

C. A. BATCHELDER.
 BOOT AND SHOE TREE.
 APPLICATION FILED MAY 15, 1902.

970,165.

Patented Sept. 13, 1910.

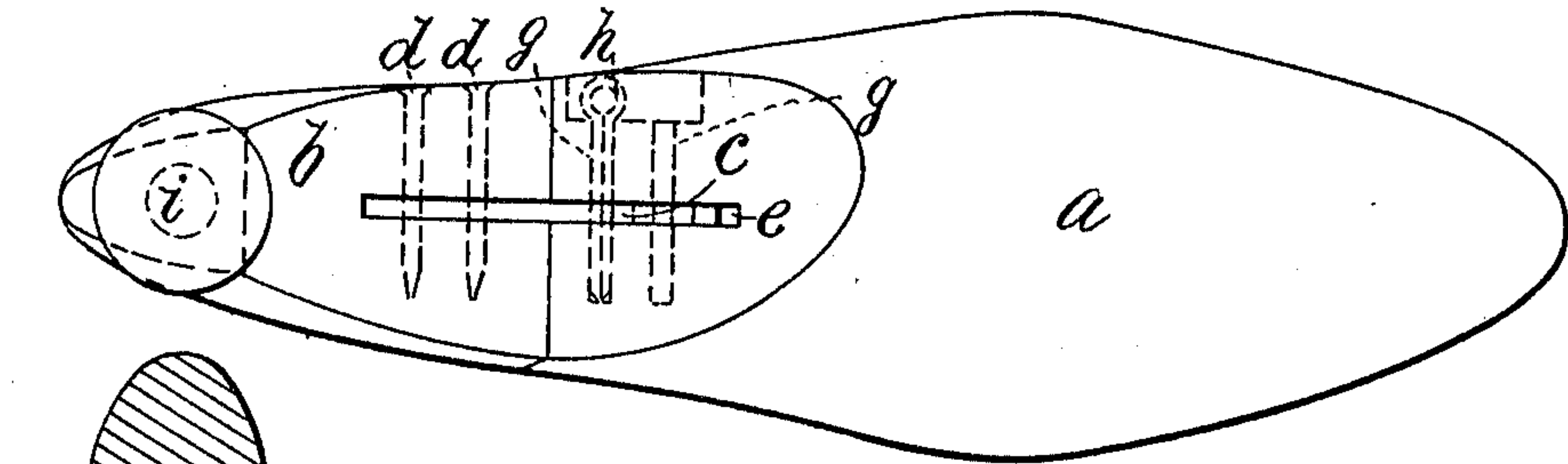


