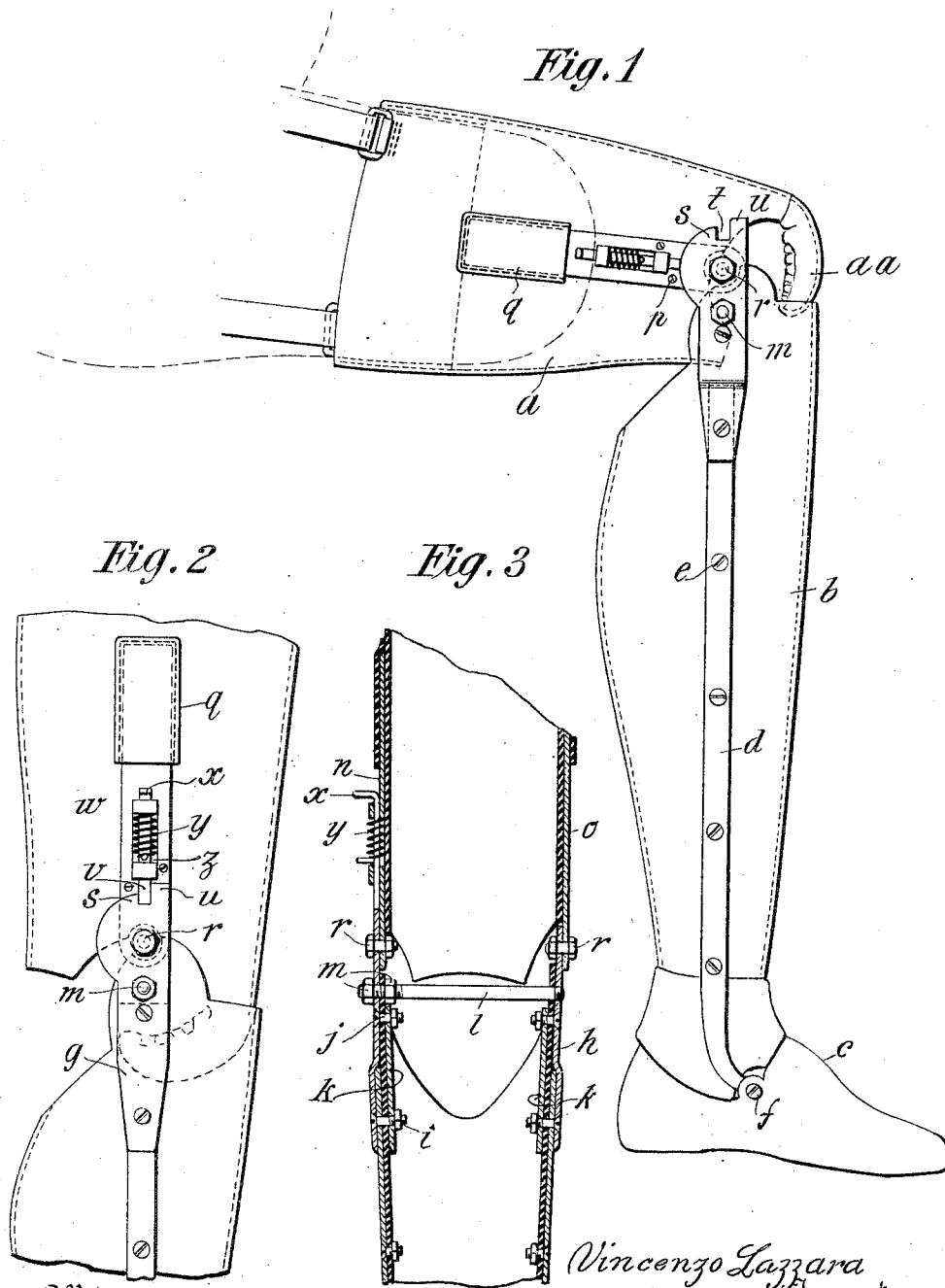


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ARTIFICIAL LEG.
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ARTIFICIAL LEG.

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To all whom it may concern:

Be it known that I, VINCENZO LAZZARA, a subject of the King of Italy, residing at 190 Jefferson street, in the borough of Brooklyn, in the city of New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Artificial Legs, of which the following is a specification.

This invention relates to improvements in artificial legs and its primary object is to devise improved means for automatically locking the leg at the knee when straightened, the said means being manually releasable when it is desired to bend the leg.

The various other objects of the invention will be more fully set forth in the following description of one form of mechanism embodying the invention which consists in the new and novel feature of construction and combination of parts hereinafter set forth and claimed.

Referring to the accompanying drawings:—Figure 1 is a side elevation of the leg when bent at the knee showing the outer side thereof. Fig. 2 is a fragmental view of Fig. 1, showing the leg straightened, and Fig. 3 is a vertical central sectional view at right angles to Fig. 2.

