(No Model.)

J. P. PRATT.

BOOT TREE.

No. 275,411. Patented Apr. 10, 1883.

Fig. 1.

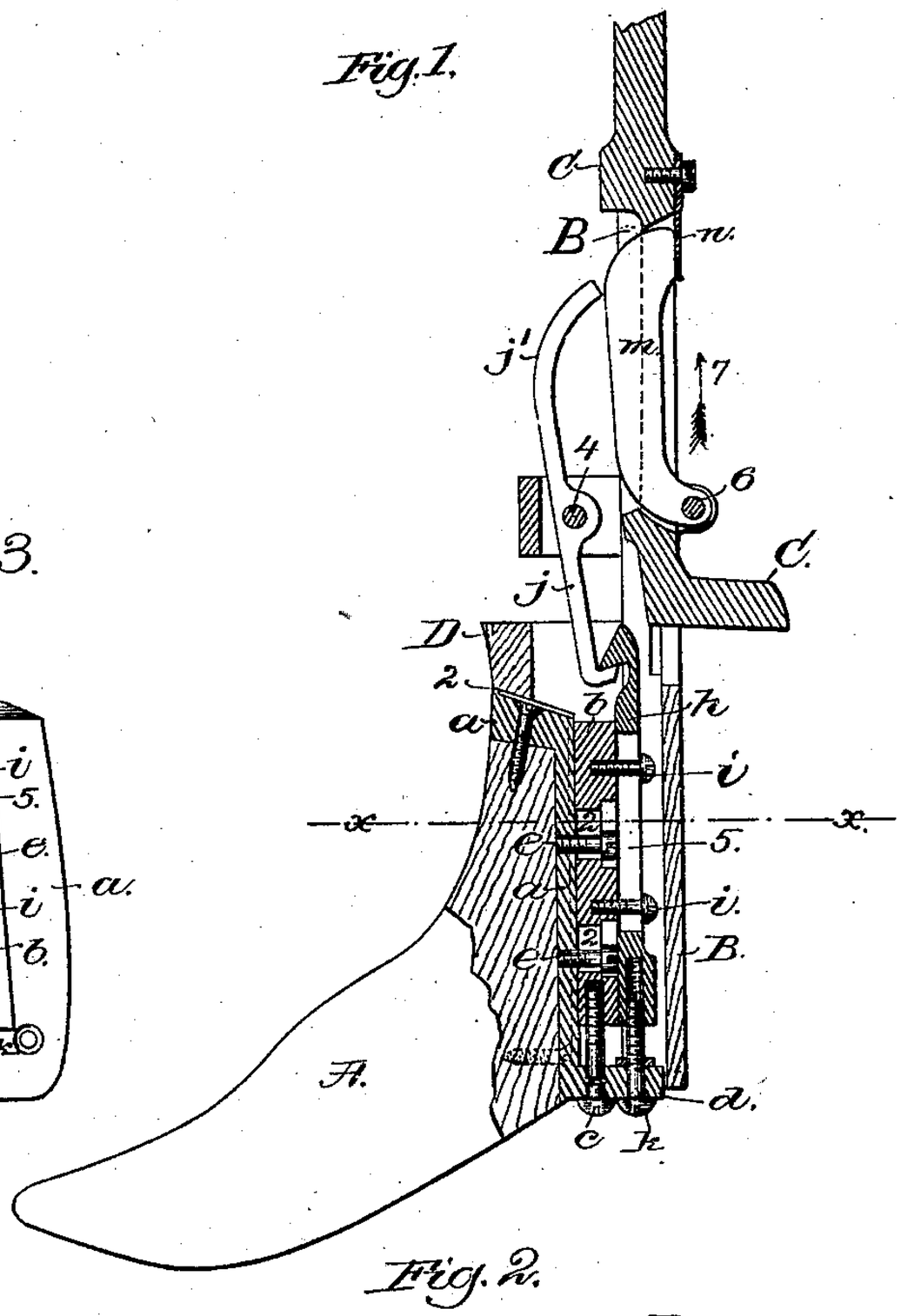


Fig. 3.