Fig. 1-

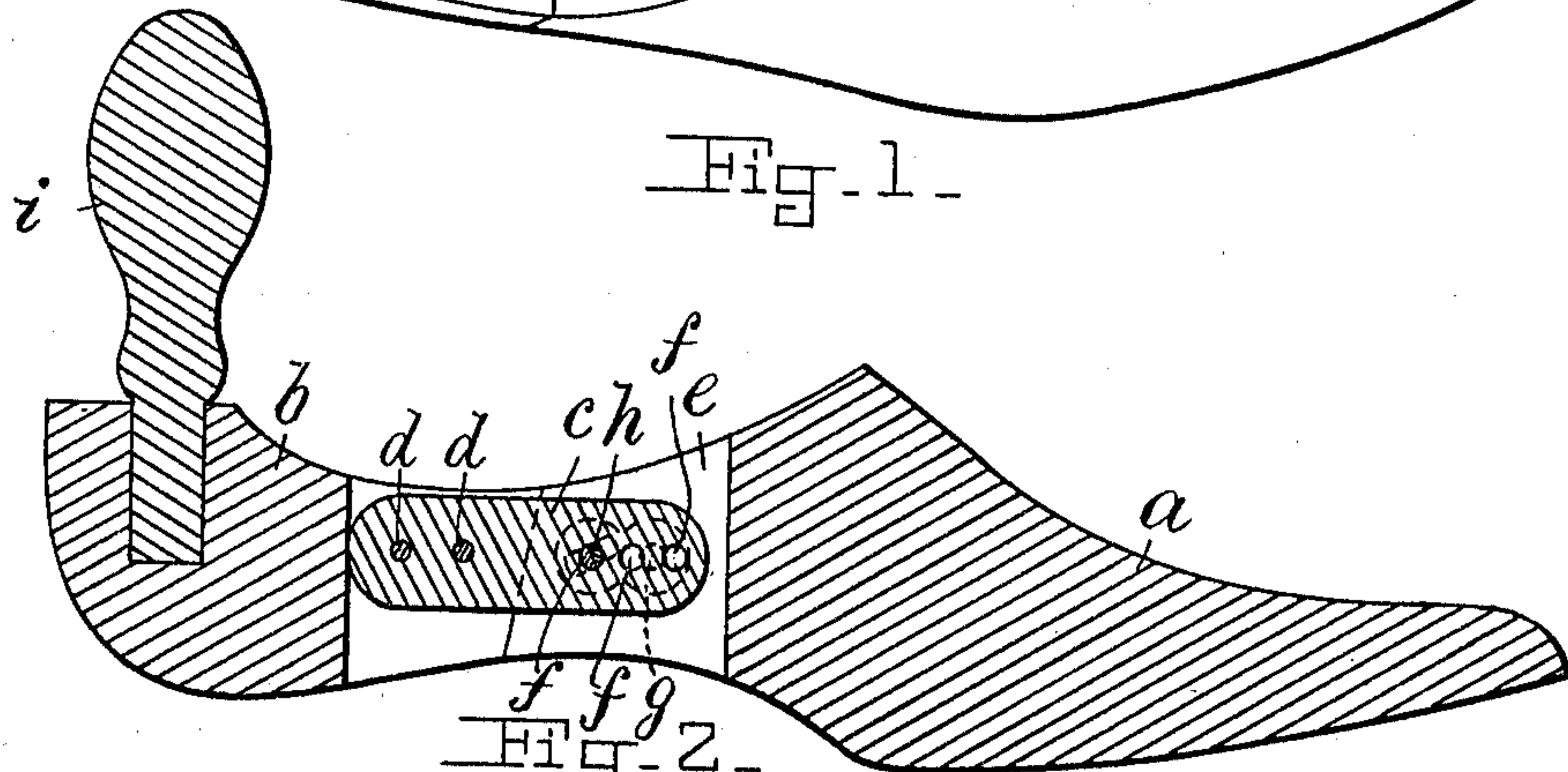


Fig. 2-

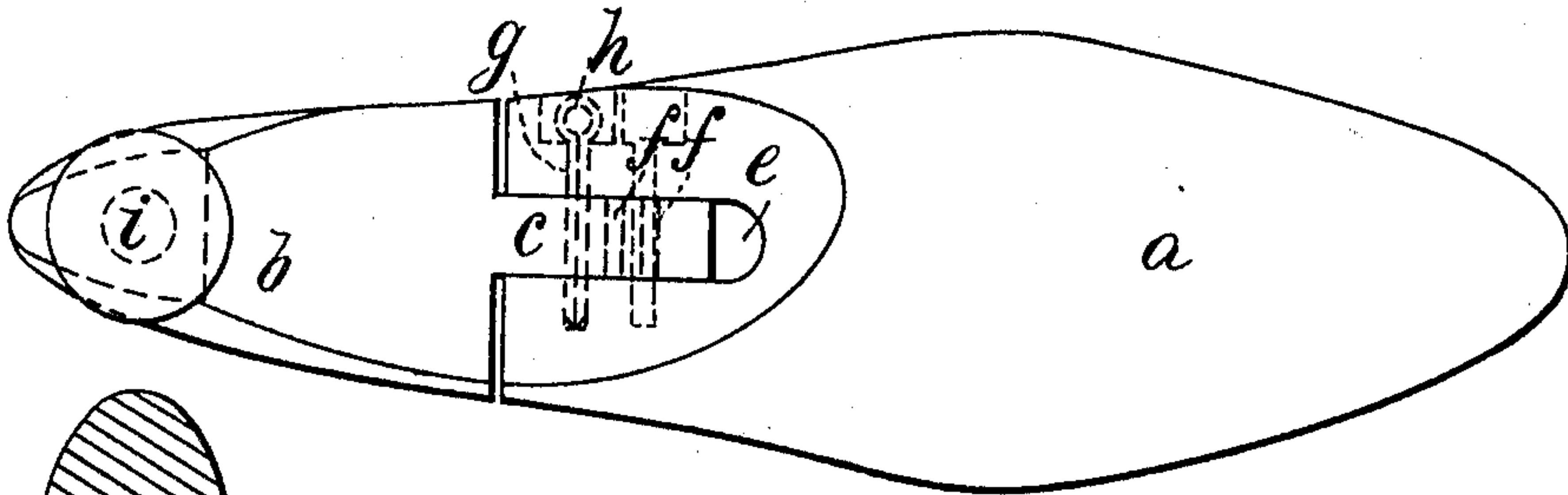


Fig. 3-

