

(No Model.)

H. C. WINTERMUTE.
ARTIFICIAL LEG.

No. 433,638.

Patented Aug. 5, 1890.

Fig. 6.

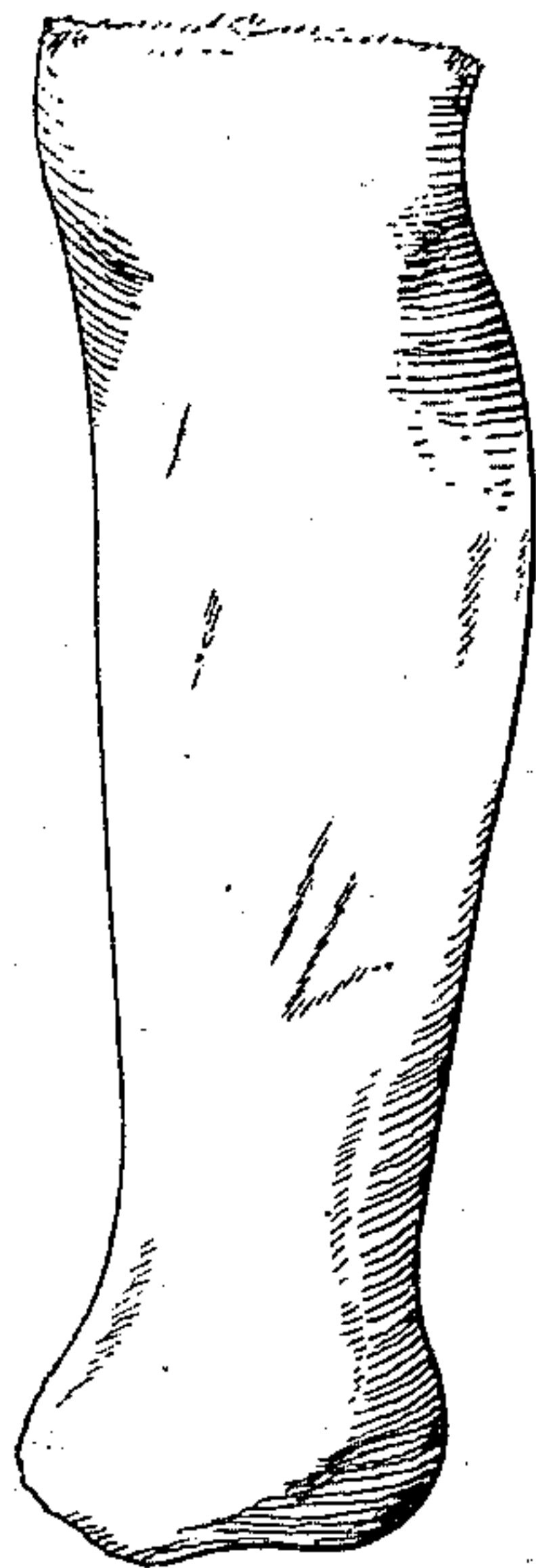


Fig. 1.

