

(No Model.)

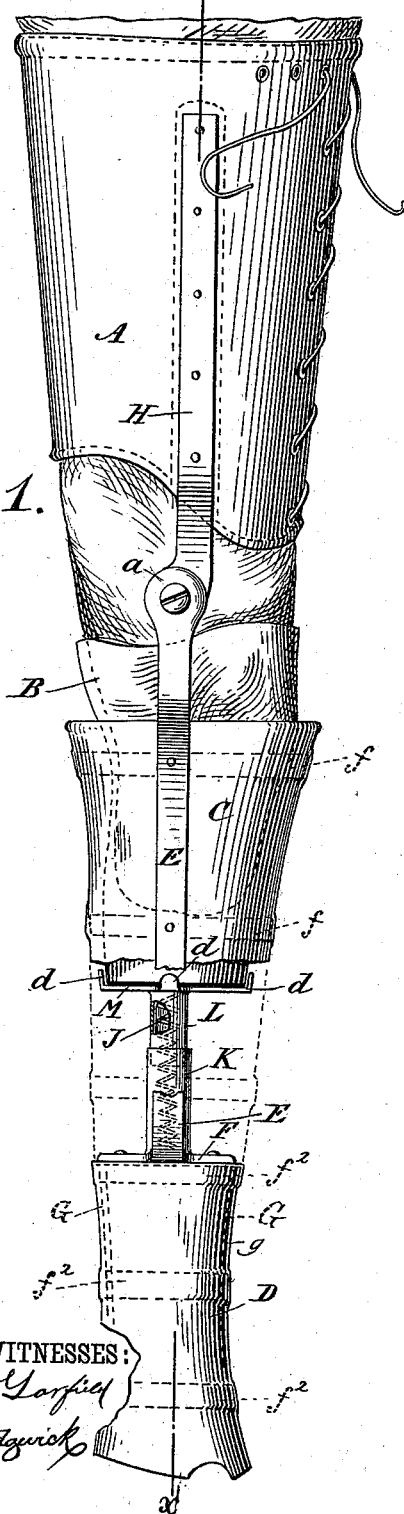
2 Sheets—Sheet 1.

A. GAULT.  
ARTIFICIAL LEG.

No. 383,569. x

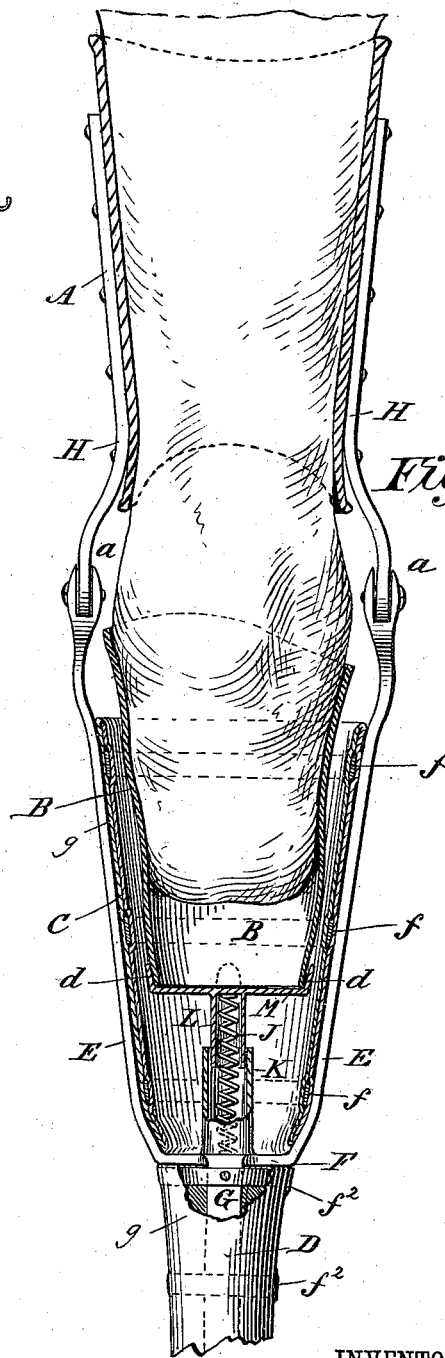
Patented May 29, 1888.

Fig. 1.



WITNESSES:  
J. D. Larpied  
C. Sedgwick

Fig. 2.



INVENTOR:

A. Gault.

BY

Munn & Co.  
ATTORNEYS.

(No Model.)

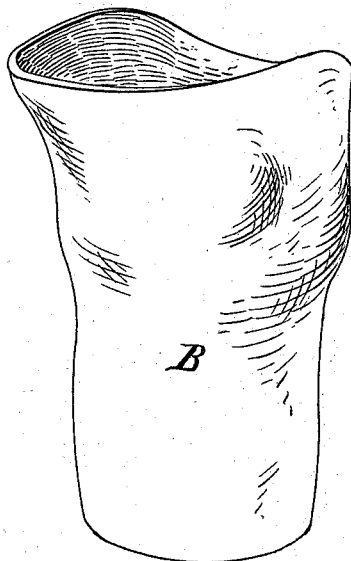
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A. GAULT.  
ARTIFICIAL LEG.

