No. 827,720. PATENTED AUG. 7, 1906.

W. E. ERWIN.

ARTIFICIAL LEG.

APPLICATION FILED APR. 13, 1905.

Fig. 1.

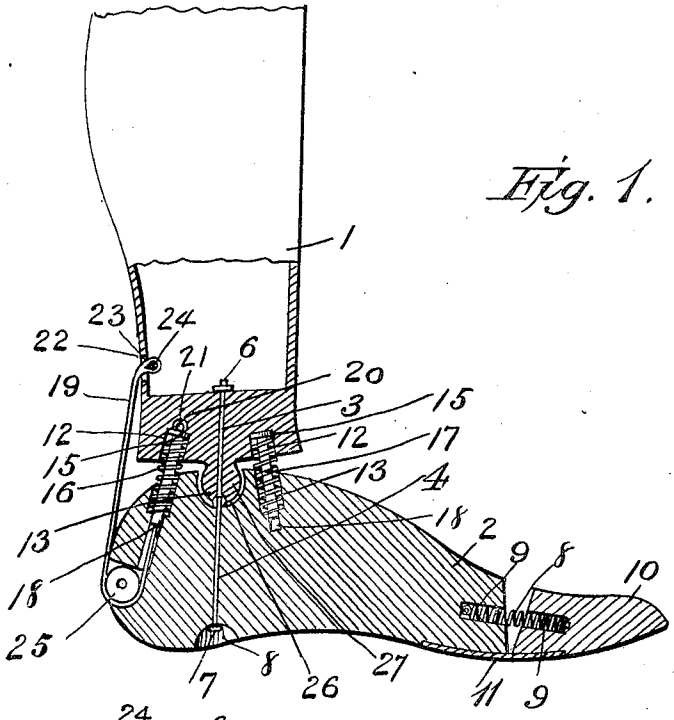



Fig. 2.

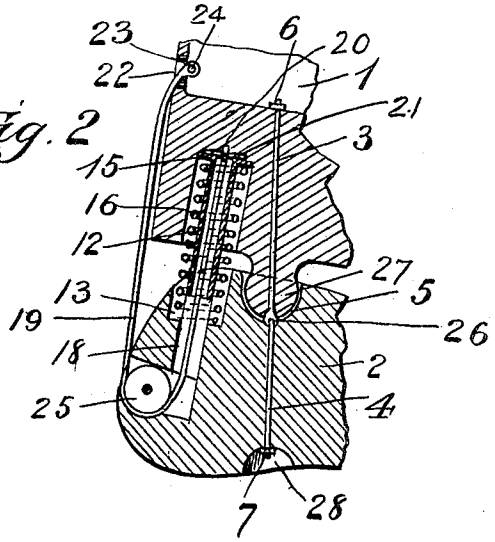
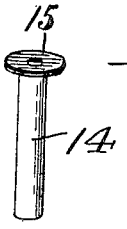



Fig. 3.

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# UNITED STATES PATENT OFFICE.

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## ARTIFICIAL LEG.

No. 827,720. Specification of Letters Patent. Patented Aug. 7, 1906.

Application filed April 13, 1905. Serial No. 255,374.

*To all whom it may concern:*

Be it known that I, WILLIAM E. ERWIN, a citizen of the United States, residing at Yorkville, in the county of York and State of South Carolina, have invented certain new and useful Improvements in Artificial Legs, of which the following is a specification.

My invention relates to artificial legs, and more particularly with the foot mechanism of the same, and has for its object to so construct the device that it will possess all the movements of the natural foot with the minimum number of parts necessary for the same.

A further object is to make the device light, elastic, and easily repaired, so that the renewal of any worn-out parts may be made with ease and little cost.

In the drawings forming a part of this specification, and in which like symbols of reference represent corresponding parts in the several views, Figure 1 is a vertical section of my artificial leg; Fig. 2, a similar sectional view illustrating more particularly the heel portion of the same, and Fig. 3 a view of tube used in connection with springs of the device.

1 represents the socket for reception of leg of wearer; 2, foot connected to same by bolts 3 and 4, hinged together by means of eyes at 5, and 6 and 7 nuts working on bolts 3 and 4.

8 represents springs lying in recesses 9, formed in foot-piece 2 and toe 10, and 11 a leather sole at base of foot to permit movement of same.

12 represents recesses formed in upper portion of foot; 13, similar recesses in foot portion; 14, tubes formed with flanges 15, adapted to work in said recesses, and 16 and 17 springs encircling said tubes and resting in base of recesses. The tubes 14 are permitted to pass beyond said springs when the same are compressed and enter a reduced portion 18 in the recesses.

19 is an elastic or strap having an eye 20 at its top for reception of a pin 21 in upper portion of leg, said pin lying on top of tube, and 22 recesses, having a reduced lower part, formed in rear of leg for reception of other end of strap, which is also provided with an eye 23, adapted to be connected to leg by pin 24. The purpose of the reduced portion of recess 22 is to lock the strap by means of pin when it is slid down in same.

25 is an antifriction-pulley for strap; 26, a recess in foot portion for reception of a knuckle-like projection 27, extending from upper portion of leg, the connection giving the parts a swivel action, and 28 is a recess in heel of foot-piece, so as to take the nut 7 from surface of same.

The operation of the leg will be apparent from the foregoing. The tubes are first placed in the recesses with the springs surrounding the same, thus holding the springs in their proper position, said springs lying against the flanges 15 and the base of enlarged portion of recess. The upper and foot portion are connected by bolts 3 and 4, the strap properly adjusted, and the device is ready for use. Of course the usual straps, &c., necessary for adjustment and attachment to stump of wearer are used; but I have not thought it necessary to illustrate or describe same, as they are well known in the art.

Having now fully described my invention and in what manner the same may be used, what I claim as new, and desire to secure by Letters Patent, is—

1. In an artificial leg, the combination with the leg portion having a depending knuckle, of a recess in the foot portion to receive the knuckle, a hinged connection for the sections, recesses formed in the sections, springs in said recesses, tubes within the spring, and a strap connecting the rear of the sections, having one end sustained by the rear spring and the other connected to the leg portion, so as to work in conjunction with the springs.

2. In an artificial leg, connections between the foot and leg portion of the same, a spring in the heel portion, and a strap having one end connected to the leg portion and passing through the rear of the foot portion, and its other end supported above the spring and adapted to depress the same.

3. In an artificial leg, a hinged connection between the foot and leg portion, recesses in the sections, springs resting in the recesses, flanged tubes within the springs, said flanges resting on the springs, and extended and reduced portions in the recesses of the foot to receive and permit play of the tubes.

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

WILLIAM E. ERWIN.

Witnesses:

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