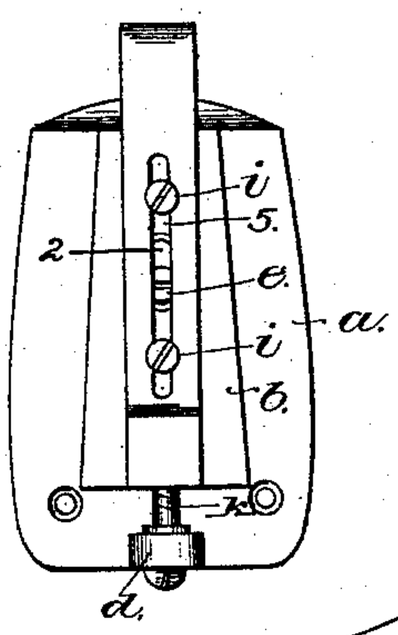
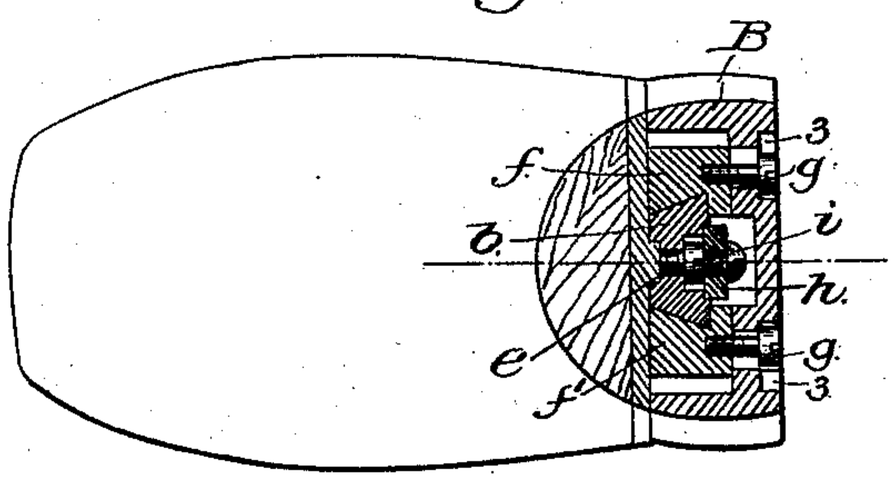


Fig. 2.



Witnesses.
John F. C. Printzlau
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UNITED STATES PATENT OFFICE.

JOHN P. PRATT, OF MILFORD, MASSACHUSETTS.

BOOT-TREE.

SPECIFICATION forming part of Letters Patent No. 275,411, dated April 10, 1883.

Application filed September 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. PRATT, of Milford, county of Worcester, State of Massachusetts, have invented an Improvement in Boot-Trees, of which the following description, in connection with the accompanying drawings, is a specification.

My invention, relating to boot-trees, is embodied in a boot-tree in which the foot portion is connected to the center portion by a sliding dovetailed joint, and is held in place thereon by a latch while the boot is being stretched and rubbed on the said boot-tree. In boot-trees of this class when the dovetailed joint and latch become somewhat worn the foot portion is loosely held with relation to the remaining portion of the boot-tree, and a gap or ridge is produced at the joint between the said foot portion and the front of the boot-tree, which causes an imperfection in the leather at that point when the rubbing pressure is applied. When boot-trees of this description have become so much worn as to produce very imperfect work the joint between the foot and center piece has to be refitted by a process of filling or scraping, which occupies considerable time, and usually necessitates the sending of the boot-trees from the factories where they are used to the factories where they are made, so that they may be refitted by the boot-tree manufacturers.

My present invention has for its object to obviate these difficulties; and it consists in providing means for adjusting the various parts as they become worn, so that the foot portion will always be held in proper relation to the remaining portion of the tree, and whereby also the foot and remaining portions may be interchangeable among a series of boot-trees, the joint properly fitting throughout the entire series.

Figure 1 is a vertical longitudinal section of a boot-tree embodying this invention; Fig. 2, a transverse section thereof on line *x x*, and Fig. 3 a rear elevation of the foot portion of the boot-tree detached.

