(No Model.)

P. M. WOLF.

ARTIFICIAL LEG.

No. 264,812. Patented Sept. 19, 1882.

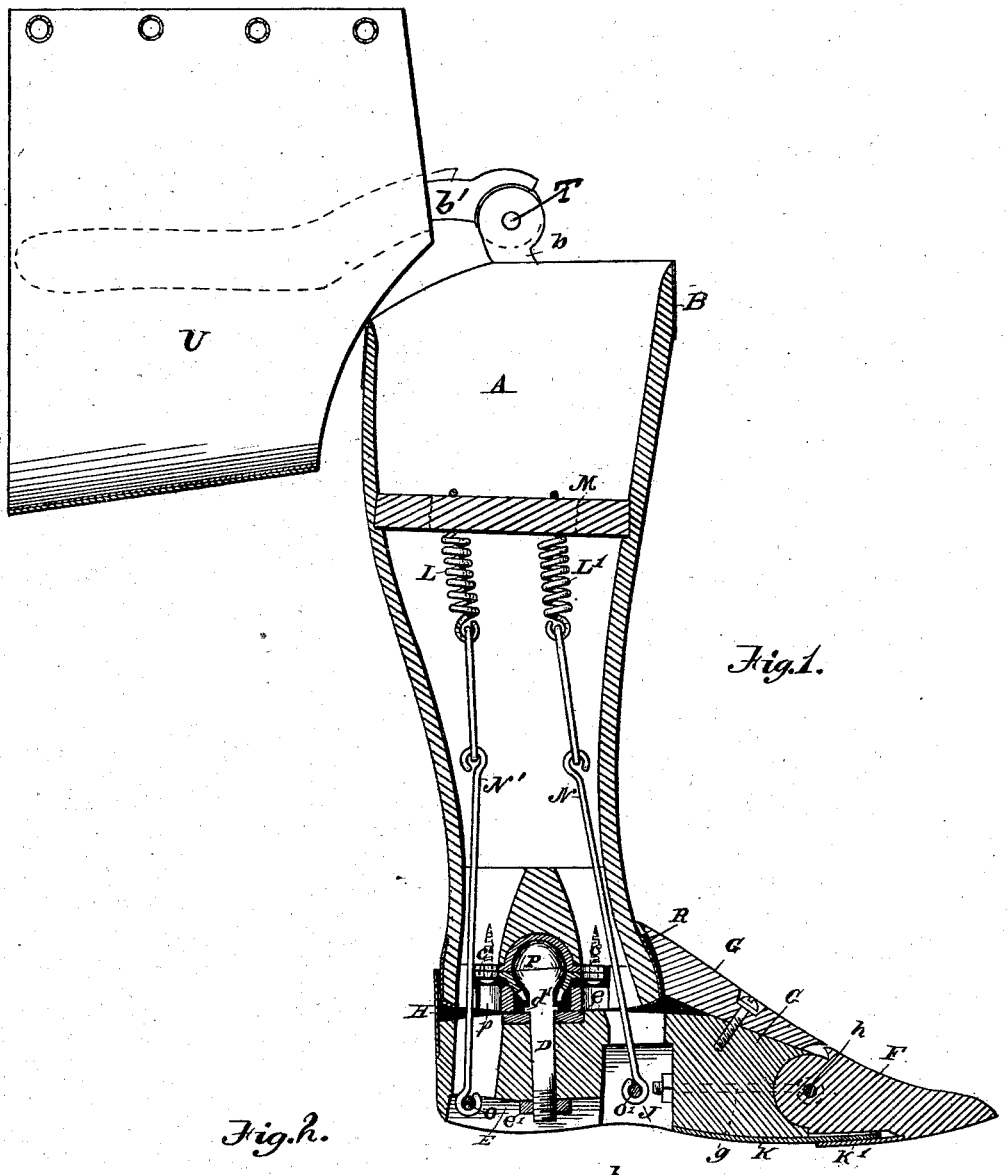
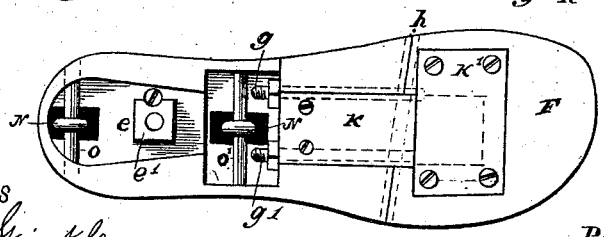


Fig. 1.

Fig. 2.