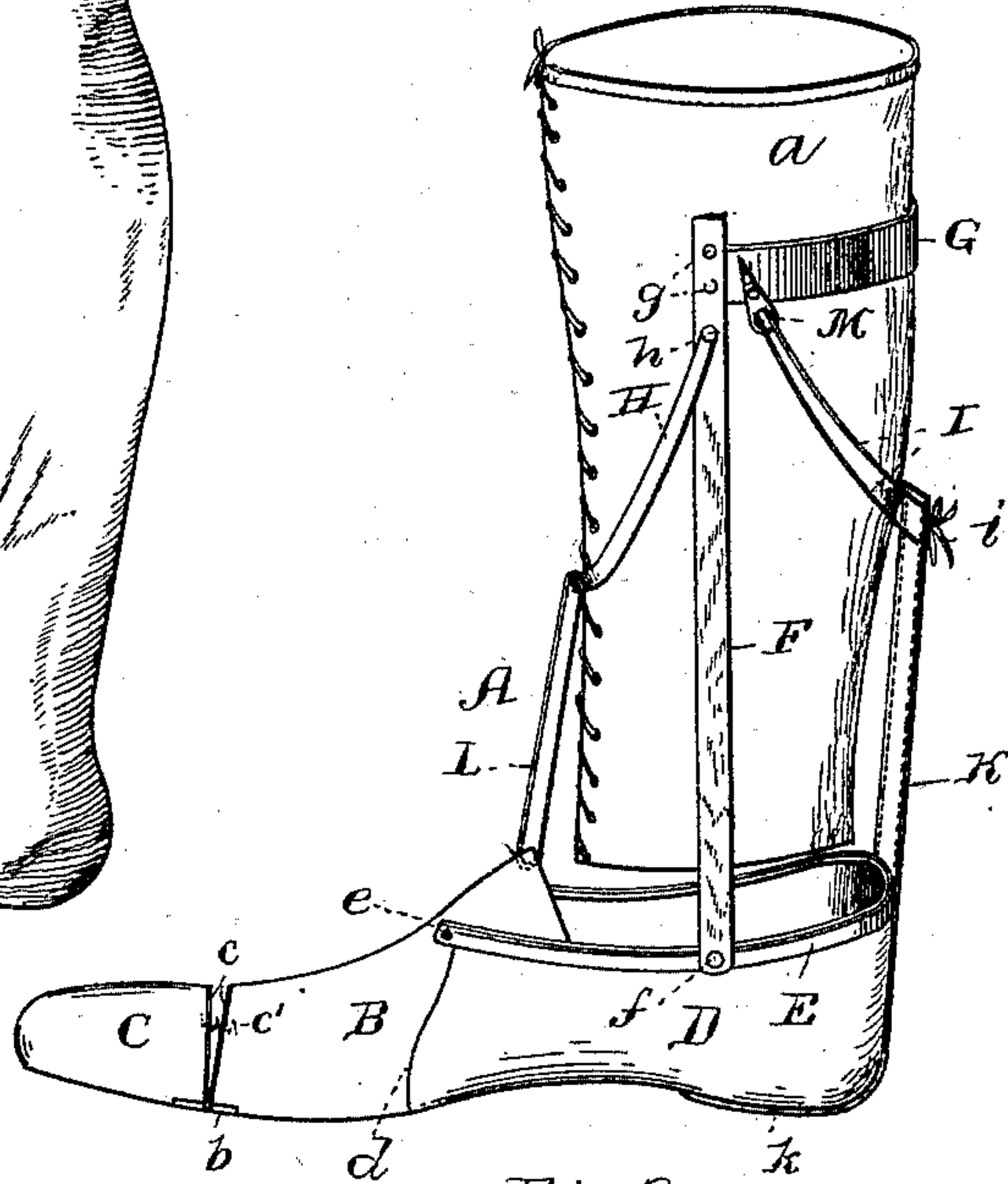


Fig. 2.

