

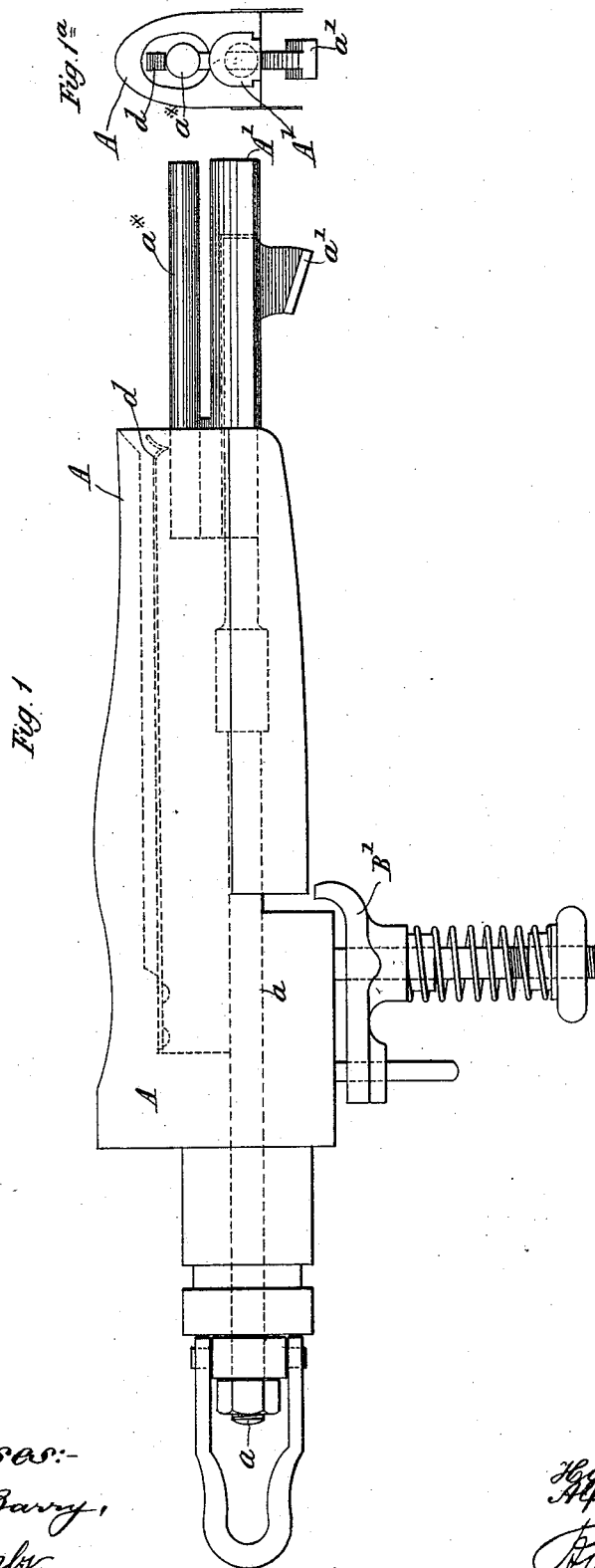
(No Model.)

3 Sheets—Sheet 1.

H. W. MOBBS & A. LEWIS.
BOOT TREE.

No. 563,502.

Patented July 7, 1896.



Witnesses:-
George Barry,
C. E. Combs.

