

E. M. COLE.
TREE LEG AND TREE FOOT.

Patented July 23, 1895.

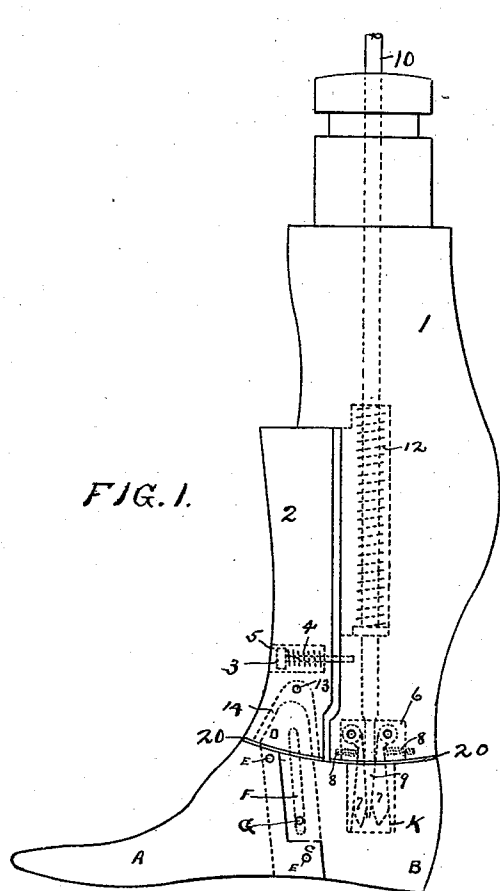


FIG. 1.

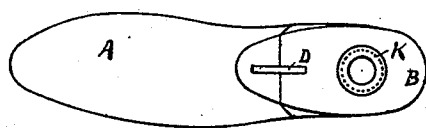


FIG. 3.

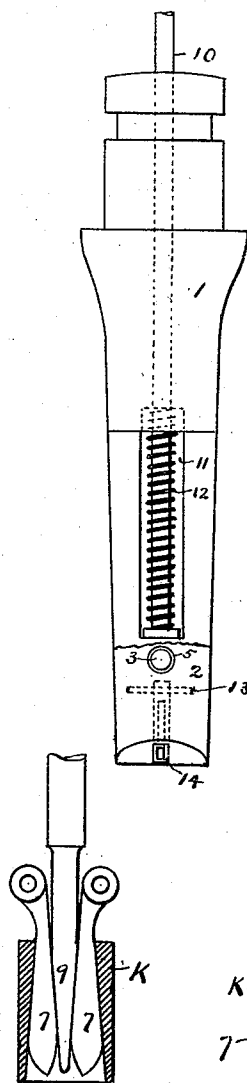


FIG. 2.

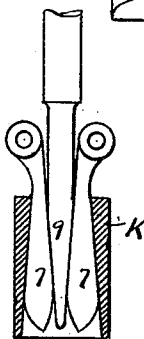


FIG. 4

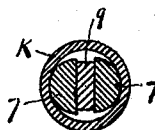


FIG. 5.

WITNESSES:

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TREE-LEG AND TREE-FOOT.

SPECIFICATION forming part of Letters Patent No. 543,376, dated July 23, 1895.

Application filed October 15, 1894. Serial No. 525,895. (No model.)

To all whom it may concern:

Be it known that I, EDWARD M. COLE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Tree-Legs and Tree-Feet, of which the following is a specification.

My invention relates to tree-legs used in the manufacture of shoes, and has for its object an arrangement of devices whereby the last used in forming the shoe may also be used in connection with the leg, thereby avoiding the necessity of removing the last and placing the shoe upon the ordinary tree-foot.

In the accompanying drawings, Figure 1 is a side elevation of a leg and foot. Fig. 2 is a front elevation of the leg, with a portion broken away. Fig. 3 is a plan of the foot, and Figs. 4 and 5 are enlarged details of the expanding-pin and socket.

The leg 1 is cut away at the front and has a supplementary piece 2, which is secured thereto by means of the pin 3 and spring 4, that are located in the recess 5. The action of the spring 4 is to press the piece 2 against or toward the leg 1, while at the same time permitting them to be separated to a limited extent to accommodate the width from front to back of different-sized feet. Brass side pieces (not shown in the drawings, but which are identical with those used in ordinary legs) prevent the piece 2 from lateral displacement on the leg 1. In a recess 6 in the lower extremity of the leg 1 are pivoted two semicircular pieces 7, that are pressed toward each other by means of the spring 8. Between the pieces 7 and serving to force them apart is a wedge 9, formed on the end of the rod 10, that passes through the leg 1 and extends out where it may be connected to a treadle for moving it. Surrounding the rod 10 and located in a recess 11 of the leg 1 is a spring 12, that serves to force the rod 10 downward and to cause the pieces 7 to be separated by the wedge 9. When the wedge 9 is withdrawn and the pieces 7 brought into contact with each other by the action of spring 8, they form a cylinder that is slightly tapered at the end. When forced apart, as shown in the drawings, they form a tapered body, the larger diameter of which is near the extremity.

