

No. 708,005.

Patented Sept. 2, 1902.

M. C. BALDWIN.  
ARTIFICIAL LEG.

(Application filed Apr. 4, 1902.)

(No Model.)

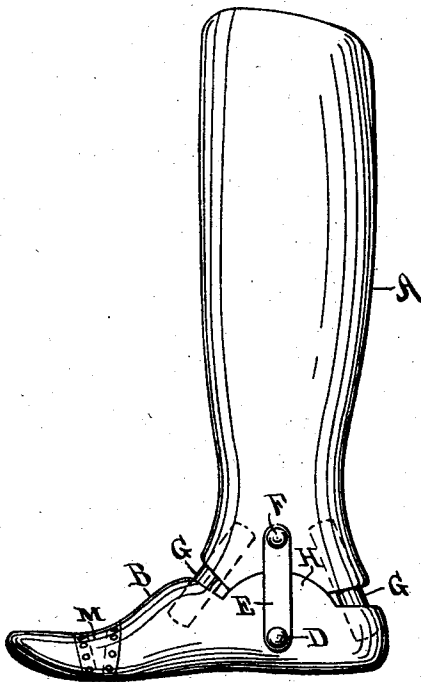


Fig. 1.

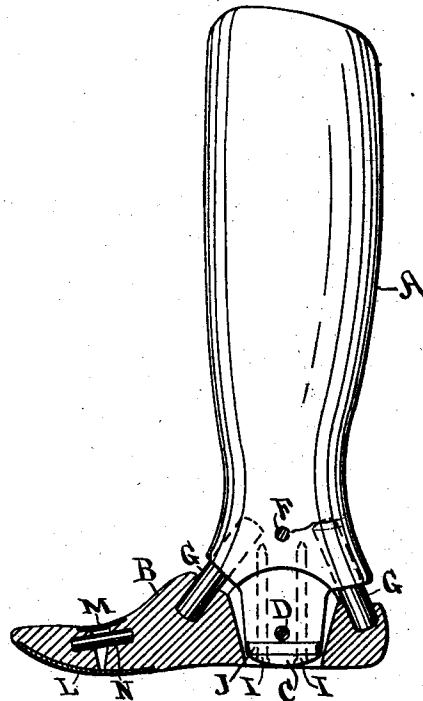


Fig. 2.

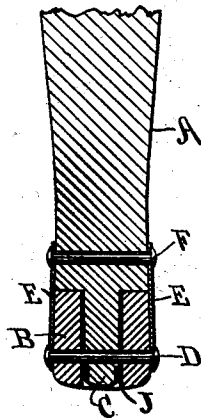


Fig. 3.

WITNESSES:

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## ARTIFICIAL LEG.

**SPECIFICATION** forming part of Letters Patent No. 708,005, dated September 2, 1902.

Application filed April 4, 1902. Serial No. 101,339. (No model.)

*To all whom it may concern:*

Be it known that I, MILES C. BALDWIN, a citizen of the United States, residing at Elmira, in the county of Chemung and State of New York, have invented a new and useful Improvement in Artificial Legs, of which the following is a specification.

My invention relates to improvements in the construction of the joints of artificial legs, and more particularly to the ankle and toe joints.

The object of my improvements is to provide a simple and durable construction of these joints whereby the cost of the leg may be materially reduced. By reason of my construction I am also enabled to provide a limb of extremely light weight.

I accomplish my object by means of the construction of the joints illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of a leg and foot embodying my improvements; Fig. 2, a similar side view showing the foot portion in section, and Fig. 3 a transverse sectional view of the ankle-joint.

Similar letters refer to like parts in the several views.

A represents the leg, and B the foot, which are turned or carved from wood of suitable lightness and strength, the leg A being also hollowed out in the customary manner to reduce its weight and to receive the stump of the leg of the wearer. The lower end of the leg is provided with a tenon C, which fits into a corresponding mortise in the foot, the tenon and mortise being cut so as to allow for the required relative forward-and-backward motion of the two members about the pivotal pin D, which passes through the foot and tenon at the point indicated. At each side of the foot are circular cheek-pieces H, the upper edges of which are cut on a circle, of which the pin D is the center, and the leg A at each side of the tenon is cut concave, so as to fit the cheek-pieces H and ride thereon. From the pin D at each side of the foot thin metal strips or straps E E rise to the pin F in the leg member, the function of these straps being to form an additional means of attachment of the leg to the foot and to relieve the

wooden tenon from wear upon the pin D, which would occur if the pin and tenon were the only means of attachment. The tenon D is strengthened and prevented from splitting by means of a light metal strip J, passed around it below the pin D, and it is further strengthened vertically by means of the metal pins I I inserted therein, as indicated by the broken lines in Fig. 2. In front and behind this joint I insert rubber blocks or springs G G in suitable sockets cut in both the foot and leg members, as indicated, these springs being preferably of solid rubber and both of them being under a slight compression when the foot is in its normal position. These springs are sufficiently elastic to allow for the necessary movement of the foot and yet of sufficient strength to serve as a cushion to remove the jar from the leg when the foot is placed upon the ground in walking and when turning upon the pivotal pin in taking a step.

The toe portion of the foot is hinged to the main portion by a leather hinge passing across the under side of the foot, and the two portions are beveled across the foot, so as to form a V-shaped cut, as shown in Fig. 2, this cut being covered by a thin leather strip M passing around the foot. There is between these two portions of the foot a third rubber block or spring N, as shown in Fig. 2, this rubber block serving to hold the two in normal position and to allow for a springy motion thereof in walking corresponding as nearly as possible to the natural movement of the toes. The simplicity of this joint will be at once apparent, and the fact that I am enabled to form the ankle-joint entirely from the leg and foot members without the use of intermediate parts will demonstrate that lightness in weight and reduction in cost can be attained by this construction.

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

1. A joint for artificial legs comprising a tenon on one member integral therewith pivoted in a mortise in a second member, said second member having cheeks at each side of the mortise cut on a circle with the pivot as a center, the first member being concaved at each side of the tenon to fit said cheeks, and

spring or cushion blocks set in sockets at the front and rear of the joint.

2. A joint for artificial legs comprising a tenon on one member integral therewith pivoted in a mortise in a second member, with  
5 side straps passing from the pivot-pin to fastening-points on the first member, and spring-blocks to hold the members in normal rela-

tion and allow for their required relative movements in walking.

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

MILES C. BALDWIN.

Witnesses:

THOMAS R. STEWARD,  
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