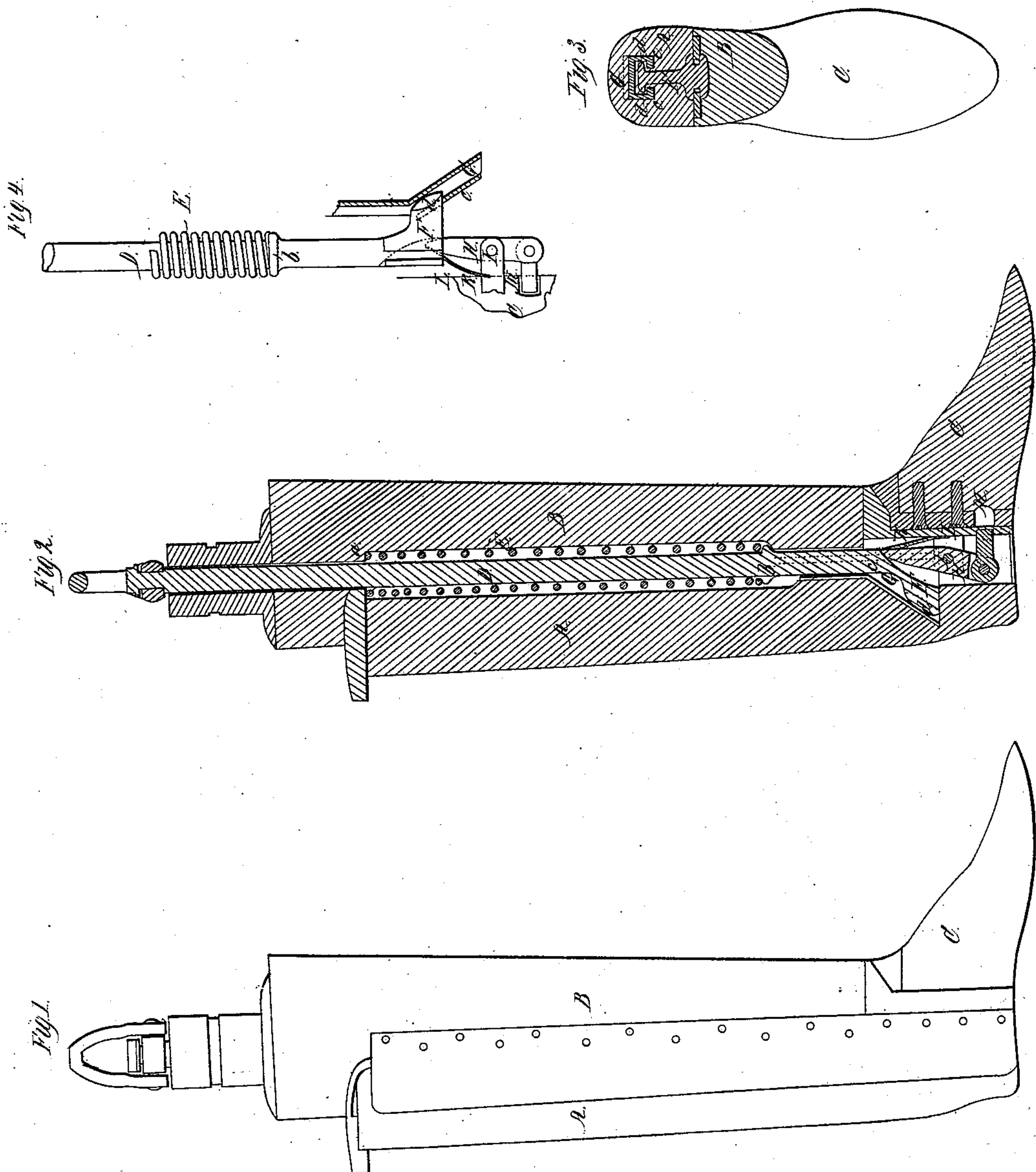


C. T. Eames,

Boot Tree,

N^o 14,951.

Patented May 27, 1856.



UNITED STATES PATENT OFFICE.

CHARLES T. EAMES, OF MILFORD, MASSACHUSETTS.

BOOT-TREE.

Specification forming part of Letters Patent No. 14,951, dated May 27, 1856; Reissued March 25, 1862, No. 1,292.

