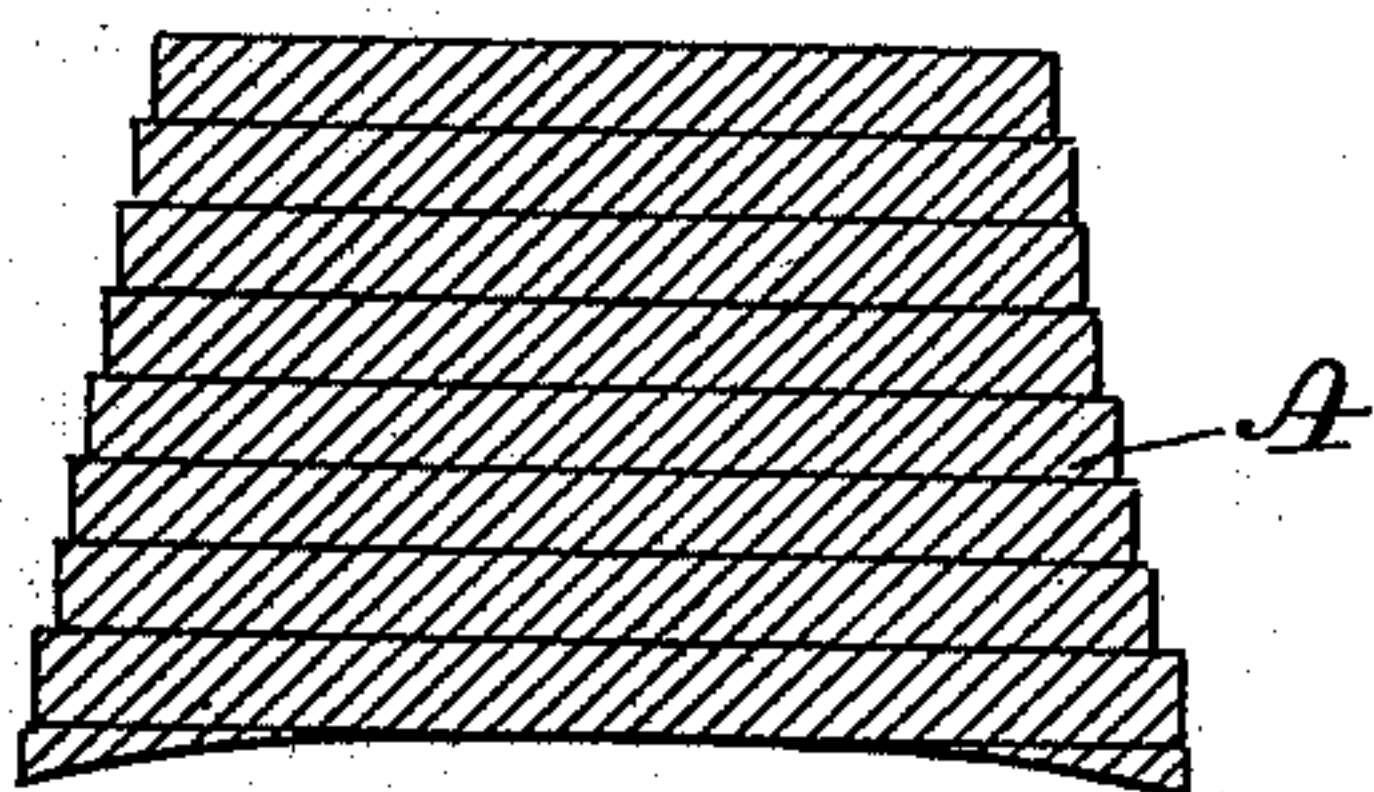


Fig. 1.

