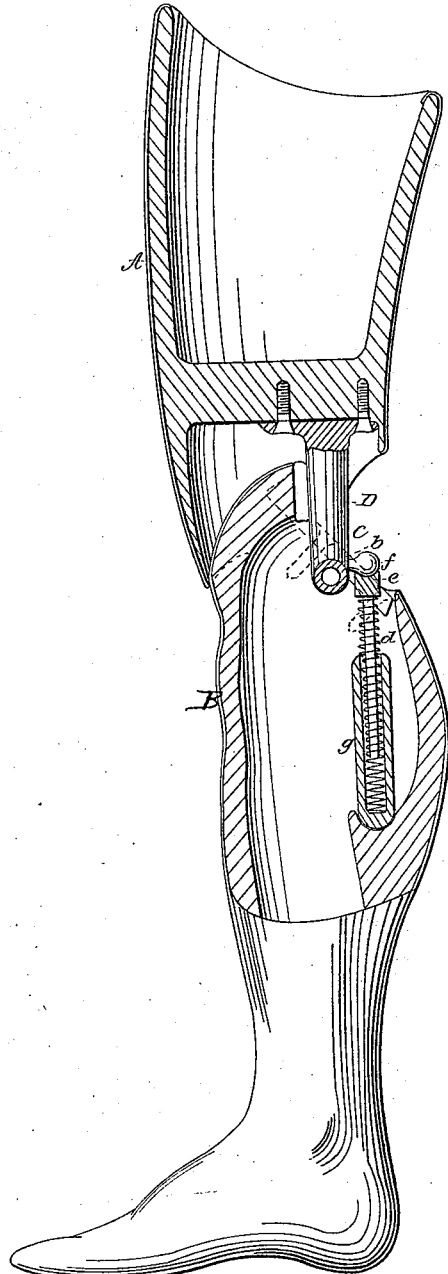


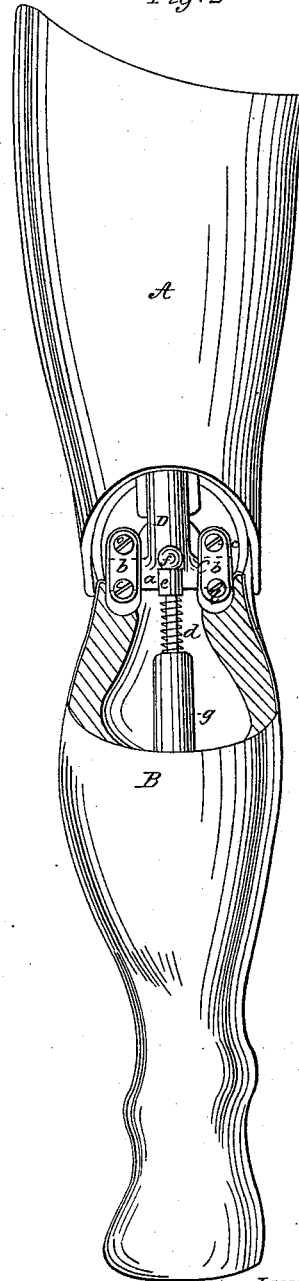
A. A. Marks,
Artificial Leg,
No. 46,687,
Patented Mar. 7, 1865.

Fig: 1



Witnesses:
Wm. J. Mc Namara
Theo. Tusch

Fig: 2



Inventor:
A. A. Marks

UNITED STATES PATENT OFFICE.

A. A. MARKS, OF NEW YORK, N. Y.

IMPROVEMENT IN ARTIFICIAL LEGS.

Specification forming part of Letters Patent No. 46,687, dated March 7, 1865.

To all whom it may concern:

Be it known that I, A. A. MARKS, of the city, county, and State of New York, have invented a new and useful Improvement in Artificial Legs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical section of an artificial leg constructed according to my invention. Fig. 2 is a sectional rear elevation of the same.

Similar letters of reference indicate corresponding parts.

This invention relates particularly to the knee-joint of an artificial leg, and to the means employed for holding said joint in position when the leg is bent.

The knee-joint consists of a bracket or standard, which takes the place of the tibia, and the lower T-shaped end of which has its bearings in oblique boxes secured in the interior of the knee-pan in such a manner that their centers coincide with the center of the knee-pan, and at the same time the boxes are so situated that they can easily be reached, and their caps taken off, whenever it is desired to take the leg apart. When the knee-joint is bent at right angles, it is retained in position by the action of a pear-shaped button, the globe-shaped head of which works in a socket formed in the head of an oscillating, vertical-sliding bar, which is exposed to the action of a spring, and which is so situated in relation to the head of the button that when the knee-joint is bent at right angles it is kept closed, and has no tendency to open spontaneously.

A represents the thigh, which connects with the leg B by means of the knee-joint C. This knee-joint is composed of a bracket, D, which takes the place of the tibia. Its upper flanged end is secured to a horizontal partition in the interior of the thigh, as clearly shown in Fig. 1 of the drawings. The lower T-shaped end of the bracket is furnished with two gudgeons,

a, which have their bearings in boxes b, secured in the interior of the knee-pan or hough, and in such a position that the center from which said knee-pan is described coincides with a line drawn through the center of the boxes. These boxes are placed in an oblique position, so that the screws c, which hold their caps down, can be easily reached whenever it may be desirable to take the leg apart.

In order to hold the leg in the desired position, either stretched or bent, a spring, d, is applied, which acts on a sliding bolt, e, the head of which forms a socket for the pear-shaped button f. The lower portion of the spring is inclosed in a box, g, of wood or any other suitable material, the lower, rounded end of which plays in a suitable hemispherical socket, h, as clearly shown in Fig. 1 of the drawings. When the leg is straightened out, the spring forces the bolt e up against the button f, and prevents the leg from bending spontaneously, and if the leg is bent at right angles the action of the spring on the button is such that the joint has a tendency to close rather than to open, and if the person wearing the artificial leg sits down the knee-joint bends readily, and does not stretch spontaneously.

By these means a simple, strong, and durable leg can be made, which combines all the advantages of the best legs now in use, and which is not liable to get out of order.

I claim as new and desire to secure by Letters Patent—

1. The oblique boxes b, applied in combination with the gudgeons of the T-shaped bracket D, and with the shell of the leg and thigh, in the manner and for the purpose substantially as set forth.

2. The pear-shaped button f, in combination with the spring d, oscillating box g, and with the bracket D, applied to the thigh and leg, in the manner and for the purpose substantially as described.

A. A. MARKS.

Witnesses:

WM. F. MCNAMARA,
THEO. TUSCH.