To all whom it may concern:

Be it known that I, CHARLES T. EAMES, of Milford, in the county of Worcester and State of Massachusetts, have invented an
5 Improvement in Boot-Trees; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

10 Figure 1, denotes a side elevation of one of my improved boot trees. Fig. 2, a vertical central and longitudinal section of the same. Fig. 3, a transverse section taken through its operative cam and inclined plane. Fig. 4, a
15 side view of said cam and the shank or rod thereof.

In the said drawings A, B, indicate the back and front portions of the leg of a boot tree, while C, is the foot part thereof,
20 they being formed and applied together in the usual way. Within the front portion of the leg and extending out of its upper end, is a rod D, which is enveloped by a helical spring E, whose ends bear respectively
25 against shoulders *a, b*, arranged on the rod and the part B, as seen in Fig. 2. The lower end of the said rod carries a cam or projection F, which works against an inclined plane G, formed with lips *c, c*, to embrace
30 projections *d, d*, on the outer end of the cam F, as seen in Fig. 3. When the cam is moved upward it will separate the two parts A, B. When pressed downward it will draw them together. The inclined plane is
35 arranged within the leg part A, so that it shall project both above and below the vertex of the angle of the instep of the foot, and the front side of the leg portion B. The cam F, will thus work either above or below
40 such vertex. In order to maintain the foot C, in place on the leg portion B, a bent lever catch H, turning on a fulcrum I, is applied within the leg part B, and arranged with respect to the foot part C, and the cam
45 F, as seen in Fig. 2. The upper arm of the lever H, working against a spring K, and an inclined plane or cam L', the said spring K, being arranged as seen in Fig. 2. When the rod D, is raised upward, the locking
50 catch H, will be forced by its spring K, into a recess M, formed in the foot part C, the catch serving to confine the foot C, to the leg portion B. During the depression of the rod D, and the cam F, the catch H, will

be moved out of the said recess so as to 55 enable the parts B and C, to be separated.

The lower part of the inclined plane G, is placed about as high as the top of the heel.

In operating with my improved boot-tree 60 after it has been inserted within a boot, the rod D, is to be pulled on so as to draw the cam F, upward. During the first portion of the movement of the cam F, and owing to its position below the upper part of the
65 instep it will separate the parts A and B, and so as to crowd the foot part C, into the foot of the boot, and at the same time force the heel of the part A, close into the heel of the boot. After this has been accomplished 70 the further elevation of the cam will not only continue to strain the leather of the foot, but will separate the two parts A, B, in such manner as to press them firmly into the boot leg, to an extent sufficient for 75 straining it to the degree required. Thus it will be seen that there will be a peculiar action of the cam F, due to its particular position, and to that of the inclined plane with respect to the angle of the instep and leg. 80

When by a series of levers or other contrivances made to simultaneously operate at the top and bottom of the back part A, and so as to force it away from the part B, strain is brought on the upper part of the boot leg, 85 at the same time, or before the lower part is strained, there is great danger of bursting open the top of the boot leg, and this is a difficulty which is incident to many expanding boot trees now in use. They do not com- 90 pletely adapt themselves to the boot, but before the foot part can be sufficiently strained by them, the leg part of it will have been too much strained. In order to remedy this defect in boot trees, I have contrived my in- 95 vention or improved boot-tree which operates so as to strain the foot of the boot first and to employ the foot (where the greatest part of the strength of the boot lies, as the upper leather there is held by the 100 sole) as a fulcrum for the leverage which may be employed to expand the leg portion. In this way I avoid all danger of bursting open the side seams of the leg and am enabled after straining the foot, to bring upon 105 the leg portion of the boot the full amount of strain required.

I do not claim the employment of either

two levers or cams arranged so as to simultaneously operate against both the upper and lower parts of the back portion of the leg of the tree; but

5 What I do claim is—

The above described arrangement or mode of applying a single cam and inclined plane, with respect to the foot and leg portions of the boot-tree, whereby the said devices are
10 made to first perform the function of setting the foot parts of the tree firmly into the foot

of the boot, and next that of stretching the leg of the boot, the application of stretching mechanism directly to the upper part of the leg of the tree being rendered unnecessary. 15

In testimony whereof I have hereunto set my signature this twenty-third day of November A. D. 1855.

CHARLES T. EAMES.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.

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