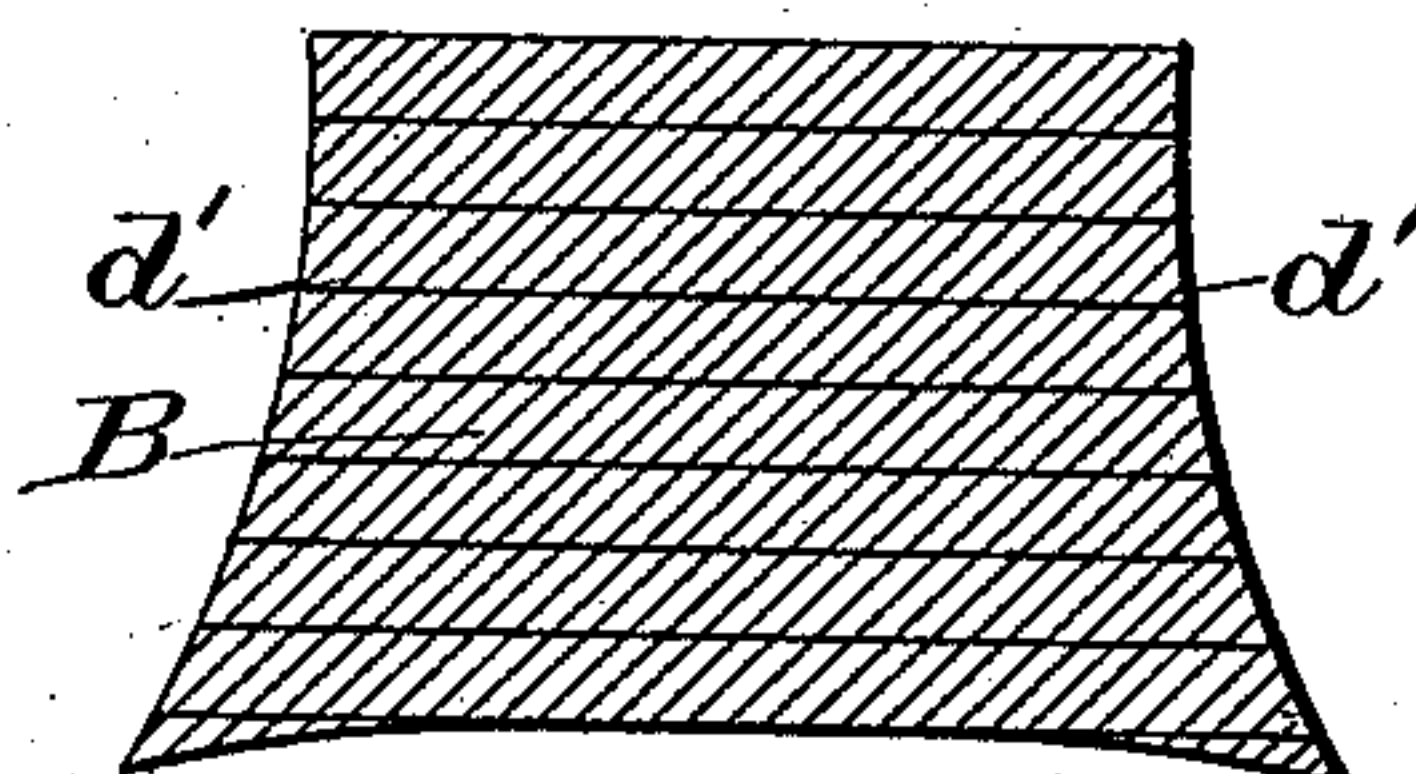


Fig. 2.