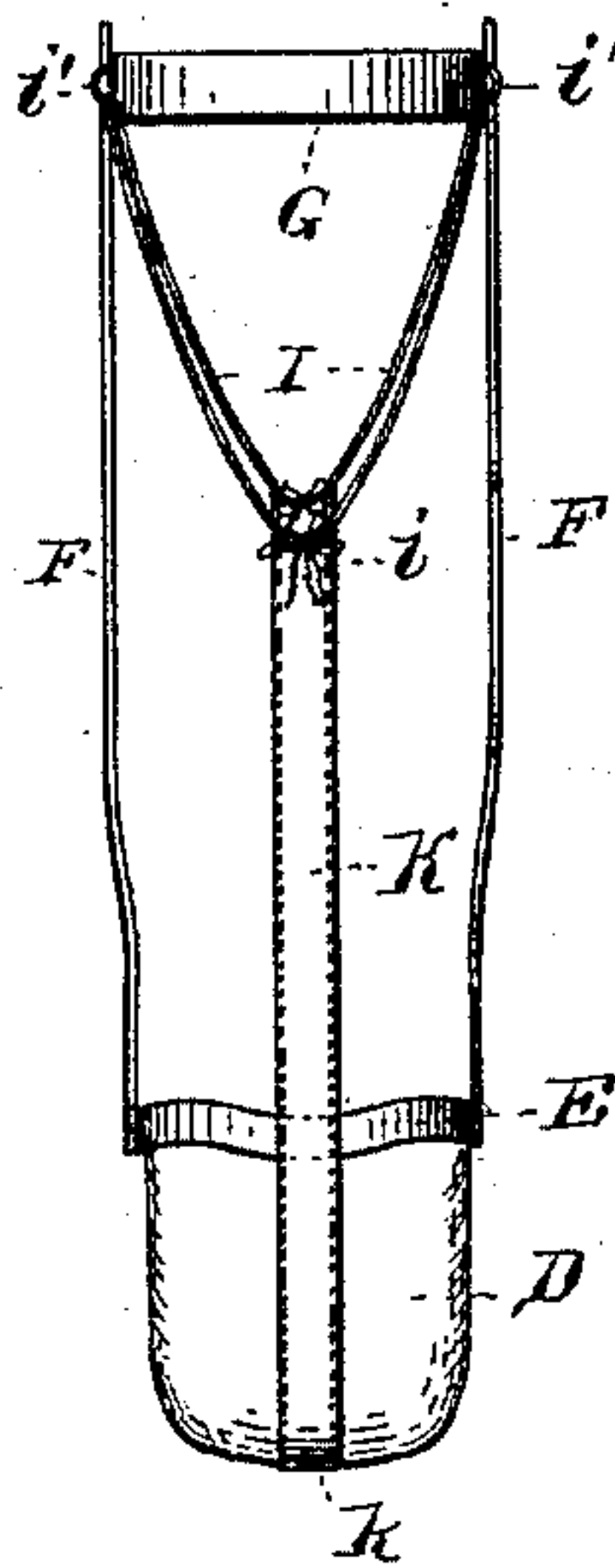


Fig. 5.