WITNESSES

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PETER M. WOLF, OF CORYELL, TEXAS.

ARTIFICIAL LEG.

SPECIFICATION forming part of Letters Patent No. 264,812, dated September 19, 1882.

Application filed June 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, PETER M. WOLF, a citizen of the United States, residing at Coryell city, in the county of Coryell and State of Texas, have invented certain new and useful Improvements in Artificial Legs; 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.

My invention consists in certain improvements in the construction and arrangement of parts in artificial legs, so as to make them more durable, easier of repair, and more comfortable to the wearer, as will be hereinafter more particularly pointed out in the claims, and described.

In the accompanying drawings, in which similar letters of reference indicate corresponding parts, Figure 1 is a sectional view illustrating my invention. Fig. 2 is a plan view of the sole of the foot, showing toe-spring and arrangements for taking up the wear of the parts. Fig. 3 shows the ankle-joint in detail.

The leg A is formed of two sections of wood or similar material, and has the metal band B around it at top, which is in this case just below the knee; and said band has two ears, *b*, which are fitted with pieces *b'*, of steel, curved as shown, and secured to leather bandage U and joined to ears *b* by means of rod T, so as to form the knee-joint. The leg A is connected to foot C by means of a flexible joint composed of the two plates *c c'*, having conical sockets therein, and the rod D, formed with the double conical head P, the bases of the cones placed together, so as to keep the rod at all times in the same place in spite of wear and jarring. The rod D has shoulders *d'*, which rest on washer *e* and allow said rod to be tightly secured to the foot by nut *e'*.

The foot is constructed in three parts—the heel-piece E, toe-piece F, and instep G—in order that the parts may be singly removed for repair or replacement. The heel-piece E is provided with the guard H to keep the boot out of the rear of the ankle-joint, and is recessed on its under side to give space for adjusting screw and nut *e'*. The toe-piece F is hinged to piece E by a concave and convex hinge, *h*, held in position by rods *g g*, provided with screw-threads and nuts, by means of which the wear is taken up or the part removed, said rods extending into the chamber J, situated about midway of the length of piece E, and is large enough to allow a wrench to be introduced for the purpose of tightening or removing said nuts. When they are removed the piece F can be separated without disturbing other parts. Under the sole of the foot, in a suitable groove or recess, is placed the flat metal spring K, which is secured to the piece E in front of chamber J, and extends across toe-hinge *h*. Its end rests against the plate K', placed across the ball of the foot, which gives an ample bearing to the spring, and with the least friction and noise brings the toe-piece back to its position after each step. The spring and bearing-plate are secured by screws to the body of the pieces E and F, and are sufficiently countersunk to be even with the surrounding surface. The removable instep-piece G forms at once a guard to keep the clothing out of the toe and front of ankle-joints, gives access to the parts, and completes the shape of the foot.

The ankle-joint is controlled by the force of the two springs L L', which are attached to a cross-bar, M, in the calf of the leg, and by means of the rods N N' they are hinged to the foot at O O', and keep the conical head P at all times in position against its bearing-plate, and so prevent jarring and noise. The said springs are to be adjusted with reference to the normal position of the foot so that when raised from the ground they will bring it into position to begin the next step. The leg A is formed in two pieces, and may be constructed of wood or similar material, and should have a covering of rawhide, which will secure the two parts together and increase the strength of the limb without adding much to the weight thereof.

The lower end of the leg is provided with the metal band R, surrounding the portion that is recessed to accommodate the ankle-joint; a washer, *p*, of rubber or leather, should be placed in the said recess below the lower plate, C, of the said joint, which washer should project slightly below the band R to form a cushion between the leg and foot. The parts being removable, the washer *p* is easily replaced when worn.

The holes through which the rods N N′ pass, both in the leg and foot, as well as in the lower hinge-plate, C, are made large enough to allow some lateral motion, and thus provide for the necessary flexibility of the parts, the cushion or washer *p* serving to prevent thumping or jarring and noise.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an artificial limb, the socket-plates C C′, rod D, having head P and shoulders *d*′, the foot E F G, provided with hinge *h* and spring K, the cross-bar M, springs L L′, and rods N N′, as shown and described.

2. In an artificial leg, the heel-piece E, provided with spring K, in combination with the adjustably-hinged toe-piece F, provided with plate K′, and the adjustable instep-piece G, adapted to extend over and form a guard for the toe-joint, substantially as shown and described.

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

PETER M. WOLF.

Witnesses:
G. A. CRAWFORD,
A. E. PETTIGREW.