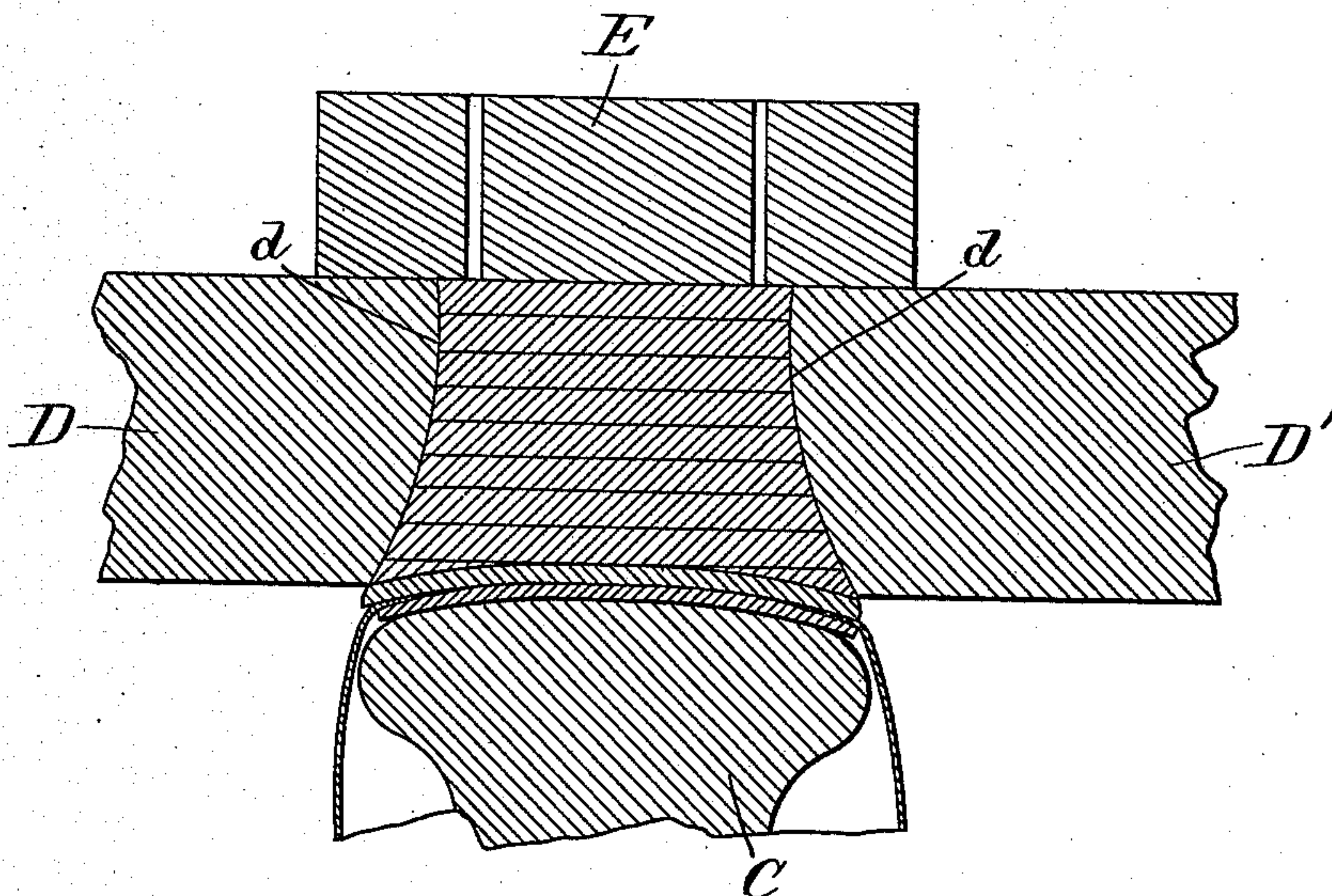


Fig. 3.