Inventors:-
Henry W. Mobbs
Alfred Lewis
by attorneys
Pomeroy & Howard

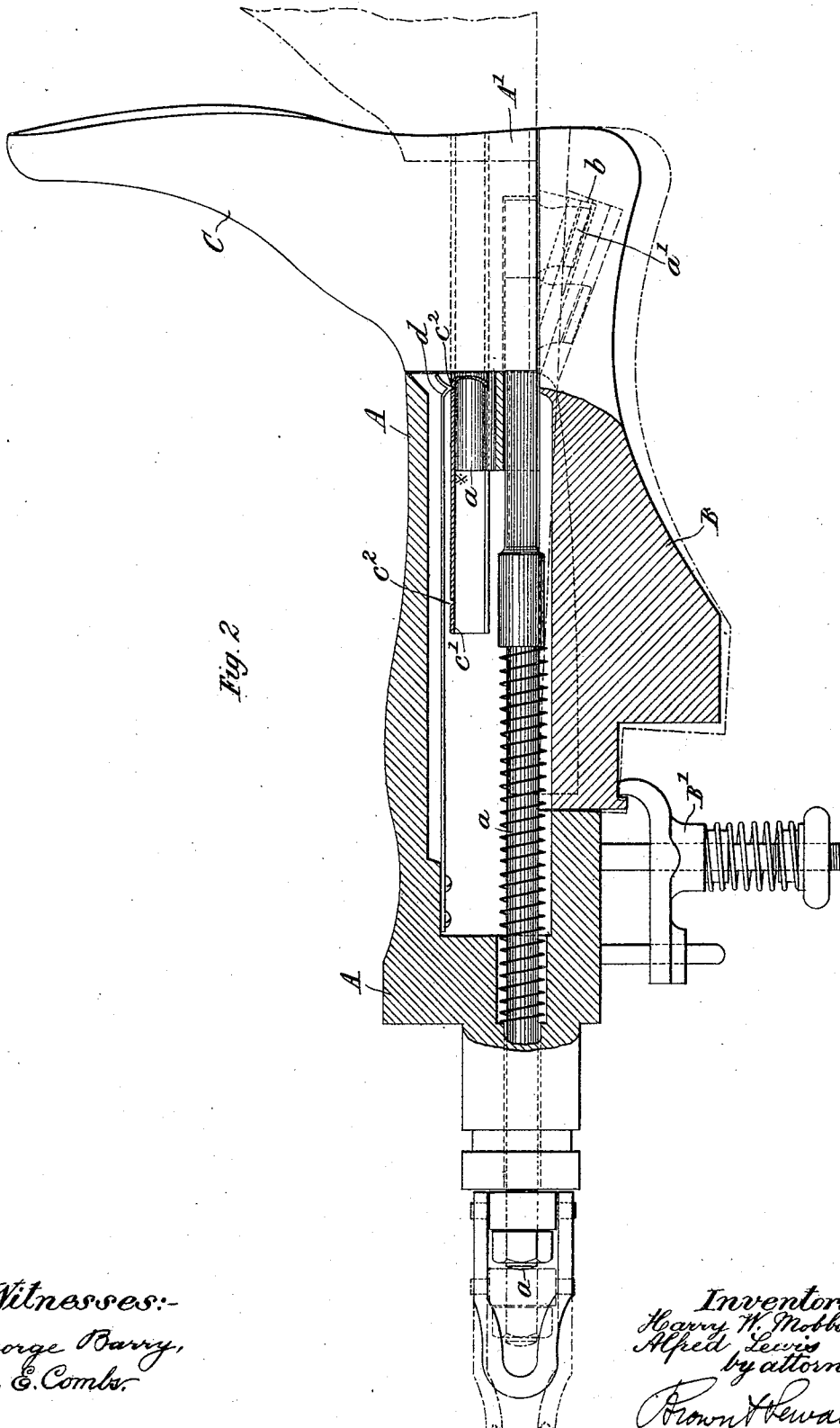
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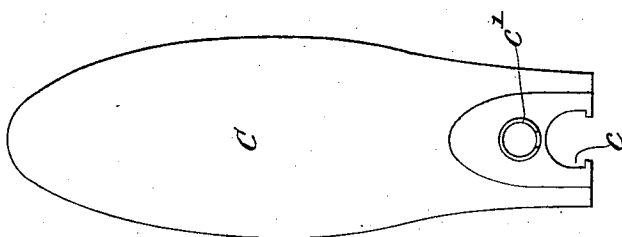


Fig. 5

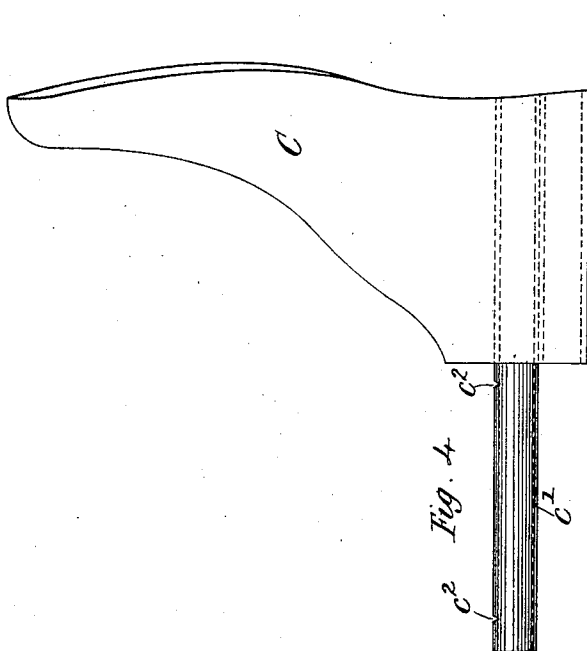


Fig. 4

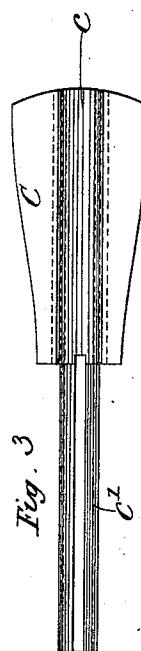


Fig. 3

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UNITED STATES PATENT OFFICE.

HARRY W. MOBBS AND ALFRED LEWIS, OF KETTERING, ENGLAND.

BOOT-TREE.

SPECIFICATION forming part of Letters Patent No. 563,502, dated July 7, 1896.

