

J. B. WARNER.
ARTIFICIAL-LEG.

No. 173,872.

Patented Feb. 22, 1876.

Fig: 1.

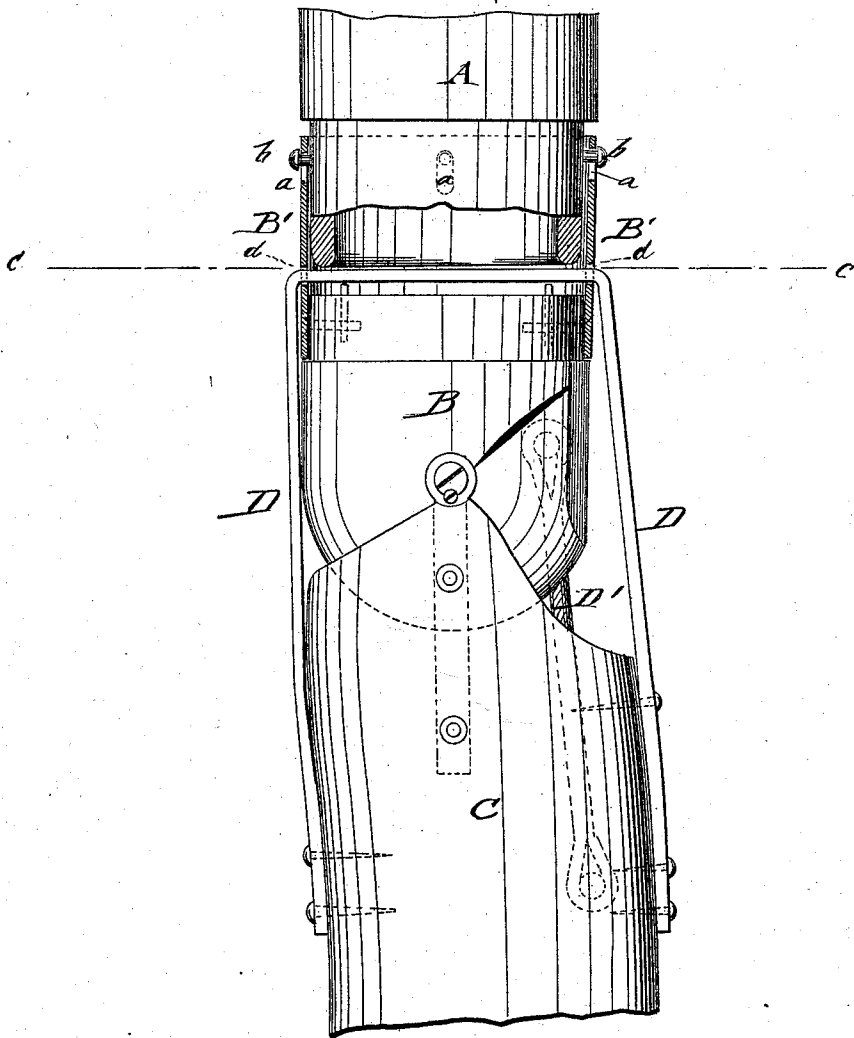
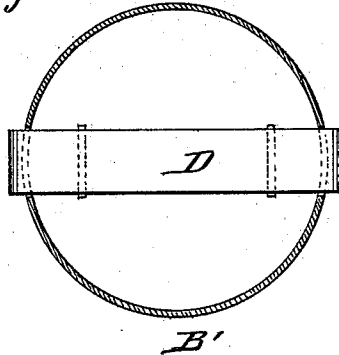


Fig: 2. B'



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH B. WARNER, OF NORTH DIGHTON, MASSACHUSETTS.

IMPROVEMENT IN ARTIFICIAL LEGS.

Specification forming part of Letters Patent No. **173,872**, dated February 22, 1876; application filed January 22, 1876.

To all whom it may concern :

Be it known that I, JOSEPH B. WARNER, of North Dighton, Bristol county, Massachusetts, have invented a new and Improved Knee-Joint for Artificial Legs, of which the following is a specification :

Figure 1 represents a sectional side elevation of my improved knee-joint for artificial legs, and Fig. 2 is a horizontal section of the same on line *c c*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The invention relates to an improved knee-joint for artificial legs, by which it is impossible for the joint to bend while the weight is upon it, and thereby a better and safer leg furnished.

The invention consists of the lower section of an artificial leg, suspended by a sliding strap from the upper section, in connection with a slotted guide-band or socket of the detached knee-piece, supporting the upper section and causing it to bear tightly on the sliding band when the weight rests on the leg.

In the drawing, A represents the upper, C the lower section of an artificial leg, and B a separate intermediate knee-piece that forms the connection of the section. The knee-piece B is provided with a guide-band, B¹, of strong sheet metal, which is firmly attached thereto, and extended upward to form a socket for the upper section A, allowing the same to slide to some extent therein. The distance which the upper section slides in the socket is regulated by slots of the band and pins *b* of the section A. The lower section C is suspended from the knee piece by an interior cord, D¹, and there is also an exterior sliding strap, D, of leather or other rigid or elastic material, as desired. The strap D passes from the front side of the lower leg section through slots *d* of the guide-band B¹, across the upper part of the knee-joint, and then down to the rear side of the lower section, being attached firmly at both ends to the same, but allowed to slide readily through the slots of the knee-piece. This allows the free movement of the

joint when there is no weight upon it, as the raising of the leg produces the downward sliding of the knee-piece and lower section, and allows the free play of the strap. But when the forward motion is completed, and the weight of the body brought to bear upon the joint, the upper section is forced downward in the socket and brought to bear on the strap, wedging the same tightly between the lower rim of the same and the upper part of the knee-piece, so that no bending of the joint at the knee is possible, as is frequently the case with artificial legs when going down hill, or when the heel rests in somewhat higher position than the toe.

The strap may be used with a short piece of elastic at the front end, which allows the giving or bending a little in walking down hill.

A short piece of elastic at the rear part of the strap shortens the rear part of the strap, and acts in the nature of a friction-brake during the best part of the step, so as to stop the leg with a more natural motion in place of the sudden click peculiar to artificial legs.

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

1. In artificial legs, a separate knee-piece, sliding by a slotted guide-band or socket along the end of the upper-leg section, substantially as shown and described.

2. The combination of the upper-leg section, sliding suspension-strap, and knee-piece having extension-socket, for the purpose of locking the strap firmly when the body is resting on the leg, and preventing the flexing of the joint at that moment, substantially as specified.

3. The extension band or socket of knee-piece provided with front and rear guide-slots for the suspension-strap, substantially as set forth.

JOSEPH B. WARNER.

Witnesses:

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