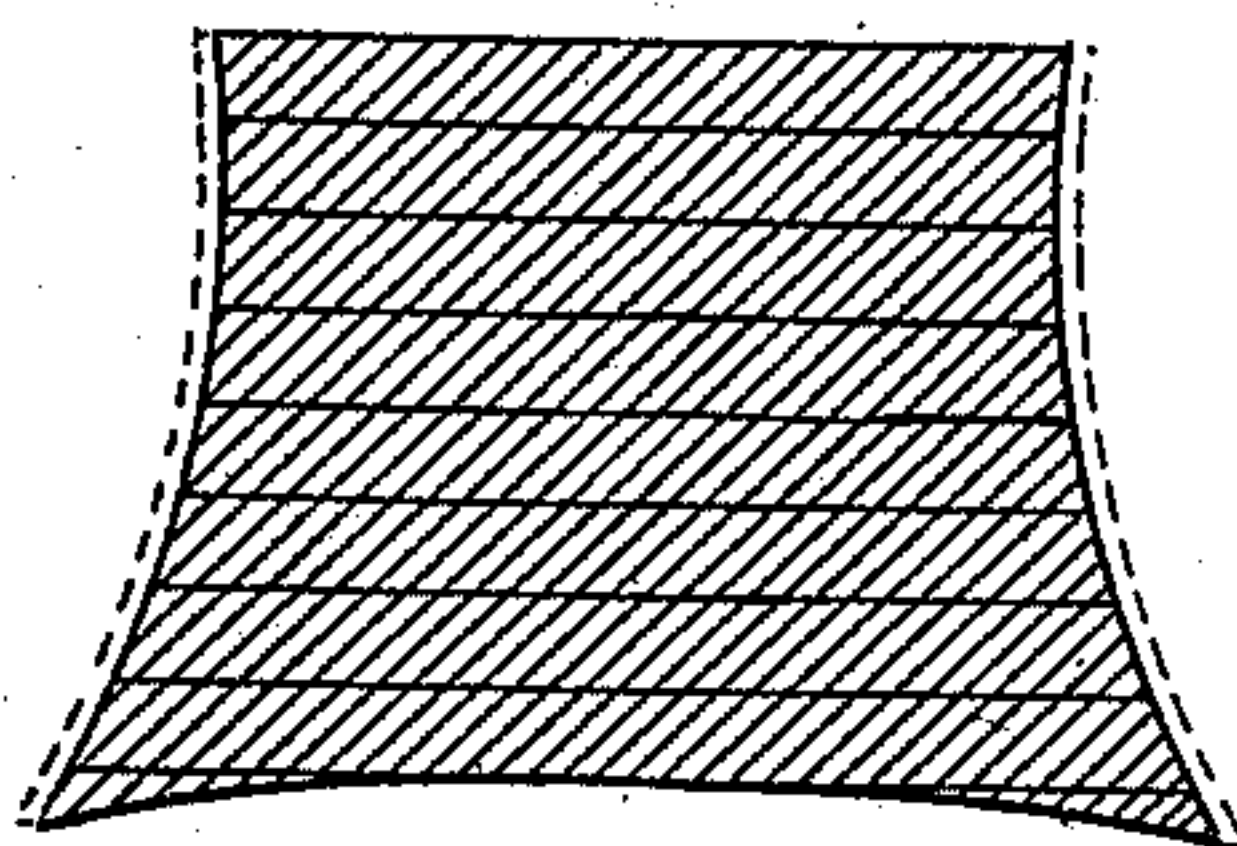


Fig. 4.

WITNESSES.
Fred. B. Dolan.
E. F. Chulson.

INVENTOR.
F. F. Raymond.

(No Model.)