Application filed July 3, 1895. Serial No. 554,832. (No model.)

To all whom it may concern:

Be it known that we, HARRY WILLIAM MOBBS and ALFRED LEWIS, boot-last manufacturers, residing at Kettering, in the county of Northampton, England, have invented certain new and useful Improvements in Treeing-Machines for Boots and Shoes, of which the following is a specification.

In the wholesale manufacture of boots and shoes as a final operation the goods are brushed and cleaned, expanded, sleeked, polished, and set into form, and for this purpose they are placed upon wooden trees, which form part of what is called a "treeing-machine."

To suit the great variety of shapes and sizes of boots and shoes which have to be dealt with, the machine must be provided with trees that can be changed from time to time, as required, to correspond as nearly as possible with the lasts upon which the boots were made.

The tree in common use consists of three parts, viz: the toe and the heel, which are of wood and can be changed, and a middle part or arm of metal to which the toe and heel are attached and which constitutes itself the waist of the foot. This middle part is permanent and cannot be changed, like the toe and heel, to suit different shapes and sizes of boots. It therefore happens frequently that the toe and the heel do not fit the middle part or waist, and there is an unevenness in the contour of the tree-foot, which is a serious disadvantage when the goods are being boned or rubbed. To overcome this disadvantage, trees have been made with expanding and contracting waists, which are, however, very expensive.

According to our invention we arrange the tree-foot in such a manner that the arm or support for the toe and heel does not form the waist of the foot, but that the waist is formed in the removable toe and heel parts and is variable in width in proper proportion to the said parts, so that the disadvantages incidental to a waist or middle portion of permanent dimensions, or to one capable of contraction and expansion, are obviated.

In carrying out our invention we make the tree-foot, so far as its contour or surface is

concerned, of two parts only, the waist being made preferably in one with the toe. The arm or middle supporting-piece is still retained; but it is so reduced in lateral dimensions as to be entirely incased within the toe part before mentioned, which is lengthened in a backward direction toward the heel, so as to meet the latter when the tree is out of action.

In the accompanying drawings we have illustrated our invention as applied to the arm of a treeing-machine.

Figure 1 shows a side view of the arm, with the foot portions removed therefrom. Fig. 1^a is an end view of Fig. 1 seen from the right. Fig. 2 is a side view, partly in section, with the foot portions attached. Figs. 3, 4, and 5 are back, side, and top views of the toe portion of the foot.

A is the metal arm, to which the toe and heel portions of the last are to be attached. This arm is hollow and contains the usual spring-encircled rod *a*, having a shackle at one end, connected to a treadle or other device for giving it an endwise pull, and at the other end a dovetailed projection *a'*, which works in the inclined grooves *b* of the detachable heel portion B, to move the latter outward and inward to stretch and release the boot in the manner well understood.

B' is an adjustable spring-catch which holds the heel portion B of the last, in conjunction with the projection *a'* and grooves *b*, to the arm A.

Referring now to the prominent feature of our invention, C is the toe part of the last, which is so formed as to surround entirely and incase the reduced end A' of the supporting metal arm A, (see Fig. 2,) thereby maintaining the even contour of the foot when the size of the last is changed. The form of the toe part C is well shown at Figs. 3, 4, and 5, where *c* is the recess, which is the same in feet of all sizes, and into which the end A' of the arm fits.

The attachment of the toe part C to the supporting-arm may be variously effected without departing from the arrangement just described, whereby the inconveniences of a permanent supporting-arm, in conjunction with removable toe and heel parts, are obvi-

ated. We prefer, however, to adopt the following method:

The toe part C, which includes the ankle and waist, is bored vertically in a suitable position, and a metal tube *c'* is inserted and secured in the hole. (See Figs. 3, 4, and 5.) This tube *c'*, which extends some inches out of the wood and is slotted longitudinally in its upper part, fits and slides upon a guide-rod *a**, placed in front of and forming part of the extremity A' of the metal supporting-arm A of the machine. The said tube is provided with two recesses or nicks *c*², which engage with a suitably-arranged catch *d*, which holds the toe part in one of the two positions as indicated by drawn and dotted lines in Fig. 2, in the manner well understood in treeing-machines; or the catch *d* may be released and the tree withdrawn, for substituting another of different size and shape, in the usual way. This mode of securing the toe part of the tree is convenient for manufac-

ture and gives a secure and satisfactory attachment for the parts.

It will be seen that the foot of the tree, being divided only in one place, and that far back near the heel, the division occurs within the heel-stiffening of the boot, and consequently no unevenness of surface is caused when the boot is being treed.

What we claim is—

In a treeing-machine for boots and shoes, the combination of a removable toe part having a metal-tube socket therein, a supporting-arm incased within a recess in the said removable toe part and a guide-rod forming part of said supporting-arm and receiving upon it the said metal-tube socket, substantially as herein described.

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