

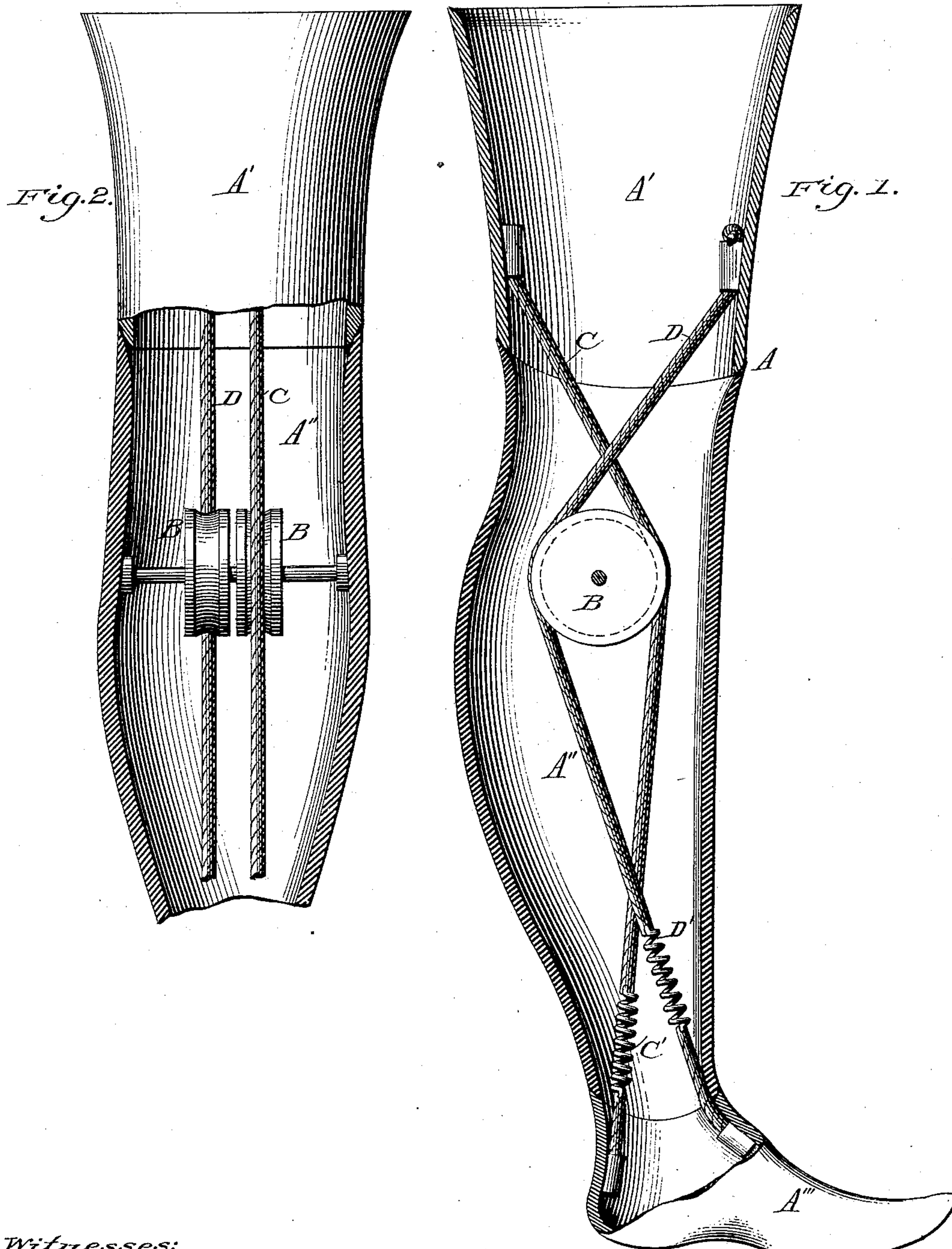
(No Model.)

H. M. KREEMER.

ARTIFICIAL LEG.

No. 360,446.

Patented Apr. 5, 1887.



Witnesses:

L. Pearson
M. T. Buchanan

Inventor:

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atty

UNITED STATES PATENT OFFICE.

HENRY M. KREEMER, OF TRENTON, NEW JERSEY.

ARTIFICIAL LEG.

SPECIFICATION forming part of Letters Patent No. 360,446, dated April 5, 1887.

Application filed November 21, 1885. Serial No. 183,493. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. KREEMER, a citizen of the United States, residing at Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Artificial Legs, of which the following is a specification.

My invention relates to improvements in artificial legs, by which, in walking, a natural motion is imparted to the foot. I attain this by the mechanism shown in the accompanying drawings.

In the drawings similar letters of reference indicate similar parts.

Figure 1 is a sectional view of an artificial leg, showing a side view of my mechanism. Fig. 2 is another sectional view, showing a front view of my mechanism.

In Fig. 1, A is the leg, composed of the thigh part A', calf part A'', and foot part A'''. Within the calf part A'' are journaled the wheels or pulleys B B. In Fig. 1 but one of these is shown, as one lies immediately back of the other; but in Fig. 2 they are shown in a front view and side by side. Near the knee of the part A' is fastened a cord, which passes back over a pulley B, and, passing down through the part A'', fastens securely to the part A''' just below and in front of the ankle-joint. In this cord is placed, near its lower end, a spiral spring, D'. In the rear of the knee, in part A', is fastened another cord, C, which passes forward over the other pulley B and down through the part A'', and fastens securely to the heel of A'''. In this cord I also place a spiral spring, C'. These pulleys B move freely on their journals, and are grooved on their peripheries to retain in place the cords C and D.

The method of fastening the cords C and D

to the parts A' and A''' is immaterial, as any proper method can be used. I preferably use the spiral springs C' and D'; but any spring of the requisite tension and elasticity can be used.

It will be seen that when the knee of the leg is bent forward the toe of the foot is raised, and that as the leg is straightened the foot resumes its position, and that as the whole leg is thrown forward the toe is lowered toward the ground, giving the motion natural in walking. I thus avoid the striking of the heel first upon the ground and the backward kicking motion so common to other makes of artificial legs. In using my appliances, also, any gait can be taken natural or desired by the wearer. The constant tension of the cords by means of the springs also keeps the joints close and firm, even if somewhat worn.

What I claim as my invention is—

1. In an artificial leg, the cord C, fastened to the rear portion of the thigh part A', passing in front of the pulley B, journaled in the calf part A'', and fastened at its other end to the back of the foot part A''', substantially as shown and described.

2. In an artificial leg, the parts A', A'', and A''', in combination with the cord D, fastened in the front portion of the thigh part A', passing back of pulley B, and fastened at the other end to the foot part A''', the cord C, fastened in the rear portion of the thigh part A', passing in front of pulley B, and fastened at the other end to the heel of the foot part A''', and with the pulleys B B, substantially as shown and described.

HENRY M. KREEMER.

Witnesses:

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