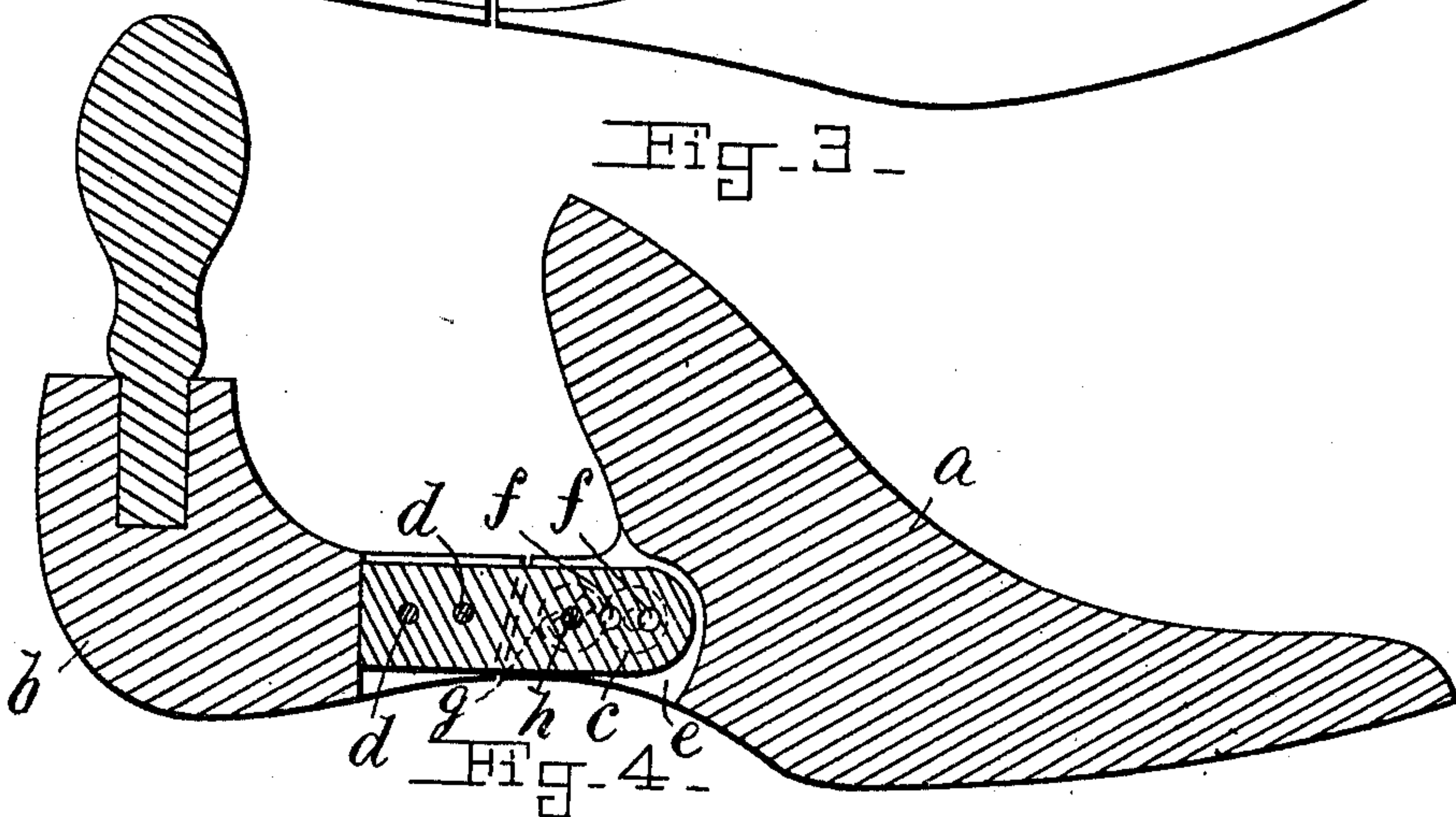


Fig. 4-

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UNITED STATES PATENT OFFICE.