The foot portion A and center piece, B, and expanding device C may be of any usual construction. The said foot portion A is provided with a metallic face-plate, *a*, fitted to the center B and front portion, D, the lower end only of which is shown in Fig. 1, in the usual manner. The said plate *a* is provided with a dovetail piece, *b*, made tapering from top to bottom, as shown in Fig. 3, and longitudinally adjustable on the said face-plate *a*, as by the adjusting-screw *c*, working in a lug, *d*, on the bottom of the face-plate *a*. The said dovetail piece *b* is fixed in adjusted position by the set-screws *e*, passing through slots 2 in the said dovetail piece, to enable it to be adjusted longitudinally by the screw *c*. The dovetail socket for the dovetail piece *b* is made in two portions, *f f'*, mounted in the center piece, B, of the boot-tree and made laterally adjustable therein, they being held in adjusted position by the set-screws *g*, (shown as passing through slots 3 in the said center piece, B.) By this adjustment of the dovetail socket the entire number of a series of center pieces may be adjusted to fit any given foot-piece, which will thus be interchangeable throughout the entire series. The said dovetailed projection and socket-piece form co-operating connecting devices for connecting the center piece and foot portion in the proper relative position. As the said dovetailed surfaces wear, the dovetail piece *b* may be moved upward on the foot-piece A by the adjusting-screw *c*, the said upward movement, owing to its tapering shape, causing it to come to a bearing on the socket *f f'* in the upward movement, by which the end of the foot-piece A is brought into contact with the front piece, D, of the tree, thus enabling the said foot-piece A to be always rigidly held in relation to the center piece, B, and front piece, D, and affording a perfectly smooth surface where the foot-piece and front piece meet, as at 2, Fig. 1. In order to fasten and retain the said foot-piece in the proper position upon the center and front piece, a latch, *h*, is provided, it being attached to the dovetailed piece *b* by set-screws *i*, and operating in connection with a catch, *j*, pivoted at 4 upon the center piece, B, of the tree. The said latch *h* operates in the usual manner, but is made adjustable on the dovetail piece *b* by means of a screw, *k*, passing through the lug *d* on the face-plate *a*. The shanks of the screws *i* pass through a slot, 5, in the said

latch *h*, instead of through the usual round holes, so as to permit the said lengthwise adjustment, by which the engaging ends of the latch *h* and catch *j* may be always kept in the proper relative position as they wear away, so that the latch will always hold the foot-piece A up snugly against the front piece, D, of the tree.

The catch *j* is actuated in the usual manner by a catch-actuating cam, *m*, mounted on the movable expanding device C, the said catch being thrown into engagement with the latch by the upward movement of the said expanding device, which takes place in expanding the tree. The said cam has heretofore formed a rigid portion of the said expanding device C; and in order to prevent breakage in case the ends of the latch and catch did not properly interlock, the end *j'* of the said catch that is engaged by the cam *m* has been made sufficiently flexible to yield and prevent breakage, this necessitating that the said end should be made of considerable length. As herein shown, the end *j'* of the catch is made short and rigid, and the cam *m* is made yielding upon the expanding device C, the said cam being shown as pivoted at 6 and normally held by a spring, *n*, in position to actuate the latch *j* when the expanding device is moved in the direction of the arrow 7 to expand the tree. In case the ends of the latch and catch do not properly interlock, the spring *n* and cam *m* would yield, thus preventing breakage of any portion of the said latch mechanism.

The socket *f f'* for the dovetail might be made in a single piece adjustable longitudinally upon the center in a manner similar to the adjustment of the dovetailed piece *a* on the foot portion.

I claim—

1. The combination of the center piece of a boot-tree, provided with a longitudinally-tapering dovetail socket-piece, with the foot-piece provided with a correspondingly-tapered dovetail projection, and means to adjust its position in the direction of its length on the said foot-piece, whereby the said projection may be caused to accurately fit its socket when the said foot-piece is placed in proper position relative to the remainder of the boot-tree, substantially as described.

2. The combination of the foot portion of a boot-tree, provided with a dovetail projection, with the center piece provided with a socket-piece made in two portions, and means to adjust the said portions of the socket-piece, substantially as and for the purpose described.

3. The combination of the foot portion of a boot-tree, and a latch and means to adjust its position on the said foot portion, with the center piece and co operating catch, substantially as described.

4. The foot portion of the boot-tree, provided with a latch, combined with the center portion and catch thereon, and the expanding device and catch-operating cam having a yielding connection therewith, substantially as described.

5. The face-plate *a*, provided with a lug, *d*, combined with the dovetail piece and latch and independent adjusting-screws therefor, substantially as described.

6. The foot portion of a boot-tree and a latch thereon, and a center piece and catch thereon, the said latch and catch forming co-operating fastening devices, combined with the means to adjust the position of one of the said devices on the corresponding portion of the boot-tree, substantially as and for the purpose described.

7. In a boot-tree, a center piece and foot portion provided with co-operating interlocking connecting devices, combined with the means to adjust one of the said connecting devices upon the corresponding portion of the boot-tree, whereby the said devices may be made to properly interlock when the said portions of the boot-tree are in the proper relative position, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN P. PRATT.

Witnesses:
JOS. P. LIVERMORE,
B. J. NOYES.