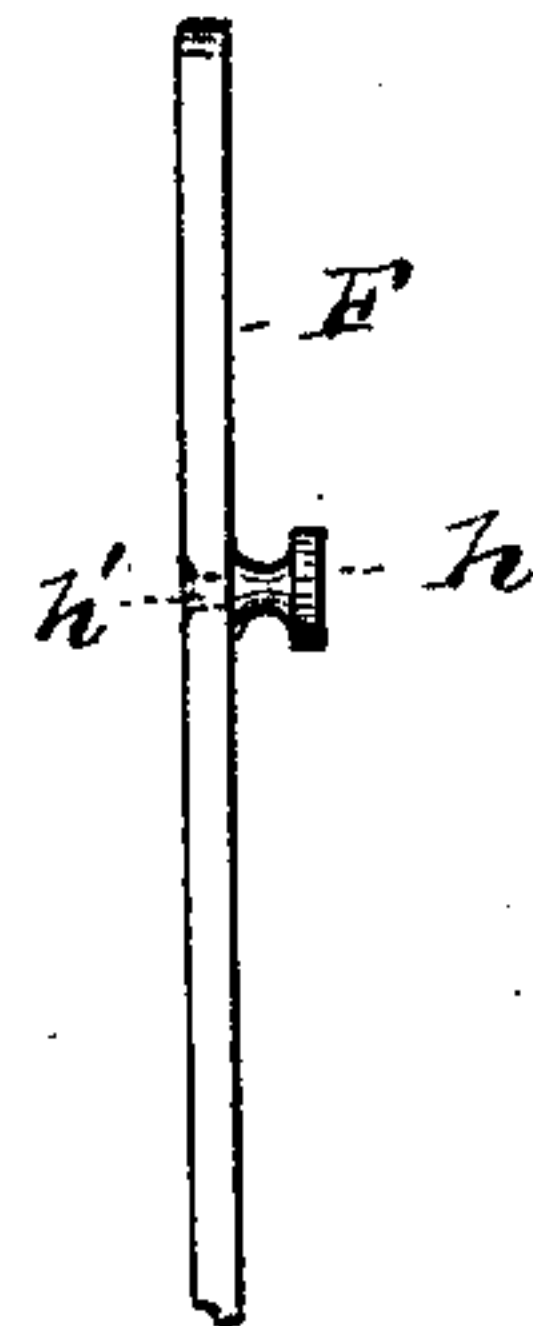


Fig. 3.

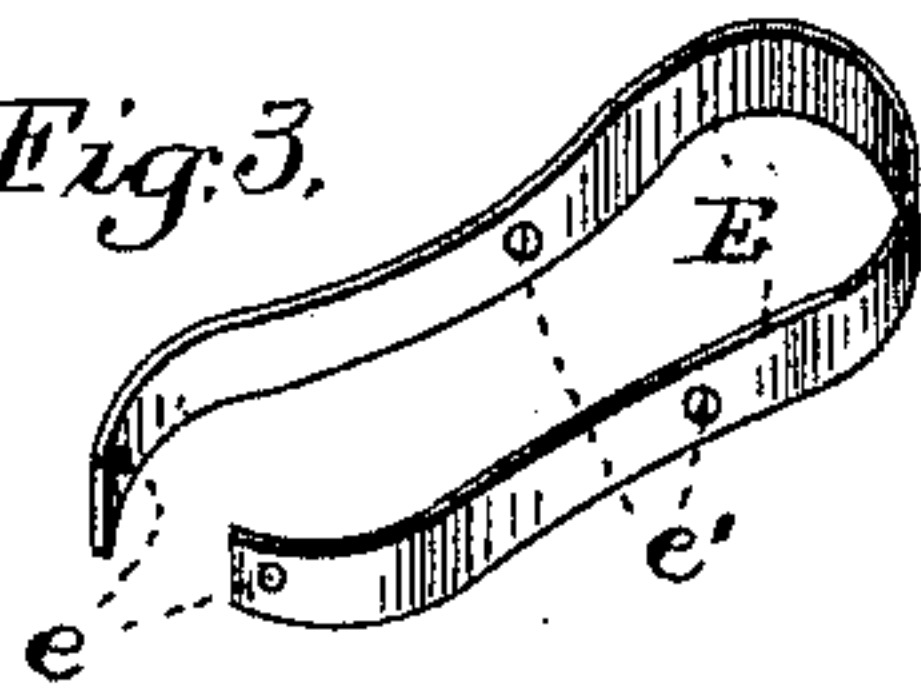
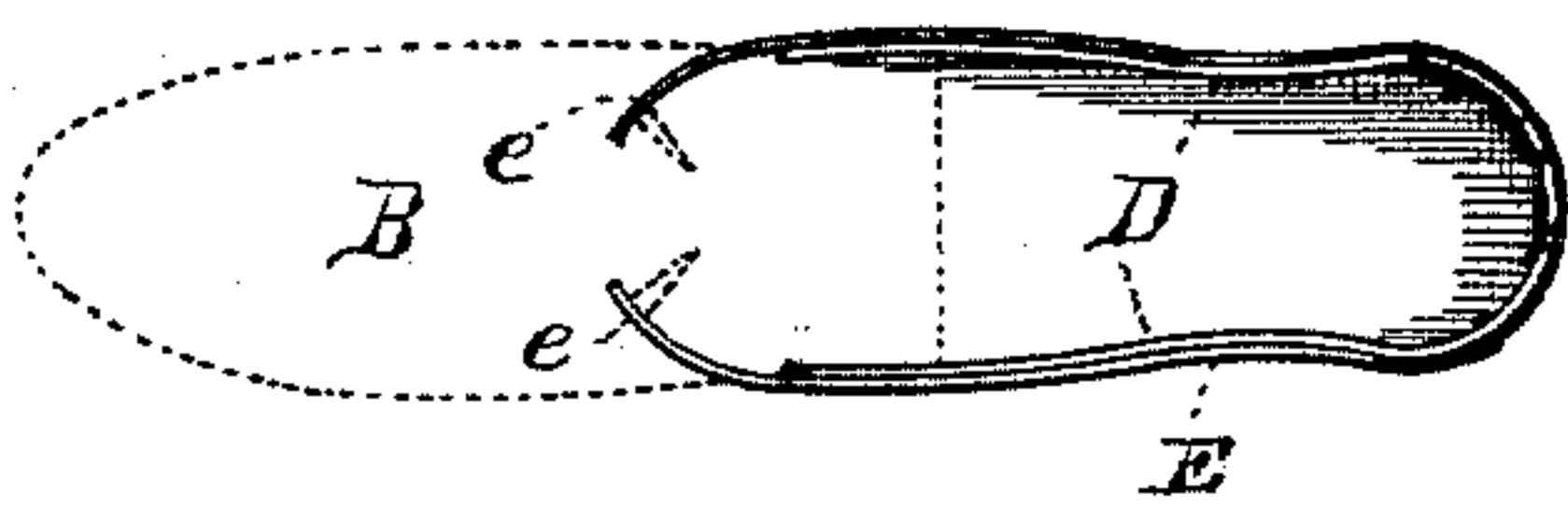