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BOOT AND SHOE TREE.

970,165.

Specification of Letters Patent. Patented Sept. 13, 1910.

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To all whom it may concern:

Be it known that I, CHARLES A. BATCHELDER, of Stoughton, in the State of Massachusetts, have invented certain new and useful Improvements in Boot and Shoe Trees, of which the following is a specification.

This invention relates to improvements in trees for boots and shoes, such as are used to keep boots and shoes in proper shape while being stored or displayed for sale, and also for restoring shoes to shape and retaining them in shape after they have been removed from the feet of the wearer; and it has for its object to provide a simple and inexpensive tree which is easily and quickly adjustable in length so that a single tree will be applicable to two or more different sizes of boots and shoes.

With this object in view, the invention contemplates a tree comprising a fore part substantially corresponding in shape and size to the fore part of the last upon which the boot or shoe was made, a heel part corresponding approximately to the shape and size of the heel part of said last, and a connecting link between the fore and heel parts of the tree, which link is either made in one piece with the fore part or the heel part of the tree or rigidly attached thereto, and is pivotally attached to the other part of the tree, the connecting link, or the part of the tree to which it is pivoted, or both of said parts, being provided with a plurality of holes to receive the pin which forms the pivot joint between said parts, the pin being arranged to be withdrawn and inserted easily for the purpose of adjusting the tree.

The invention is carried out substantially as illustrated on the accompanying drawing, which forms an essential part of this specification and whereon like characters of reference refer to like parts wherever they occur on the different parts of the drawing.

On the drawing: Figure 1 represents a plan view of the preferred form of my improved tree; Fig. 2 represents a longitudinal section of the tree shown in Fig. 1; Fig. 3 represents a plan view of a slightly modified form of my improved tree, and Fig. 4 is a view in longitudinal section of a second modified form.

Heretofore, unless very expensive trees were used, it has been the practice to construct the tree in two or more parts, so con-

nected together that it could not be adjusted in length, and therefore was only useful in boots or shoes of the same length. It is well known that the longer a boot or shoe is worn, the more it stretches and the longer and larger the foot space within it becomes; therefore a tree which perfectly fitted the boot or shoe when new would be somewhat small and short for the same boot or shoe after it had been worn for a time.

It is the object of my present invention to provide an inexpensive boot or shoe tree which shall be easily and quickly adjustable in length, so that the same tree may be used when the boot or shoe is new and when it has been enlarged by wear, the tree being adjustable to compensate for this stretching of the boot or shoe and adapted for holding the boot or shoe in the proper shape as well as it did when the boot or shoe was new.

My improved tree is made with a front or fore part *a* and a rear or heel part *b*. The size and shape of the fore part *a* is substantially the same as the corresponding part of the last upon which the boot or shoe was made, and the size and shape of the heel part *b* is substantially the same as the corresponding part of the same last, the adjacent faces of fore part and heel part being therefore of the same area. The fore part or the heel part of the tree, but preferably and as herein shown the heel part, is provided with a tongue or projection *c*, which may be made as an integral piece of the heel part, as shown in Fig. 3, or it may be made as a separate piece and rigidly attached thereto by means of the rivets *d, d*, as shown in Figs. 1 and 2, or by any other suitable means. When the tongue *c* is made as a separate piece and rigidly attached to the heel part *b*, it may be made as a thin metal plate, and as most of the wear upon the tree comes upon the tongue *c*, as will be seen by the complete description herein contained, it is advantageous that this tongue should be made of a wear resisting material, such as iron, steel, or other metal. The tongue *c* enters a recess *e* formed in the fore part *a* of the tree, which recess is of a width corresponding to the width of the tongue and of such a depth that the front surface of the heel part will rest against the rear surface of the fore part when the tree is in the position shown in Figs. 2 and 4, which is the po-

