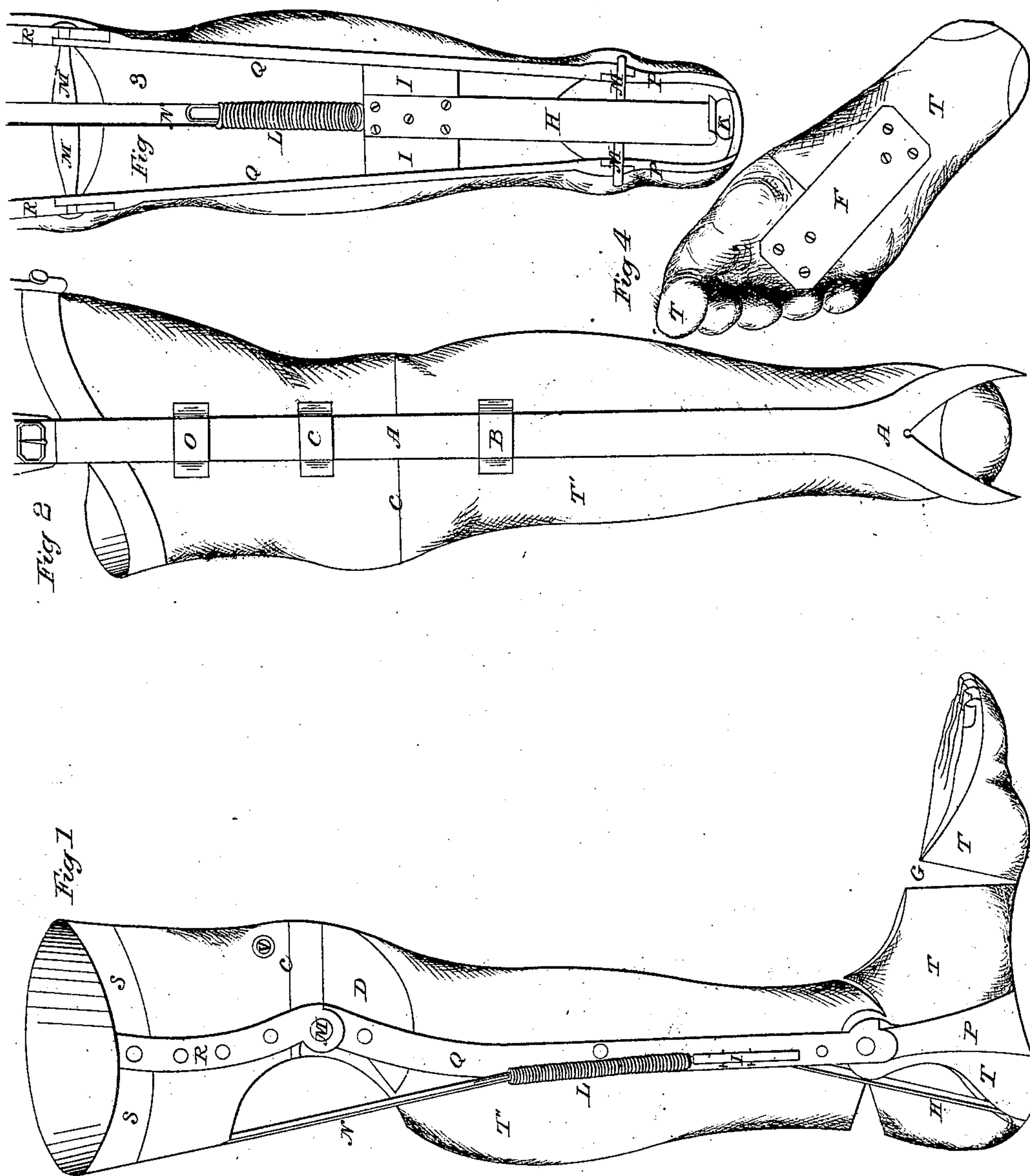


L. Tassius,
Artificial Leg.

N^o 81,033.

Patented Aug. 11, 1868.



