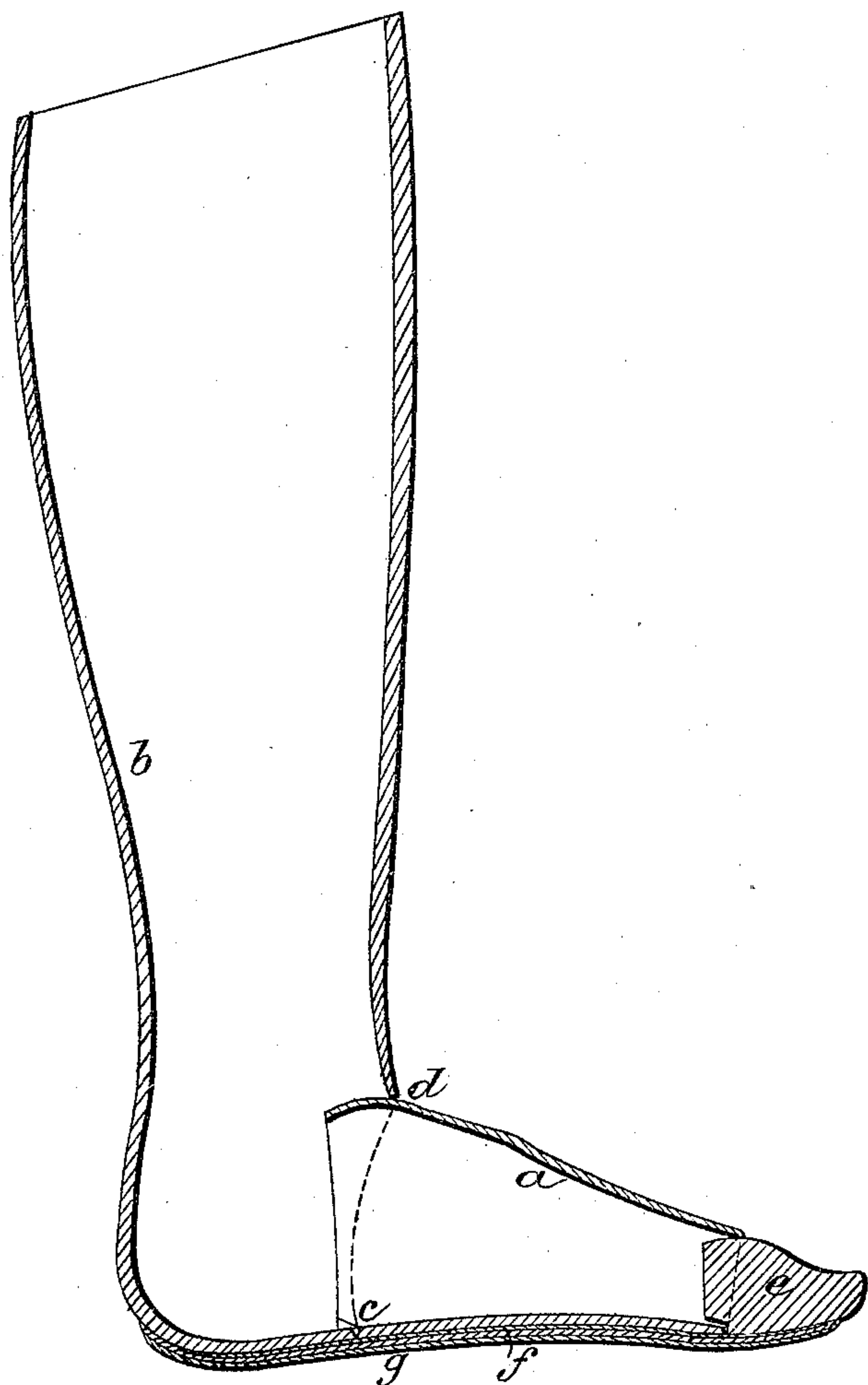


*S. G. Gregory,*

*Artificial Leg.*

*No. 86,530.*

*Patented Feb. 2. 1869.*



*Witnesses.*

*McCombs.*

*A. Sellers.*

*Inventor.*

*Stephen G. Gregory.*

# United States Patent Office.

STEPHEN G. GREGORY, OF ALBANY, NEW YORK.

*Letters Patent No. 86,530, dated February 2, 1869.*

## IMPROVEMENT IN ARTIFICIAL LIMBS.

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, STEPHEN G. GREGORY, of the city and county of Albany, in the State of New York, have invented a new and useful Improvement in Artificial Limbs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and which represents a sectional elevation of an artificial limb, constructed in accordance with my improvement.

My invention consists in making an artificial leg, or limb, with a joint extending from the instep, or thereabouts, to (as a fulcrum or centre of motion) a point or line on the sole of the foot at front or in advance of the heel, and supporting the same or forward portion of the foot by a spring, preferably arranged to run the length of the sole or thereabouts, though a different arrangement of spring or springs may be applied, by which disposition of joint, as contradistinguished from one at the ankle, pivoted above or in rear of the heel, a more natural or easier and less noisy treading-action is secured.

The limb represented in the accompanying drawing may, if desired, be made of wood, or any suitable material, substantially as hereinafter described. The foot-part *a* forms its junction with the leg-portion by a joint extending from (as a centre of motion) the sole, at front or in advance of the heel, as at *c*, to the instep, as at *d*. Said portion *a* may either be pivoted at *c*, and held up or supported by a spring applied in any proper manner, or it may be sustained, as well as the jointed toe-portion *e*, by a spring-plate, *f*, extending the length of the sole or thereabouts, and giving a general strength and elasticity to the foot, from toe to heel, as well as dispensing with pivots, or joint-pins, at the centres of motion, to the foot-portion *a* and toe-part *e*, said plate

*f* being properly secured to the limb, and covered externally by, say, a leather facing, *g*.

By the arrangement of the joint extending from the instep to the sole, making the centre of motion, as at *c*, in contradistinction to an ankle-joint having its centre of action in rear or back part of the heel, a much easier, steadier, and less noisy treading-action is secured, as in putting down the heel there is no tendency, by such pressure or action, to cause the more forward portion of the foot or sole to strike or flap the ground, or to come in contact with it till the natural bend or action of the body gently brings it down. This will be self-evident when it is considered that the heel-portion has a solid bearing on the ground, across or beneath, or in line, as it were, with the leg, which is not the case with an ankle-joint crossing the leg or shank, and pivoted in rear.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The limb, having the shank extended downward, to form the entire heel of the foot, and having the centre of motion of the foot-part, near the sole, and about at the junction of the under side of the heel with the hollow of the foot, substantially as and for the purpose herein described.

2. In combination with the limb, jointed as described, the spring sole-plate *f*, extending from toe to heel, and serving to support both jointed portions *a* and *e*, as herein set forth.

STEPHEN G. GREGORY.

Witnesses:

J. W. COOMBS,  
A. LE CLERC.