(No Model.)

E. SCOTT.

ARTIFICIAL LEG.

No. 302,433. Patented July 22, 1884.

Fig. 1.

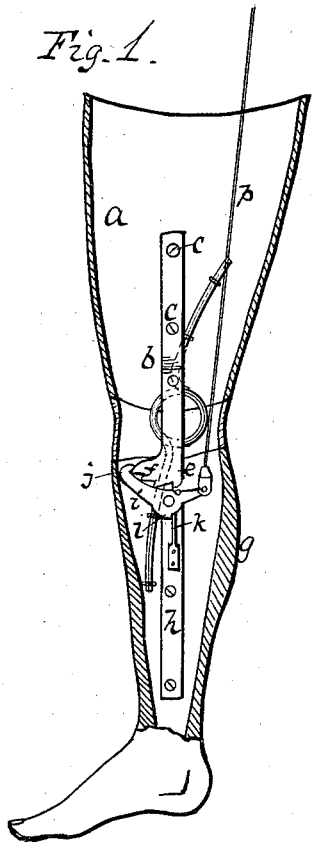


Fig. 2.

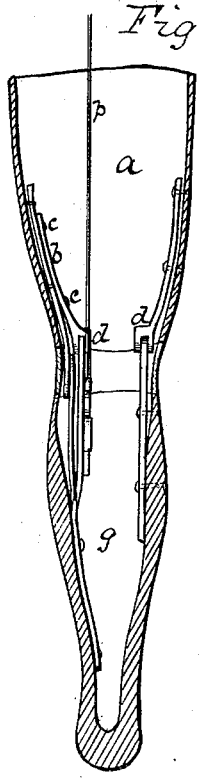


Fig. 3.

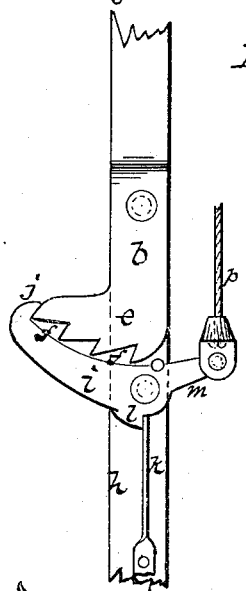
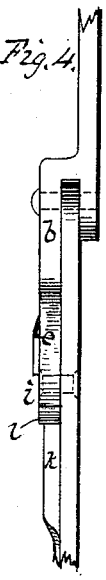


Fig. 4.



Witnesses:
Josiah W. Ellis
M. E. Harrison.

Inventor.
Edward Scott
Per C. D. Levis Attorney

UNITED STATES PATENT OFFICE.

EDWARD SCOTT, OF PITTSBURG, PENNSYLVANIA.

ARTIFICIAL LEG.

SPECIFICATION forming part of Letters Patent No. 302,433, dated July 22, 1884.

Application filed March 3, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SCOTT, a subject of the Queen of Great Britain, and a resident of Pittsburg, Thirty-Second Ward, in the county of Allegheny and State of Pennsylvania, have made a new and useful improvement in that class of artificial legs wherein the knee is articulated or jointed, of which the following is a specification.

Heretofore all such legs have been constructed so that the action of the limb is brought about by simply lifting the leg with a sort of loose swinging forward movement sufficiently high to enable the foot to clear obstructions, and, by a progressive pitch of the body, straighten the leg and bring the foot down upon the ground preparatory to the next step; but as the movement of this knee-joint is only prevented from exceeding a certain limit in either direction by means of a positive stop at each end of a full swing at all intermediate points or positions, it remains free to move, and should the wearer stumble, no provision is made whereby he may suddenly stiffen the leg and use it as a brace or support to save himself from falling.

My invention consists of a combination, with the knee-joint of an artificial leg, of such a mechanical contrivance as will enable the wearer to suddenly check and firmly hold the leg stiff at any intermediate point between that represented by a straight standing leg and such angle of flexure as is required to give a proper and natural position in sitting, and by a slight action of his shoulder either loosen the joint or suddenly check and hold the same at his convenience or pleasure in the act of walking.

To enable others to fully understand my invention, I will proceed to describe it by reference to the accompanying drawings, wherein—

Figure 1 represents a vertical section of an artificial leg, exhibiting therein a side elevation of my improvement; Fig. 2, a transverse vertical section of such leg; Fig. 3 an enlarged detached view of my improved check device; Fig. 4, an edge view of the same.

The artificial leg to which I propose to apply my improvement may be constructed of any suitable material and fitted with all the usual joints and appendages incident thereto; but in order to accomplish the object of my invention I provide the inner upper portion, *a*, of the leg with a downwardly-extending metallic bar, *b*, rigidly affixed therein by means of short screws *c c* or other convenient and proper contrivances. The lower end of this bar *b* extends a short distance below the pivotal points *d* of the knee, where it terminates in an enlargement, *e*, having in its under edge a series of angular notches or catches, *f*. Affixed in like manner in the lower portion, *g*, of the leg is another metallic bar, *h*, provided at its upper with a short lever, *i*, pivoted thereto, one end of which is furnished with an angular hook, *j*, corresponding in shape and size with the notches *f* in the bar *b* above; and the hook *j* is constantly forced toward the aforesaid notches and into them, when opportunity is given, by means of a spring, *k*, so attached to the lower bar, *h*, as that its free end shall press against a small projection, *l*, on the under side of the lever, and thus keep it ready for immediate action. To the opposite end, *m*, of this hooked lever *i* is attached a cord or strap, *p*, that is intended to pass up over the shoulder of the wearer, and by suitable means be comfortably secured to his body in such a manner as that when he occupies a standing or upright position the tension of the cord *p* on the lever will be such as to withdraw and keep the hook *j* clear of the notches *f f* in the rigid bar above, and allow the knee-joint to swing free, as in other artificial legs; but should the wearer stumble in his walk, he will naturally stoop to save himself, and by thus depressing his shoulders relieve the tension on the cord *p*, whereupon the spring *k* will so act upon the lever *i* as to cause its hook to engage one of the nearest notches *f*, and suddenly check the limber movement of the leg by holding it perfectly rigid and stiff until the wearer has an opportunity to recover himself and regain an upright standing position, upon which the joint will be released, that he may walk as before.

Having thus described the nature and con-

struction of my invention, what I claim, and desire to secure by Letters Patent, is—

The knee-joint of an artificial leg, in combination with a spring lever or catch provided with a cord or strap for operating the same, in conjunction with one or more notches secured to or arranged above the latch in another portion of the leg, substantially in the manner shown, for the purposes hereinbefore set forth.

EDWARD SCOTT.

Witnesses:
R. R. LOWRY,
H. T. MORRIS.