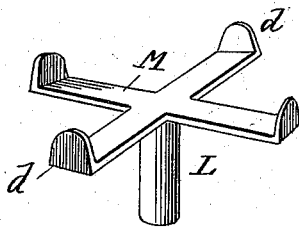
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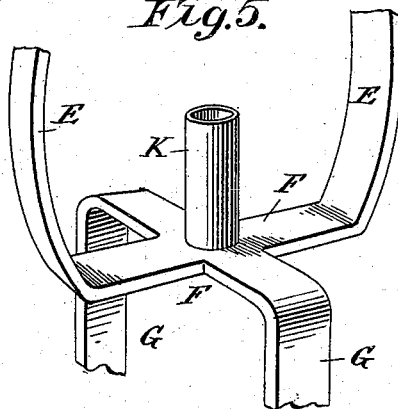
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



WITNESSES:

*J. D. Garfield*  
*C. Sedgwick*

INVENTOR:

*A. Gault*  
*Munn & Co.*

BY

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

ALEXANDER GAULT, OF MEDFORD, MINNESOTA.

## ARTIFICIAL LEG.

SPECIFICATION forming part of Letters Patent No. 383,569, dated May 29, 1888.

Application filed November 21, 1887. Serial No. 255,796. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER GAULT, of Medford, in the county of Steele and State of Minnesota, have invented a new and Improved Artificial Leg, of which the following is a full, clear, and exact description.

The object of the present invention is to provide an artificial limb, particularly for use by a person whose leg has been amputated between the knee and foot, that will not chafe the stump of the wearer; and it consists in certain constructions and combinations of parts composing the leg, all substantially as will hereinafter more fully appear, and be set forth in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of the artificial limb, showing the stump of a leg amputated below the knee in position therein. Fig. 2 is a vertical transverse section of same on line *xx*, Fig. 1. Fig. 3 is a perspective view of the stump-socket detached, and Figs. 4 and 5 are perspective views in detail of parts to be hereinafter referred to.

This artificial leg comprises three sockets—namely, a thigh-socket, A, a stump-socket, B, and an outer socket, C, for holding the said stump-socket, said latter socket being supported from the ankle or foot piece D by brace-rods E E, secured thereto, said brace-rods being the upward extension of a plate or frame, F, lying on top of said ankle-piece D and provided for a firm fastening thereof to the ankle-piece with downwardly-extending brace-rods G G, lying alongside of and bound to said ankle-piece, as hereinafter described, and the thigh-socket A is supported from the ankle portion and from said socket C by braces H H, jointed to the braces E E, as at *a*.

The stump-socket B consists of a suitable flaring or more or less funnel-shaped casing, open at the top, and preferably open at its lower end, of an internal form generally corresponding with that of the stump of a leg amputated above or below the knee, and it is to be composed of hard vulcanized rubber or of other suitable material molded or otherwise

formed of the desired shape, and to possess sufficient rigidity.

The frame F is provided with a vertical tubular extension or guide socket, K, within which is disposed a spiral spring, J, against which, playing within or about said socket, is a guide tube or spindle, L, downwardly projecting from a frame, M, having lugs *d d*, said frame serving as a platform and rest or holder for the lower end of the stump-socket, and when the artificial leg is worn the weight of the wearer thereon is supported from the foot and ankle piece by the braces E H and thigh-socket A, and the stump-socket B is pushed and held closely to a bearing on the stump at all times by the spring-actuated frame M, thereby precluding any play or chafing between the stump and its said socket.

A desirable method of confining the brace-rods E and G to the outer socket, C, and ankle-piece D is by the employment of suitable confining straps or hoops, of metal or other suitable material, surrounding said portions C D and the said brace-bars in place thereon, as indicated at *f f*<sup>2</sup>, an overlying covering of leather, *g*, or other desired material being then preferably provided.

A rubber spring may be substituted for the spiral spring J, if desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an artificial limb, a socket for receiving the stump of an amputated leg, formed and suitably shaped of hard molded india-rubber or gutta-percha, substantially as described.

2. In an artificial leg, the combination, with an ankle-piece, D, having a vertical guiding-socket, a spring, and outer socket, C, and appliances for supporting said outer socket, of a stump-socket having a downward projection playing upon said guiding-socket against said spring, substantially as and for the purposes described.

3. In an artificial leg, the combination, with ankle-piece D, having an upwardly-projecting socket, and means for supporting said ankle-piece, of a frame provided with a tube projecting downwardly within the socket of the

ankle-piece, a spring in said socket and tube, and a stump-socket resting upon the said frame, substantially as herein shown and described.

4. In an artificial leg, the combination, with  
5 an ankle-piece, D, having a vertical guiding-socket, K, and a spiral spring, J, therein, and an outer socket, C, and appliances for supporting said outer socket, of a frame having upwardly-extended lugs *dd* and a downwardly-  
10 extended tube, L, playing within said guiding-socket K against said spring, and a stump-socket, B, resting on said frame, substantially as and for the purpose described.

5. In an artificial leg, the combination, with  
15 an ankle-piece, D, having secured thereto a frame, F, provided with upwardly-extended brace-bars E E, a thigh-socket, A, pivotally secured to said brace-bars, and an outer socket, C, secured to and supported by said brace-  
20 bars, of a stump-socket fitting loosely within said socket C, and a spring between said frame

F and said stump-socket for forcing said stump-socket upwardly, substantially as and for the purpose described.

6. In an artificial leg, the combination, with 25  
an ankle-piece, D, a frame, F, provided with downwardly-extended brace-bars G, lying along and secured to said ankle-piece, said frame also having upwardly-extended brace-  
bars E E, a thigh-socket, A, pivotally secured 30  
to said brace-bars E, and an outer socket, C, secured to and supported by said brace-bars, of a stump-socket fitting loosely within said  
socket C, and a spring between said frame F  
and said stump-socket for forcing said stump- 35  
socket upwardly, substantially as and for the purpose described.

ALEXANDER GAULT.

Witnesses:

J. A. SAWYER,  
OTIS LORD.