Fig. 4.



Witnessed

R. A. Balderson,
J. K. Lathy

Inventor.

Harris C. Wintermute

By Lathy & Balderson,
his Attys.

UNITED STATES PATENT OFFICE.

HARRIS C. WINTERMUTE, OF KANSAS CITY, MISSOURI, ASSIGNOR OF ONE-HALF TO HECTOR LITHGOW, OF SAME PLACE.

ARTIFICIAL LEG.

SPECIFICATION forming part of Letters Patent No. 433,638, dated August 5, 1890.

Application filed May 12, 1890. Serial No. 351,482. (No model.)

To all whom it may concern:

Be it known that I, HARRIS C. WINTERMUTE, a citizen of the United States, residing at Kansas City, in the county of Jackson, State of Missouri, have invented certain new and useful Improvements in Metallic Inside Heel-Shoe and Foot-Extension, of which the following is a full, clear and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in inside heel-shoe and foot-extension; and it consists in the novel construction and arrangement hereinafter fully set forth and described. The object of my invention is to provide a metallic inside shoe which may be fitted to the heel where the front part of the foot has been amputated, as shown in Fig. 6. Its further object is to provide a metallic heel-shoe and foot-extension which will, by using the braces, straps, and parts shown in the drawings, form a foot which will be durable and may be constructed with simplicity and economy. These ends I attain by using the devices illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my invention, showing forth the improvements. Fig. 2 is a rear view of the same with the lacer removed. Fig. 3 is a detail, in perspective, of the metallic band, which is rigidly secured around the metallic shoe. Fig. 4 is a plan view of the metallic shoe, showing the foot-extension in dotted lines. Fig. 5 is a detail view of the button or knob, to which the front straps or artificial muscles are secured. Fig. 6 is a view of a limb, (with the front part of the foot amputated,) on which my improved inside shoe is to be worn.

Referring to the drawings by letter, A represents my invention constructed substantially as shown in Fig. 1.

B is the ball and instep of the foot, made of wood, having a toe-piece C hinged thereto by a suitable hinge *b*, the joint between said toe-piece and main foot being lined with leather or rubber strips *c*, for the purpose of making an easy flexible joint.

c' is a coil-spring secured in the foot B and

the toe-piece C, and serves to spring said toe-piece into position.