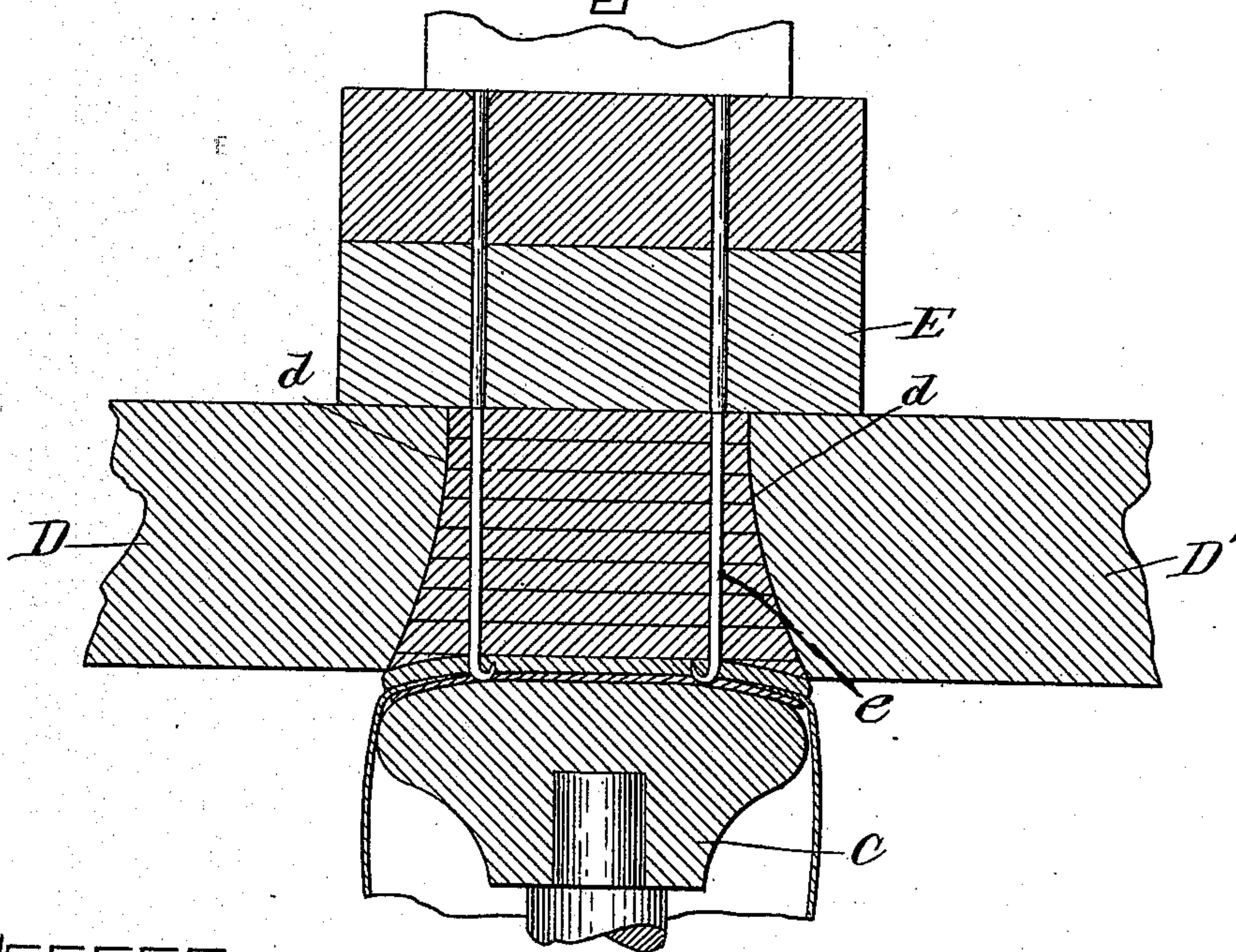