Located in the lower face of the piece 2 and

secured by the pin 13 is a metallic socket 14, the aperture in which is shaped so as to engage and fit the edge of a plate D, that forms a part of the construction of the tree-foot. The tree-foot is the same in form and construction as the last shown and described in my pending application, Serial No. 525,453, filed October 10, 1894, and consists of a fore-part section A and a heel-section B secured together by means of the slotted plate D and the pin G. The line of intersection between the parts A and B is inclined and offset, as shown in the drawings, and the slot F in the plate D is also inclined, but to a slightly less extent than the line of intersection between the parts A and B. The result of this construction is that when the foot is put into the form of a uniform last, as shown in the drawings, the parts A and B are locked together by wedging, and when the heel-section is raised on the fore-part section the parts are freed from locking and contract in the direction of the length of the foot. The plate D extends above the foot and is of such form and size as to fit and be guided by the socket 14 in the piece 2. The lines of intersection between the parts A and B, and consequently the plate D, are always located at a definite distance from the instep of the foot, so that when the foot is pressed up against the tree-leg and the plate D enters the socket 14 the foot and the piece 2 are brought into such relationship to each other that the curve of the instep will join the curve of the piece 2 and form one unbroken line.

Located in the upper face of the section B is a metallic socket K, the circular opening in which is of larger diameter in the interior than at the mouth. The diameter of the mouth of the socket K is just large enough to permit the pieces 7 to enter when the wedge 9 is withdrawn, and small enough to prevent the withdrawal of said pieces when the wedge 9 is forced down by the action of the spring 12. The socket K is located at a distance from the edge of the heel-section B that is equal to the distance of the wedge 9 from the edge of the leg 1. It will be evident from what has been said of the socket K and the expanding-pin that enters it and of the socket 14 and the plate D that the curves on the front and rear of the foot will always join the

curves of the leg, the small difference in the length of the top face of the foot being compensated for by compression of the spring 4 on the pin 3.

5 Secured to the lower face of leg 1 and the piece 2 are sheets of rubber, felt, or other yielding material 20 that act to make a more perfect joint between the leg and foot and to compensate for any inequalities in the upper
10 face of the foot.

The operation is as follows: The operator puts his foot on a treadle, that forms part of the machine for supporting the tree-leg, and causes the wedge 9 to be withdrawn from between the pieces 7. He then takes the partly-made shoe, with the last in it on which it was formed, and presses said last or tree-foot up against the end of the tree-leg, so that the expanding-pin 7 7 9 will enter the socket K and the plate D will enter the socket 14. He then
15 releases the treadle, whereupon the spring 12 forces the wedge 9 forward and causes the pieces 7 to expand in the socket K. The shoe is then ready for the process known as "tree-
20 ing."

What I claim is—

1. In combination with a tree-leg provided with a socket and a projecting and expanding pin, a two part tree-foot having its parts connected together by means of a pin and a
30 slotted plate, a projecting edge on said plate adapted to enter and fit the socket in the tree-leg, and a socket in the tree-foot adapted to be engaged by said expanding pin.

35 2. In combination with a two-part expanding tree-leg having a socket in one part and an expanding pin in the other part, a two-part tree foot having a slotted tongue in the fore part section and a groove and pin in the heel section for securing the parts together
40 and permitting one part to have a limited movement on the other part, a tapering projection on said tongue adapted to enter and fit the socket on the tree-leg, and a socket in the heel-section for receiving the expanding
45 pin on the tree-leg.

3. A two-part tree-foot having its parts secured together by a slotted plate and pin, the slot in said plate being at an inclination to
50 the line of intersection between said parts for the purpose of causing the parts to be wedged

together when pressed into the position corresponding to that of a uniform last, a projecting edge on said plate for engaging a socket on a tree-leg, and a tapering socket in the heel section of said tree-foot for receiving and being gripped by an expanding pin on the same tree-leg. 55

4. A two-part tree-foot having its parts secured together by means of a slotted plate and pin and having the slot set at an inclination to the line of intersection between the parts so as to cause the parts to become wedged together when put into the position corresponding to that of a uniform last, a two-part tree-leg, one part of which has a limited movement toward and from the other part, a projection on one tree-foot part and a socket on the other tree-foot part, and corresponding socket and projection on the tree-leg parts for connecting the tree-foot and the tree-leg together, one of said projections being in the form of an expanding pin for the purpose of causing it and its corresponding socket to form a gripping device. 75

5. In combination, a self-locking two-part tree-foot, a two-part tree-leg having its parts arranged to expand or contract so as to make it conform to different lengths of tree feet, sockets and projections for securing the tree-leg and tree-foot firmly together, and a layer of yielding material between said tree-leg and said tree-foot for the purpose of compensating for inequalities caused by using tree-feet of different lengths. 85

6. A two-part tree-foot and a two-part tree-leg, a projection on the fore part of the tree-foot and a corresponding socket on the fore part of the tree-leg, a gripping device for securing the rear parts of the tree-leg and tree-foot together, said gripping device consisting of an expanding pin and a corresponding socket, and means for permitting the parts of the tree-leg to expand and contract in the direction of from front to rear to cause it to accommodate and correspond to different lengths to tree-foot. 95

EDWARD M. COLE.

Witnesses:

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C. S. DODDS.