Witnesses:

A. S. Goz
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LOUIS TASSIUS, OF NORWALK, OHIO.

Letters Patent No. 81,033, dated August 11, 1868.

IMPROVED ARTIFICIAL LEG.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, LOUIS TASSIUS, M. D., of Norwalk, in the county of Huron, in the State of Ohio, have invented a New Articulated Artificial Leg; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention is distinguished from all others hitherto invented by numerous advantages, both as regards general mechanism and lightness.

Figure 1, side view of the positions of the springs H and L, of the steel heel K, of the incision G, of the knee in copper, G, of the steel bands P Q R, and by the steel bandage S encircling the thigh.

Figure 2, a front view, the position of the sling A.

Figure 3, back view, the position of the steel plate I, which holds the springs L H, the steel heel K.

Figure 4, view of the sole of the foot, position of the spring F.

The spring supports the foot by forming a stirrup, passes by B upon the knee D, by C and O as far as the buckle. There it is tightened as much as necessary.

In a standing posture, the sling A rests on the shoulder, and it acts upon the entire mechanism. The knee cannot bend when the heel touches the ground. In a sitting posture, on the contrary, the sling slips by B and G in such a way as to allow the natural flexion of the copper knee, which is then seen projecting through the hole drilled in the general leather envelope.

View of the Sole of the Foot.

Beneath the sole of the foot there is a spring-plate, which, by means of the articulation G, bends upwards and downwards, according as the foot is or is not on the ground.

Side View.

The spring H is riveted to the plate I, which is fixed between the two bands, Q, of the tibia. This spring pushes the heel K when the foot presses the ground. This is an advantage quite unknown in all preceding systems, according to which the foot advances by a sliding movement, either direct or circular, at the risk of coming in contact with all sorts of obstacles, and producing a fall.

The spring L is attached at the lower extremity, by a hook, to the upper extremity of the plate I, and at the corresponding end of the plate by a leather, N, which is fixed to the thigh. It only acts when the stump being inserted in the upper extremity of the apparatus, the thigh is raised, and then, by the mere movement of the stump, the mechanism is acted upon, and produces a flexion of the knee—an effect hitherto never obtained.

The action of the sling, when it is drawn back to its natural position after the bending of the knee, allows the leg to stretch, and make a step in advance, and then, and in the most natural manner possible, the weight of the body being thrown forward, and acting upon the articulation of the foot, stimulates the wearer to take another step, and so on as long as he wishes.

The External Envelope; the Inward Working; the Weight, and the Form.

The external of this leg is a mass of hardened papier-mache, surrounded with a coat of gum, and then with an envelope in leather, or, if economy be an object, in linen cloth. These envelopes are pierced with little holes, V, to prevent the effects of perspiration.

The average weight of this leg, with its accessories, is about two kilogrammes. It may be from fifteen to twenty centigrammes heavier, according to the size. The envelope alone weighs seventy-five centigrammes. The whole presents the appearance of a masculine and well-formed leg.

The axle (in French,) M of the bend of the knee, and the instep, are of copper, and work interiorly with a cylindrical rotation across the rounds of the steel bands. They are riveted externally on the copper plate. The bands Q and R, and the circle, S, of the thigh, are solidly fixed to the envelope.

The steel bands are attached to the foot, and envelope it in the form of a stirrup.

A heel, R, in steel, encloses the heel in walnut wood. Between the two is a leather tongue, to break the shocks, which might react upon the stirrup.

On the thigh, the circle and the bands are placed externally, in order not to compress the stirrup. They extend to S, where they are joined to the bands of the bottom of the leg, which are concealed and act in the interior.

What I claim as my invention, and desire to secure by Letters Patent, is—

The herein-described artificial leg, consisting of the heel-plate K, stirrup P, springs H L, links Q R, and sling A, all constructed and arranged to operate, in combination with the articulated foot T and leg T', in the manner substantially as set forth.

LOUIS TASSIUS.

Witnesses:

W. H. BURRIDGE,

PETER A. BISHOP.