

No. 741,849.

PATENTED OCT. 20, 1903.

C. E. STONE.
ARTIFICIAL LEG.

APPLICATION FILED OCT. 1, 1902

NO MODEL.

Fig. 1.

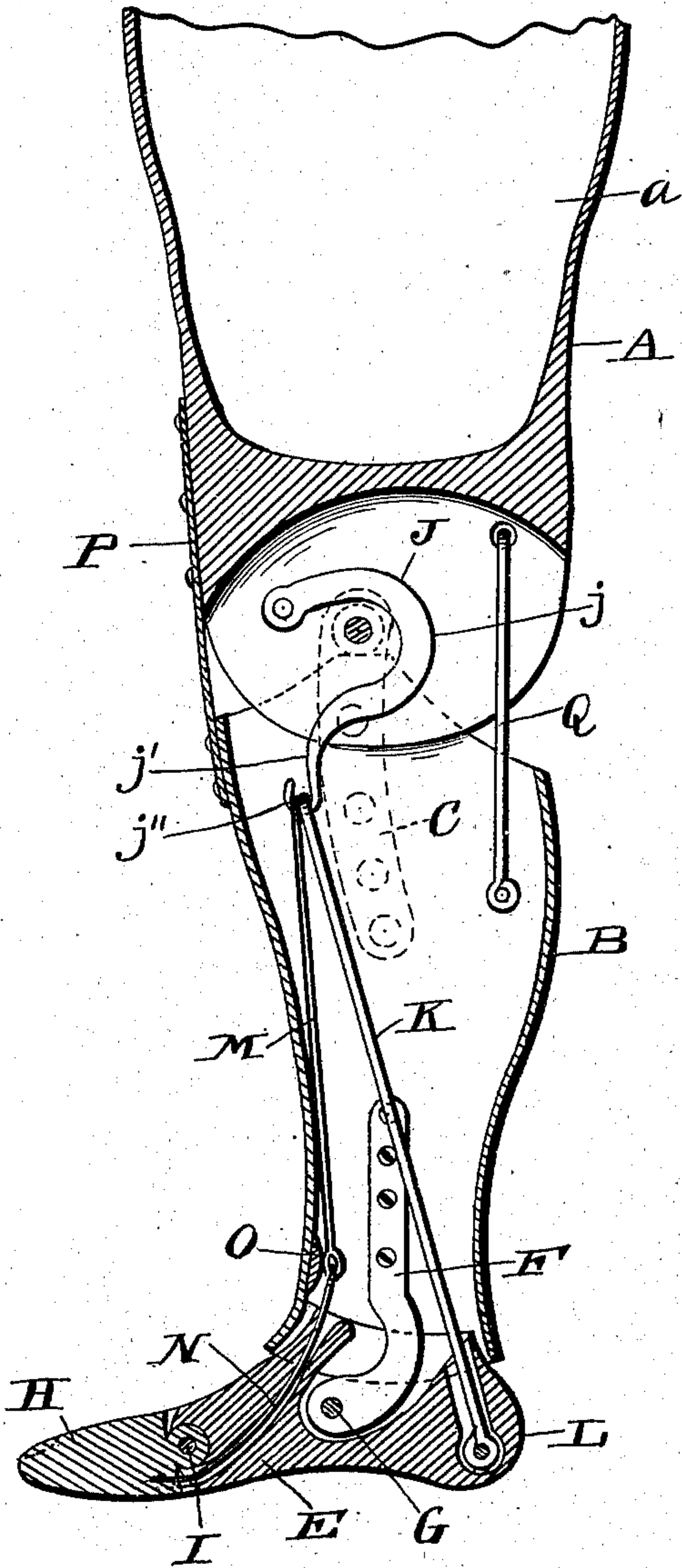
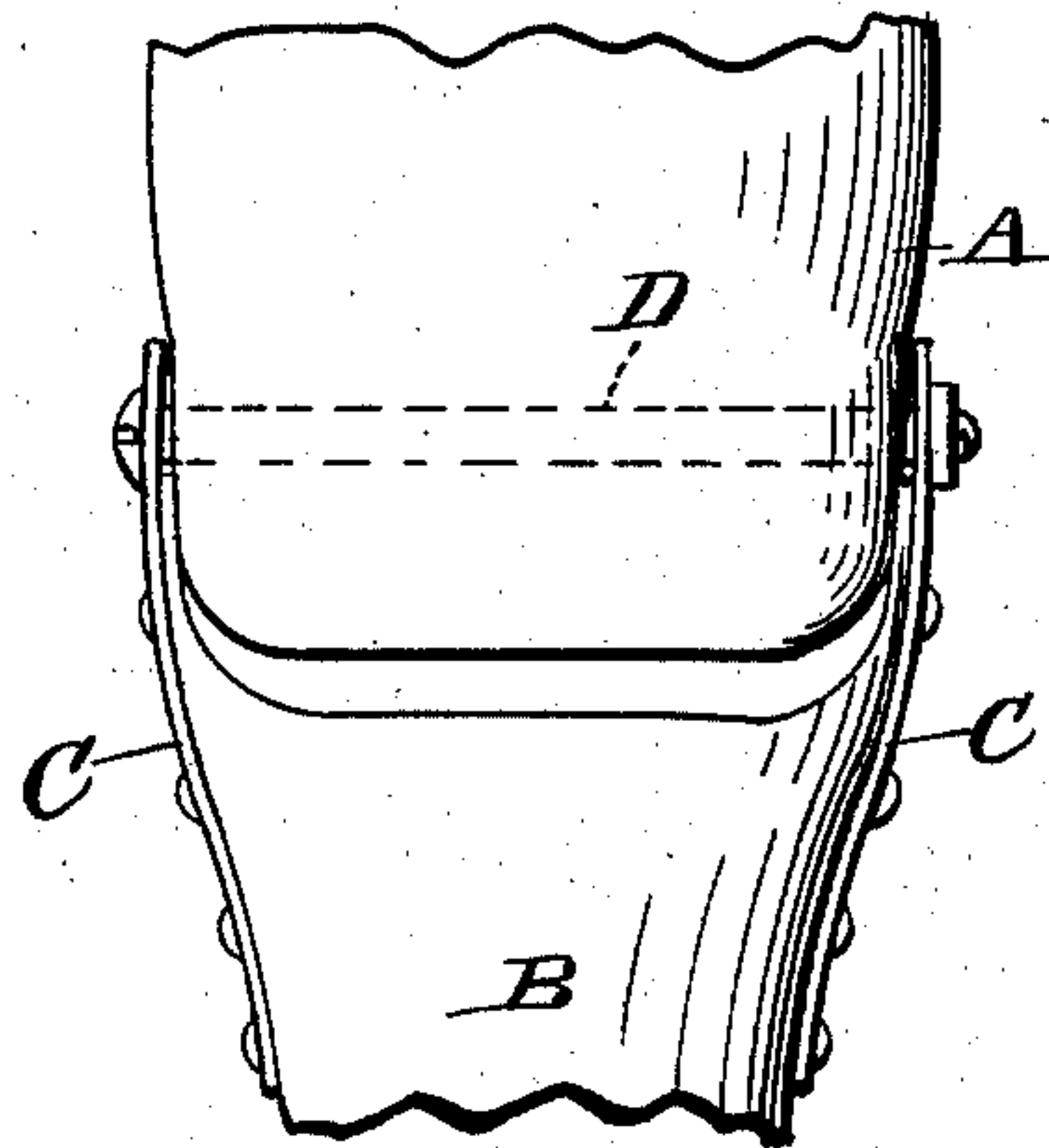