My embodiment is preferably shown in connection with an artificial leg formed of leather, raw-hide, or a similar substance, and comprises an upper part *a*, a lower part *b*, and a foot *c*. Such material is especially adapted for artificial legs on account of its comparative strength and lightness, and the facility with which it may be formed and cut to suitable shapes at the joints. The lower leg part *b*, is strengthened at each side by the bars *d—d* conveniently secured to the leg by bolts *e*. The bars are suitably curved at their lower ends for pivotally connecting them to the foot *c*, as by means of the screws *f*.

Plates *g* and *h* are preferably secured to the upper ends of the bars *d* by bolt *i*, but they may be formed integrally with the bars if desired. These plates are extended upwardly beyond the bars, and are further secured to the lower leg part by bolts *j*. Strengthening plates *k* are secured to the interior of the lower leg part, by means of the bolts *i* and *j* thereby strengthening the joint between the plates *g* and *h* and their respective bars *d*. The plates *g* and *h* and the upper end of the lower leg part are fur-

ther strengthened by an adjustable bolt *l*. This bolt is tapped at one end into the plate *h* and passes freely at its other end through the plate *g*. This end is threaded to receive the bolts *m—m*. By properly adjusting these bolts the lower leg part may be made to snugly fit the upper part of the leg. The bolt *l* also serves to stiffen both parts of the leg. Plates *n—o* are secured to the upper leg part *a* by screws *p* and the upper ends are preferably secured in leather sheaths *q*. The plates *n* and *o* overlap the plates *g* and *h* respectively and are pivotally connected to them by the bolts *r*. The plate *g*, which is the plate on the outer side of the leg is disposed on the outside of the plate *n*. This plate has formed upon its rear side a rounding cam *s*, which terminates at the top in a notch *t* having a stop *u* on the farther side of it. A latch *v* is slidably mounted in sleeves *w* secured on the plate *n*. The lower end of this latch is adapted to set in the notch *t* and to slide upon the cam *s* when lifted from the notch, as when the lower leg part is turned about its pivotal connection. The latch is formed with a finger piece *x* for raising it, and has a spring *y* mounted upon it between the upper sleeve *w* and a pin *z* set in the latch. This spring holds the latch upon the cam and causes it to snap into the notch when the leg is turned to bring the latch and notch into alinement.

A knee piece *a* is secured to the lower end of the upper leg part. This is preferably made of leather in the form of a hollow shell, and is of sufficient length to dip or extend into the hollow interior of the lower leg part *b* when the parts are bent as shown in Fig. 1. It has enough resiliency to set firmly, but yieldingly, against the upper edge of the lower leg part *b*. When the leg is straightened as shown in Fig. 2, the knee turns into the hollow interior or the lower leg part beneath the bolt *l*.

In operating the leg, all that the wearer has to do when he desires to bend it at the knee, is to raise the latch *v* by means of the finger grip *x*, until the end of the latch has cleared the notch *t*. The latch is intended to be concealed by the trousers leg (not shown), but is in a suitable position to be in easy reach by the hand. When the latch is raised, the joint at the knee is free to bend, and will easily bend, as for instance, when the wearer assumes a sitting posture

as shown in Fig. 1. When the wearer rises, the leg straightens automatically and the latch follows the cam and when it reaches the notch *t* it snaps into place. The stop *u* serves to prevent the latch from passing to the other side of the notch.

Although I have shown only one form of mechanism embodying my invention, it is obvious that various changes within the skill of the mechanic may be made therein without departing from the spirit of the invention, provided the means set forth in the following claims are employed.

Having thus described my invention, I claim:—

1. In an artificial leg, an upper part, a lower part, a plate secured to the upper part on the outer side thereof, a plate secured to the lower part on the outer side thereof, pivotal connections connecting the plates at the knee of the leg, a latch bolt secured to slide upon the upper plate, a handle on the bolt for raising it, a spring on said bolt for automatically lowering it, a cam formed on the top of the lower plate having a notch at

the forward end for receiving the latch to lock the leg in straightened position, said cam being adapted to hold the latch bolt back in set position when disengaged from the notch, and an extension on the forward end of said cam for stopping the latch bolt when brought to register with said notch.

2. In an artificial leg, an upper part and a lower part made hollow of sheets of leather, plates of metal reinforcing the said parts at both sides and pivotally connected to form the knee joint, a reinforcing bolt tapped into one of the plates and extending through the corresponding leg part and loosely through the opposite plate, and nuts screwed on said bolt each side of said last plate affording adjusting means for the transverse dimensions of said leg parts.

This specification, signed and witnessed this 26th day of July, A. D. 1912.

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Witnesses:

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