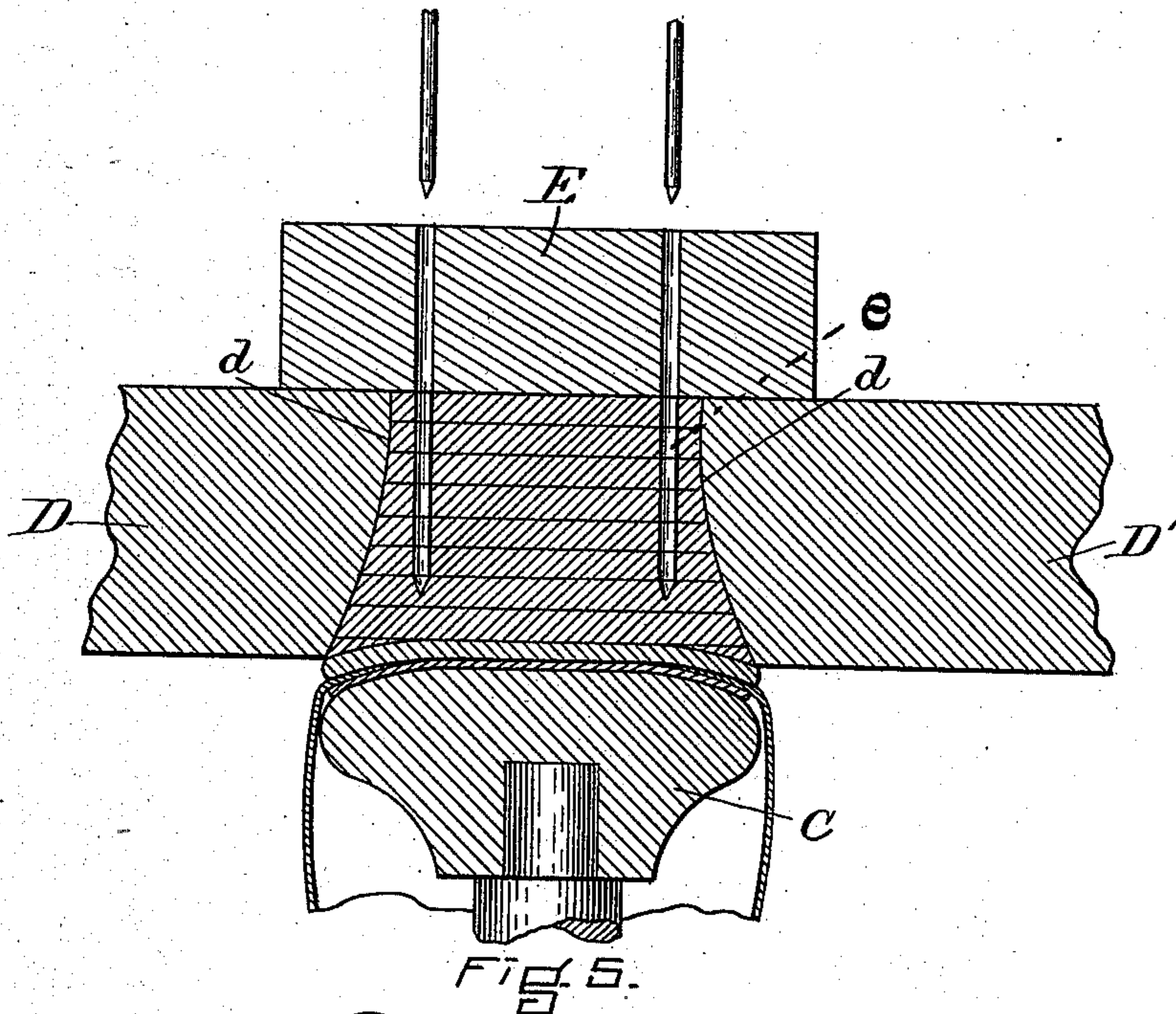
2 Sheets—Sheet 2.

