No. 840,160. PATENTED JAN. 1, 1907.

D. M. REID.

PNEUMATIC TREE.

APPLICATION FILED DEC. 1, 1905.

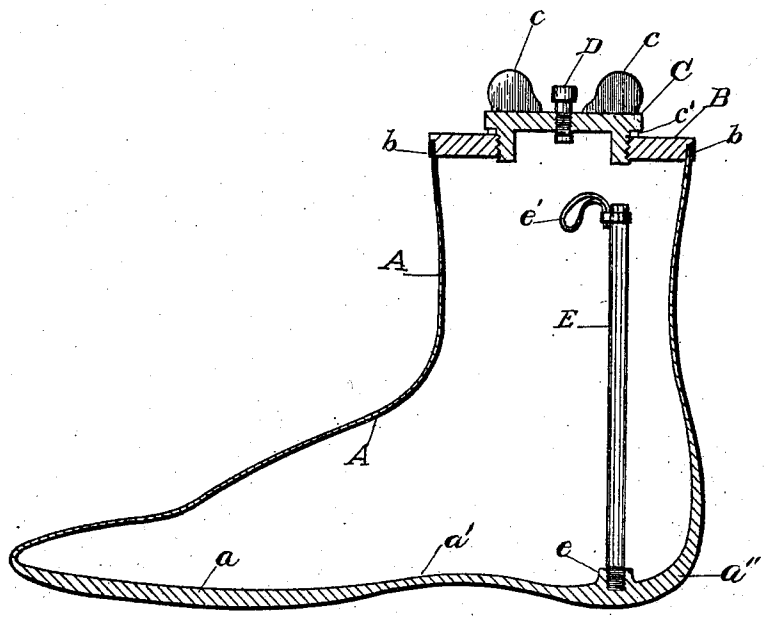


Fig. 1

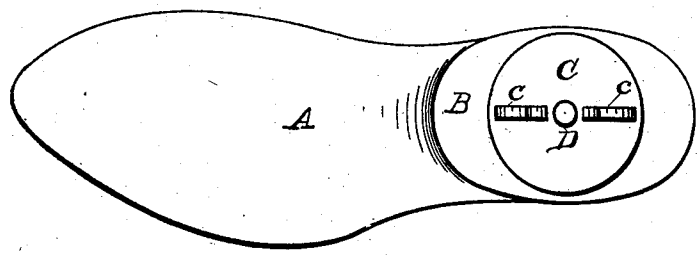


Fig. 2

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PNEUMATIC TREE.

No. 840,160. Specification of Letters Patent. Patented Jan. 1, 1907.

Application filed December 1, 1905. Serial No. 289,894.

To all whom it may concern:

Be it known that I, DAVID MACDONALD REID, a citizen of the United States, residing at Mingo Junction, in the county of Jefferson and State of Ohio, have invented certain new and useful Improvements in Pneumatic Trees; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to produce a pneumatic tree or form-preserver for boots and shoes, which is designed to be inserted and inflated when the boots or shoes are not being worn, the purpose being to eliminate the wrinkles which may form when being worn.

Another object is to produce a device which may be used constantly to preserve the natural shape of boots and shoes when they are not being worn.

Another object is to provide pneumatic means for exhibiting boots and shoes in store-display.

Another object is to devise a convenient shoe form or tree which may be collapsed and carried in small space while traveling or which may be always kept in a convenient place ready for use.

Another object is to provide a device which may be used to preserve unusual shapes in boots and shoes—for instance, by building up with patches on the exterior of the tree at places to correspond to where corns or bunions occur on the feet, so that when the tree is distended in the shoe the shoe will be caused to retain or assume the right shape to accommodate the said corns and bunions.

In the drawings, Figure 1 is a central longitudinal sectional view of the tree or shoe-form. Fig. 2 is a plan view of the tree or form.

In the drawings, A is the upper and ankle of the tree, composed of a suitable elastic material, which will retain the compressed air without leaking.

a is the sole of the form or tree. *a'* is the waist of the sole, and *a''* is the heel portion and counter. It will be observed that the ball of the sole and the heel portion of the sole are very much thicker than the waist. The sole and heel are made of increased thickness to secure stiffness, while the waist is flexible, the object being to secure sufficient flexibility of the waist to permit bending the tree conveniently when inserting in the shoe, while the sole, being stiff, is readily pushed forward into the toe of the shoe.

B is a metal plate to the circumference of which the upper edge of the ankle A is cemented. *b* is a band which binds the said edge more securely to the plate B. The said plate B is of approximately oval shape to conform to the shape of the ankle of the shoe, and said plate has a circular screw-threaded opening to receive the threaded cap C. *c c* are thumb-lugs, integrally a part of said cap C and which are used to screw or unscrew the said cap.

D is an ordinary return-valve, such as is commonly used on pneumatic tires. Said valve is screwed into the cap C.

c' is a suitable gasket, which serves to make an air-tight joint between the cap C and the plate B.

E is a pole, which is detachably connected by any suitable means to the interior of the heel portion at *e*. *e'* is a strap attached to the upper end of the said pole E. The purpose of the pole E is twofold—namely, to afford a means for pushing the tree into the shoe and also to withdraw it therefrom without straining the upper A.

In operation the cap C is removed from the plate B, and the collapsed body A is inserted into the shoe. The waist *a'* being flexible permits the sole *a* to be pushed forward without straining the shoe or boot upper. When this has been done, the pole is grasped by the hand, and by pushing upon it the heel part is forced down into the shoe. If desired, the pole is then removed, or it may be allowed to remain in the tree. It is obvious that a longer pole than shown may be used—of a length sufficient to protrude through the opening in plate B, which of course would necessitate removal when the tree has been inserted in the boot or shoe. The cap C is then screwed into the plate B. An ordinary bicycle air-pump is then applied to the valve D and sufficient air is pumped into the tree to secure the necessary distention.

It is found that full sizes of the tree will answer for two half-sizes of shoes. For instance, a No. 5 tree will distend a No. 5 or 5½ shoe, and so on, the material of the upper A being sufficiently elastic to permit this.

Having thus described my invention, I claim—

1. A pneumatic tree or form for boots, and

shoes having a main body, the upper and ankle of which are composed of elastic material, and having a sole flexible at the waist and stiff at the ball and toe and at the heel.

2. A pneumatic tree for boots and shoes provided interiorly with means detachably connected to the heel portion for forcing said tree into boots or shoes, or withdrawing same therefrom.

3. A pneumatic tree for boots and shoes provided with an elastic upper, a sole flexible at the waist, detachable means at the upper part of the ankle for opening or hermetically closing the tree, means through which the tree may be inflated and means interiorly disposed for forcing into or withdrawing the tree from a boot or shoe.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID MACDONALD REID.

Witnesses:
DAVID TOPE,
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