Fig. 2.



Witnesses

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ARTIFICIAL LEG.

SPECIFICATION forming part of Letters Patent No. 741,849, dated October 20, 1903.

Application filed October 1, 1902. Serial No. 125,558. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. STONE, a citizen of the United States, residing at Port Townsend, in the county of Jefferson and State of Washington, have invented certain new and useful Improvements in Artificial Legs, of which the following is a specification.

My invention relates to artificial legs, and has for its objects to provide a leg that will comprise a minimum number of working parts, that is adapted for use by a man whose leg has been amputated above the knee, and so constructed as to give a near approach to the action of a natural leg in walking, and that has means for stiffening the knee-joint and prevent it bending when the weight is thrown thereon in the act of walking.

The advantages of my invention will more fully appear hereinafter and by reference to the accompanying drawings, in which—

Figure 1 is a view in section of my invention, and Fig. 2 a rear view of a fraction of the leg at the knee-joint.

Referring to the drawings, in which similar reference characters indicate corresponding parts throughout the several views, A indicates the upper part of an artificial leg having a stump-socket *a* therein; B, the calf portion of the leg hinged to the stump portion A by means of a metal plate C, secured to calf portion B and pivot-pin D.

E represents the foot hinged to calf portion B by means of plate F and pin G, and H the front part of the foot hinged, by means of pin I, to the foot E.

J represents a cam-hook pivoted in the part A forward of and slightly above pivot-pin D, said hook being bent back, as shown at *j*, to pass around pin D and then bent straight down, as shown at *j'*, and ending with a hook or loop *j''*.

K represents an inelastic cord connecting the heel L of the foot portion E with the hook *j''*, and M an elastic cord secured to hook *j''* and connected, by means of a leather thong N, with the bottom of the front of foot H.

O represents a protuberance made of sole-leather, against which thong N rubs during operation.

P represents elastic straps connecting the parts A and B in front of the knee-joint, and Q inelastic cords secured to said parts behind the joint to stiffen the joint when the leg is supporting the wearer.

It will be readily understood from the above description that when in the act of walking the heel is placed on the ground the forward part of the foot will be pushed downward, thus stretching the cord M, which will pull forward the cam-hook J, and as the knee straightens, assisted by the elastic straps P, a lock will be formed on both sides of the pivot-pin D at the front by the cam-hook J and the cord K, the lower end of the hook being drawn forward by the tension of the elastic cord M, while at the back the cords Q act directly to prevent backward bending of the joint. When the other leg is thrown forward in taking a step, the forward part of the foot E is bent up, relaxing in a degree the tension on the elastic cord M and giving a pull on the inelastic cord K and pulling the lower end of the cam-hook J back, so that the knee-joint may be bent by the stump, combined with the pull exerted by cord K, and the weight of the body being thrown on the other leg the artificial leg may be lifted from the ground for the next step and the above-described operation repeated.

Having thus described my invention, what I claim is—

1. In an artificial leg, a cam-hook pivoted at one end in the part above the knee-joint forward of said joint and bent to pass around the joint, and cords connecting said cam-hook with the foot, substantially as shown and described.

2. In an artificial leg, a cam-hook pivoted in the part above the knee-joint forward of the pivot and bent to pass back of it, an elastic cord connecting the free end of the hook with the ball of the foot, and an inelastic cord connecting the hook with the heel, substantially as shown and described.

3. In an artificial leg, a cam-hook pivoted in the part above the knee-joint forward of the pivot and bent to pass around back thereof, an elastic cord connecting the free end of

5 said hook with the ball of the foot, an inelastic cord connecting the hook with the heel, elastic straps connecting the outside of the upper and lower leg over the knee-joint, and cords connecting the back parts of the leg above and below the knee-joint, substantially as shown and described.

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

CHARLES E. STONE.

Witnesses:

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