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Fig. 6.

INVENTOR.

F. F. Raymond

UNITED STATES PATENT OFFICE.

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

METHOD OF ATTACHING HEELS TO BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 413,963, dated October 29, 1889.

Application filed July 25, 1887. Serial No. 245,178. (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 the Method of Attaching Heels to the Soles 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.

The invention relates to a method of attaching heels to the soles of boots or shoes, which involves the trimming of the heel-blank before it is attached to the sole of the boot or shoe and the placing of the trimmed heel-blank upon the outsole of the boot or shoe to which it is to be attached, the supporting of the same by abutments having the configuration or shape or substantially the configuration or shape of the trimmed edge of the heel, which are brought to bear against the side surfaces of the heel and held there while the trimmed heel is being attached, and the attachment of the trimmed heel-blank while thus held supported upon the outsole.

The lifts of the heel may be held intact while under the operation of trimming by any well-known means, among which may be mentioned pressure upon the same after piling up or applying an adhesive substance to the individual lifts to temporarily hold them together.

In the drawings, Figure 1 represents in vertical section an ordinary form of heel-blank. Fig. 2 represents such heel-blank reduced to shape by the removal of stock from its side surfaces. Fig. 3 is a view in vertical section illustrating the method of supporting the trimmed heel-blank while it is being attached to the soles of the boot or shoe. Fig. 4 represents in vertical section an attached trimmed heel which has not only been supported by the side abutments, but solidified to a certain extent by them, as will be hereinafter described. Figs. 5 and 6 illustrate the devices used in practicing the method.

In the drawings, A represents the heel-blank before it is trimmed; B, the heel-blank after it is trimmed, but before it is attached.

C represents the last or work-support, upon which the boot or shoe to be heeled is held in a vertical position during the attachment of the trimmed heel.

D D' represent two abutments, each of which has a surface *d*, which approximates the shape of the trimmed surface *d'* of the heel-blank. These abutments D D' are adapted to be moved against the side surfaces of the heel with any degree of compression and to be held locked against the side surfaces of the heel, so as to support the same during the attachment of the trimmed heel. The heel-blank may either immediately before or while it is held by the abutments D D' be submitted to direct vertical compression by means of the movement of the last or work-support C vertically against the templet E, or by the downward movement of the templet E in relation to the last or work-support. The holes *e* are then formed or pricked in the trimmed heel while it is held supported or compressed, and attaching-nails are then inserted in these holes and are driven either singly or as a gang or group. I prefer the last-named way. The heel-blank may then be either flush-nailed or blind-nailed. If flush-nailed, the attaching-nails are driven so that their heads are flush with the upper surface of the lift. If blind-nailed, the heads of the attaching-nails are left extended from the surface of the upper lift of the heel. This manner of driving the nails, however, is practiced only when the top lift is attached after the trimmed heel-blank has been attached.

e' represents the attaching-nails. I have already intimated that the abutments D D' may be used either as a support for the side surface of the trimmed heel, in which case they act to maintain the trimmed heel in proper shape or form while it is being attached, or they may be utilized not only to maintain this form and prevent the heel from being disturbed during attachment, but also to exert compression against the side surfaces of the heel. This last-named action is desirable, especially when a trimmed pieced heel is used; and by exerting upon the trimmed surface of the heel a compression which may vary according to the quality of the stock and the

character of the heel, the surfaces of the heel are provided with a finish and smoothness and density which are very desirable.

5 By trimming the heel-blank before it is attached it may be trimmed more rapidly, more surely, and more cheaply than it can be trimmed after it is attached. By using abutments or supports which bear against the side surfaces of the heel, and which act to support
10 the same during the attachment of the trimmed heel, I am enabled to secure the trimmed heel to the soles of a boot or shoe without marring, injuring, or disturbing the trimmed or finished surface.

15 I may use for trimming the heel-blank the trimming mechanism described in the Henderson and Paine patent, Serial No. 220,920, or the Henderson patent, Serial No. 236,494. Said supports or abutments D D' may be operated as described in my patent, No. 347,061,
20 or in any other desired way.

The templet E may be given the vertical movement as described in the Henderson patent, No. 316,894, or the last or work-support C
25 may be given the vertical movement in relation to the templet as described in my patent, No. 322,560.

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

30 That improvement in the art of making and attaching heels which consists in trimming a detached heel-blank to the form substantially of a finished heel, locating said finished heel-blank upon the heel end of the out- 35 sole of a boot or shoe held or supported by a last or jack, maintaining the trimmed contour of the edge of the heel-blank by side supports arranged to be held in contact therewith during the attaching of the heel, and the attaching 40 of the heel while it is thus held, whereby the heel-blank is trimmed before attachment to the boot or shoe and its trimmed form maintained during its attachment to the boot or shoe and the subsequent trimming of the 45 heel-blank rendered unnecessary, substantially as described.

FREEBORN F. RAYMOND, 2D.

In presence of—

FRED. B. DOLAN,
E. A. PHALEN.