D. B. JAMES.

ARTIFICIAL LEG.

APPLICATION FILED AUG. 18, 1908.

912,130. Patented Feb. 9, 1909.

Fig. 1.

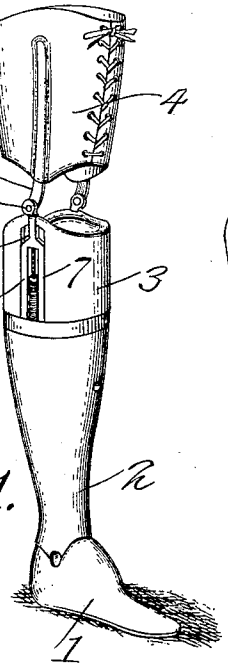


Fig. 2.

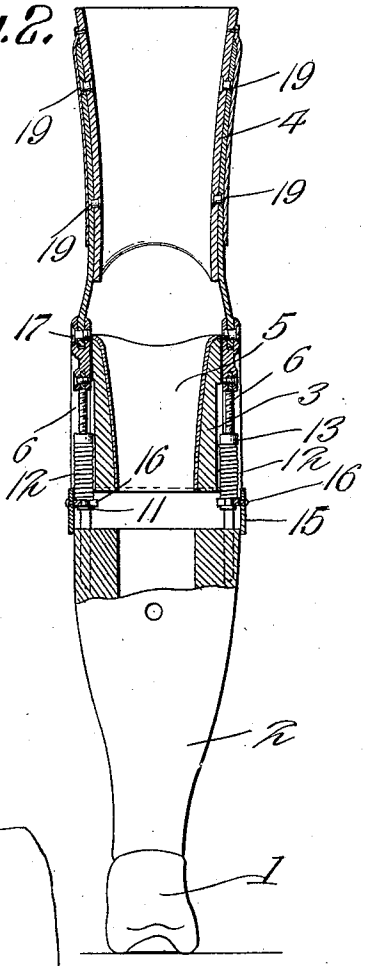
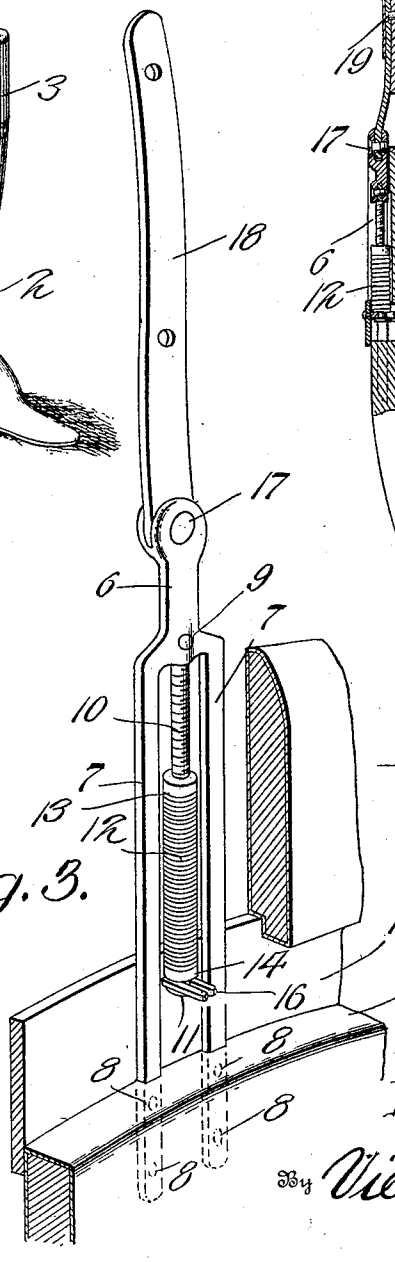


Fig. 3.



Witnesses

C. E. Smith.

E. R. Emmyea

Inventor

David B. James,

By Victor J. Evans

Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DAVID B. JAMES, OF JACKSON, TENNESSEE.

ARTIFICIAL LEG.

No. 912,130. Specification of Letters Patent. Patented Feb. 9, 1909.