D is a metallic shoe made in a suitable shape to fit the heel, having its sides extend over the wood extension, as shown in Figs. 1 and 4, thereby forming a sufficient surface for securing it to said extension B.

E is a band composed of steel, which passes around the entire surface of shoe D and extends beyond the edges of said shoe, and is securely bolted or riveted in the wood extension B. The band E encircles the shoe D at the top, as shown in the drawings, and serves to form a suitable bearing for the metallic stays or braces F. Said braces F are placed one on either side of the limb, having their lower ends loosely bolted to the steel band E, thereby forming a joint for the ankle. At the top of the braces F is a semicircular metallic band G, which passes around the rear of the limb, immediately below the knee-joint. Rigidly secured near the ends of band G are loops M, through which the lace-cords I pass. Said cords I then extend downward and are properly tied to eyes in the leather band K.

H is a leather strap, secured at its ends to the knobs *h*, this strap extending downward around the front of the limb and receiving the rubber straps or artificial muscles L, which in turn extend down and are rigidly secured to the wood foot-extension B, thereby making the device flexible and easy of wear.

The leather heel-cord K, which is rigidly riveted to the bottom and rear of the metallic shoe D, extends upward until it covers about two-thirds of the distance between the foot and the knee, and is provided at its upper end with eyes *i*, through which the lace-strings I are secured. Said lace-strings I pass upward and through the loops M, and back to eyes *i*, as shown in Fig. 1.

a is a lacer, made of any suitable material, which may be worn with my device. This, however, I do not claim as being a part of my invention.

b is the hinge, heretofore referred to, which connects the toe-piece to the foot.

d are the extremities of the sides of the inside shoe, where they lap over the wood ex-

tension of the foot. These extremities are countersunk in the foot-piece, so as to form a smooth surface or joint. *e* are perforations in the steel band E, by which said band is secured to the front part of the foot. *e'* are also perforations in the sides of said steel band E, through which the rivets *f*, which secure the braces F, are secured.

g are rivets by which the band G is rigidly secured to braces F.

The object of having the loops M placed near the extremities of the leg-band G is to prevent said band from working loose, caused by the severe strain of lace-cords I.

h are knobs to which the straps or artificial muscles are secured.

The device is designed to be worn inside of an ordinary boot or shoe, thereby causing the foot on which my improved inside shoe is worn to present a neat and natural appearance.

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

1. An inside heel-shoe and foot-extension, consisting of the foot-extension B, metallic heel-shoe D, secured to the rear part of said extension, and steel band E, encircling the upper edge of said shoe, with its ends secured to said extension, substantially as shown and described, and for the purposes set forth.

2. The combination of the foot-extension B, metallic heel-shoe D, secured to the rear part of said extension, steel band E, encircling the

upper edge of said shoe, with its ends secured to said extension, heel-cord K, extending upward, its top end being provided with eyes *i*, through which the lace-cords I pass, substantially as shown and described.

3. An inside shoe having the metallic shoe D, provided with a steel band E, to which the upright braces F are hinged, the upper ends of said braces F being rigidly secured to the metallic band G, for the purposes substantially as specified.

4. The combination of the inside metallic shoe, the heel-cord K, lace-strings I, the latter secured in the loops M, which are riveted to the metallic band G, near the braces F, for the purposes specified.

5. The combination of the foot B, heel-shoe D, secured to said foot, band E, encircling the upper edge of said heel-shoe, braces F, pivoted to said band, band G, rigidly secured to the upper ends of said braces, heel-cord K, attached to heel of said shoe, cords I, secured to said heel-cord and band G, strap H, its ends secured to knobs *h*, and rubber straps L, secured to said strap H, and extension B, substantially as shown and described, and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HARRIS C. WINTERMUTE.

Witnesses:

S. L. C. HASSON,
R. A. BALDERSON.