sition occupied when the tree is adjusted for and in position within the smallest boot or shoe for which it is designed. In this position the sides of the heel part form with the sides of the fore part a smooth and uninterrupted surface. The tongue *c* is provided with a series of transverse openings *f, f*, arranged substantially as shown, being preferably equidistant from each other. The fore part of the tree is provided with one or two openings *g, g*, which are counterbored and extend across the recess *e*, as shown. A cotter pin *h* is inserted into one of the openings *g* in the fore part of the tree and through one of the openings *f* in the tongue, the head of said pin entering the counterbored portion of the opening *g* so as to be entirely below the outer surface of the fore part of the tree. This pin *h* and the tongue *c* form a connecting link between the parts *a* and *b* and the said parts are free to turn in relation to each other, the pin forming a pivot upon which they turn. The pin *h* may be inserted through any one of the openings in the tongue *c*, and by this means the length of the tree, when in the position shown in Fig. 2, may be increased or diminished as desired in order to adjust it to the proper length to remove the wrinkles from the upper of the boot or shoe in which it is to be used. When two or more openings *g* are provided in the fore part of the tree, they are preferably made at a greater or lesser distance apart than the distance between the openings in the tongue, and by this means I am able to obtain a much finer adjustment of the length of the tree than is possible where the distance between openings on tongue and fore part is the same.

The heel part *b* is provided with an upwardly projecting handle *i* by which it may be operated. This handle may be made removable or be permanently attached to the tree, as desired, but is preferably permanently attached to the heel part, as shown.

In Figs. 2 and 3 I have shown my invention applied to a low-cut tree, such as would be used in low-cut shoes or slippers, but which may be used in high-cut boots or shoes when it is not required to stretch or smooth the upper part of the boot or shoe. My invention is applicable to high-cut trees to be used when it is desired to smooth the wrinkles from a higher part of the boot or shoe than could be smoothed by the use of the trees illustrated in Figs. 2 and 3, and I have shown my invention applied to such a high-cut tree in Fig. 4.

The operation of my improved tree is substantially as follows:—When it is desired to insert the tree within a boot or shoe, the two parts of the tree are turned upon the pin *h* as a pivot until the heel part extends nearly at a right angle to the fore part. The tree in this condition is introduced into the

boot or shoe, the fore part *a* being pressed as far forward as possible, and the heel part is then forced down into proper place, thereby pressing the fore part of the tree into the toe of the boot or shoe with sufficient force to remove all wrinkles from the upper of the boot or shoe. If it is found that the tree is not long enough to properly remove the wrinkles, the tree is removed from the boot or shoe and properly adjusted as to length by removing the pin *h* from the opening in the tongue *c* through which it passes and passing it through the proper opening in the tongue *c* to increase its length the desired amount. By this means it will be seen that the boot or shoe may be kept in proper shape even though it be slightly stretched by being worn. In order to remove the tree from the boot or shoe, it is only necessary to hold the boot or shoe in one hand and with the other hand to grasp the handle *i* and to turn the heel part on the pin *h* so as to draw the heel part from the boot or shoe. After the heel part has been raised from the heel portion of the boot or shoe the entire tree may be easily removed.

Although I have illustrated the fore part of the tree as being provided with two openings *g*, it will be understood that one of said openings may be dispensed with if desired, or that a series of openings may be made through the fore part of the tree and a single opening made in the tongue, without departing from the spirit of my invention.

Although I have illustrated the heel part of the tree as being provided with the tongue projecting rigidly therefrom and the fore part of the tree with a recess to receive the tongue, by which said parts of the tree may be pivotally connected to each other, it will be understood that the tongue might be formed upon the fore part of the tree and the recess formed in the heel part of the tree without departing from my invention.

My improved tree is very simple in construction, inexpensive to manufacture, effective, easily adjusted to the proper length, and obviates the necessity of having two or more trees for boots which vary slightly in length.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim:—

A shoe tree comprising a forepart formed in one piece bifurcated at its rear end and shaped to conform to the forepart of a boot or shoe and provided with a plurality of transverse openings in its bifurcated portion, a heel part shaped to conform to the heel part of said boot or shoe provided with a rigid handle and having its forward end of the same width as the adjacent end of the forepart, a tongue rigid with the heel part and extending centrally therefrom into the

bifurcated portion of the forepart, a distensible bifurcated pin formed to be inserted in the openings of the forepart and heel part to form a pivotal connection between said parts and to permit the tree to be adjusted to different lengths of boots and shoes, the head of said pin being entirely received in a recess formed in the forepart of the last, said openings being arranged to permit the adjacent faces of said forepart and heel part to be in contact when the tree is adjusted to its shortest position whereby the sides of the tree in said position are

smooth and uninterrupted, the distance between each perforation in the tongue and the next perforation in the series differing from the distance between the two perforations in the forepart of the tree, substantially as shown and described. 15

In testimony whereof I have affixed my signature, in presence of two witnesses. 20

CHARLES A. BATCHELDER.

Witnesses:

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