Application filed August 18, 1908. Serial No. 449,065.

To all whom it may concern:

Be it known that I, DAVID B. JAMES, a citizen of the United States of America, residing at Jackson, in the county of Madison and State of Tennessee, have invented new and useful Improvements in Artificial Legs, of which the following is a specification.

This invention relates to artificial legs, and one of the principal objects of the invention is to provide novel means whereby the stump of the leg will not move up and down in the socket therefor during the use of the artificial leg.

In many artificial legs as at present in use the stump moves slightly up and down in the socket whenever the foot strikes an obstruction in alighting from a vehicle, thus often causing chafing of the stump and sometimes leading to serious injury.

The principal object of my invention is to overcome this defect in the construction of artificial legs in a novel way.

Another object of my invention is to provide a socket for the stump which will snugly fit the same and to mount said socket upon spring guides at opposite sides of said socket so that the lower portion of the leg or foot may move toward and from the socket when the weight of the wearer is thrown upon the leg without moving the stump in the socket.

These and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which,—

Figure 1 is a perspective view of an artificial leg made in accordance with my invention. Fig. 2 is an enlarged front elevation and partial section of the same. Fig. 3 is a detail perspective view illustrating a partial section of one of the yielding guides and supports and its connection with the foot section of the leg.

Referring to the drawings, the numeral 1 designates the foot, and 2 the lower leg section.

3 is the leg socket and 4 the thigh socket for securing the artificial leg in place.

The leg socket 3 is made to fit the stump of the wearer by first taking a plaster of paris cast of the same and making up a body portion of willow wood to substantially conform to the plaster cast. This wooden foundation is lined with leather or other suitable material 5. The socket 3 is larger at its upper end, and thus as the stump may be slightly enlarged in the course of time it will fit the socket by moving slightly upward therein, means being provided to compensate for this movement. At opposite sides of the socket 3 recesses 6 in the wooden foundation are provided, and mounted in the recess 6 are the bifurcated guides consisting of the parallel arms 7, the lower ends of which are secured in the lower leg section 2 by rivets 8, as shown in Fig. 3. Secured between the arms 7 of the guide by means of a screw or rivet 9 is a threaded rod 10, and mounted on said rod is a nut 13. A spiral spring 12 is connected to the nut 13, and at the lower end of said spring a head 14 is connected thereto, said head having a reduced neck and an enlarged portion 11 adjacent to the neck. The neck on the head 14 is engaged between the forks 16 with the enlarged portion 11 on the underside of said forks to hold the spring in place. The forks 16 are connected to a band 15 which surrounds the leg section 2 and is of such a size as to move freely upon said section. Pivoted at 17 to the upper end of the guide 6 is a supporting bar 18, said bar being secured by means of rivets or screws 19 to the thigh socket 4, as shown more particularly in Fig. 2.

An artificial leg made in accordance with my invention may be conveniently used by a young person who has not yet attained his full growth. The socket member 3 having been made to conform to the stump of the amputated leg, as the person grows the artificial leg may be slightly lengthened by adjusting the springs 12 upon the rods 10 and placing washers on top of the leg section 2 to compensate for such adjustment. For instance, should a person lose a leg six inches below the knee at the age of fifteen, the leg will grow no more from the knee down, but will grow from the knee up. My artificial leg may be quickly adjusted to meet such contingencies without requiring the services of a skilled mechanic.

From the foregoing it will be obvious that an artificial leg made in accordance with my invention will have a yielding action when excessive weight is placed thereon without moving the stump in its socket, and at the same time provision is made for adjustment to suit varying conditions of use.

I claim:—

An artificial leg provided with a socket

made to fit the stump of the wearer, guides mounted in the sides of the socket, threaded rods secured to said guides, spiral springs surrounding said threaded rods, a band carried by the socket and provided with supporting forks, said threaded rods having heads thereon to fit the undersides of the supporting forks, a thigh socket and bars pivoted to the guides and connected to the thigh socket.

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

DAVID B. JAMES.

Witnesses:
B. H. BERNORT,
FRANK M. HICKS.