

No. 787,250.

PATENTED APR. 11, 1905.

C. B. WINN.
ARTIFICIAL LEG.
APPLICATION FILED JAN. 14, 1905.

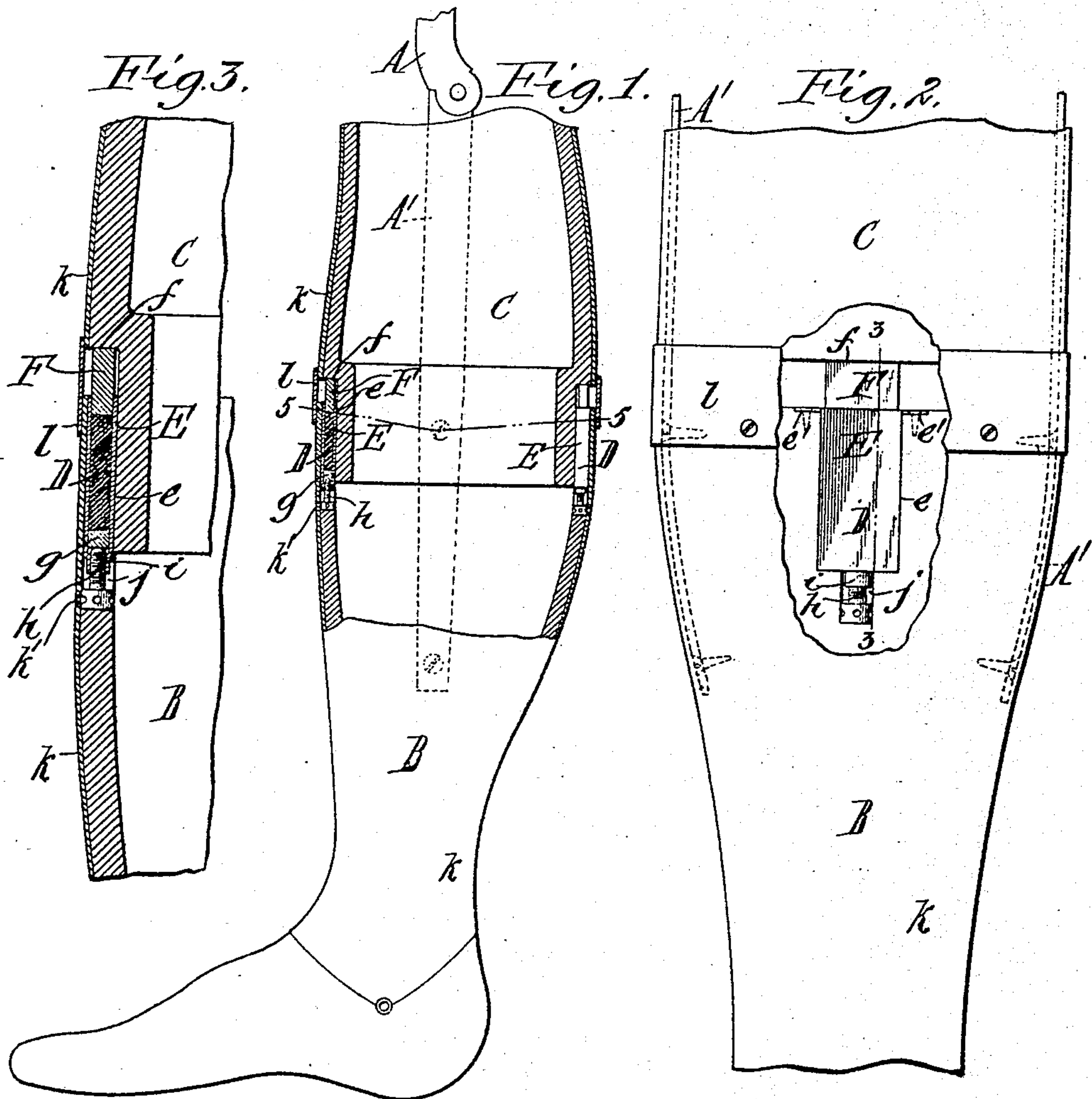
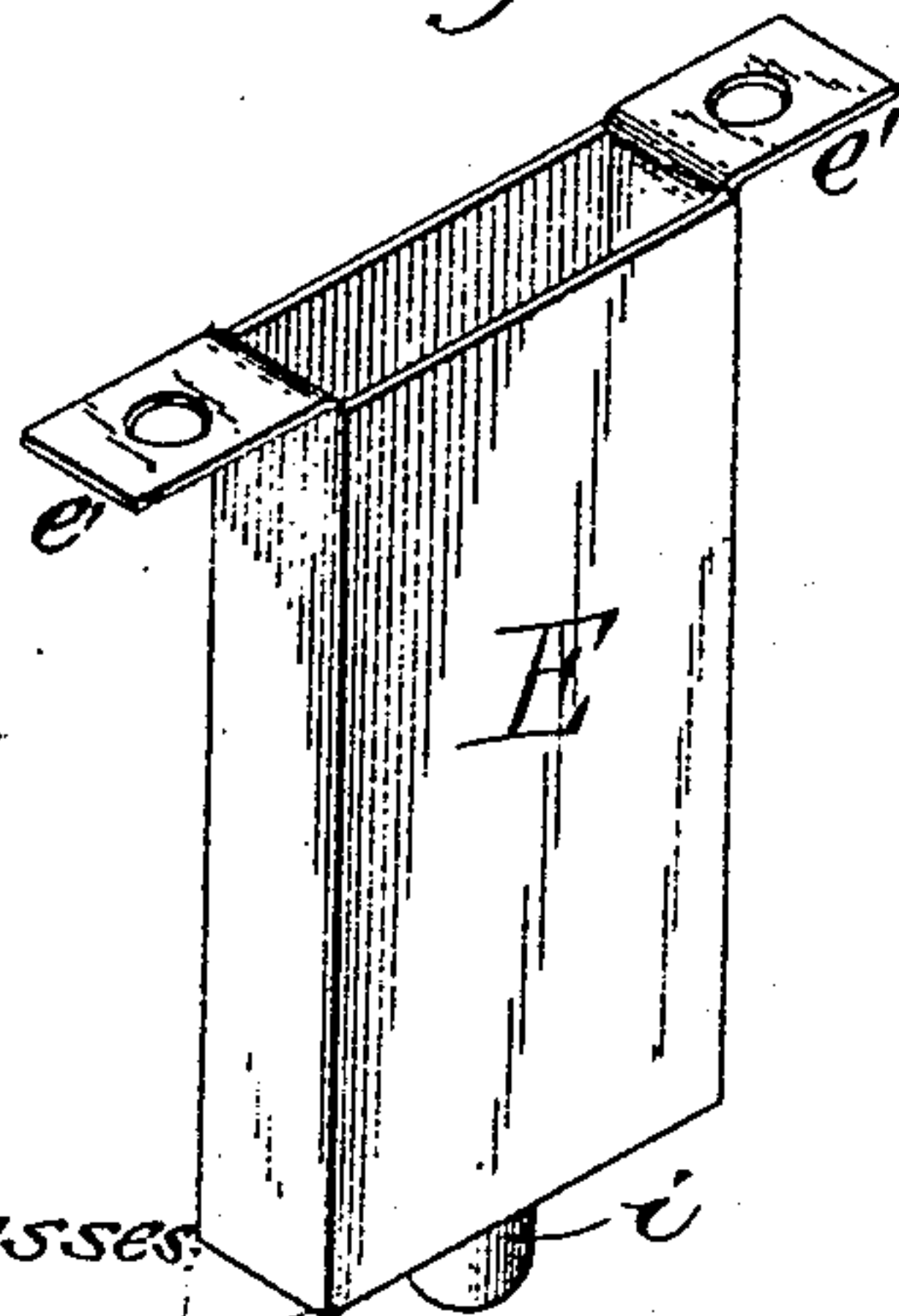
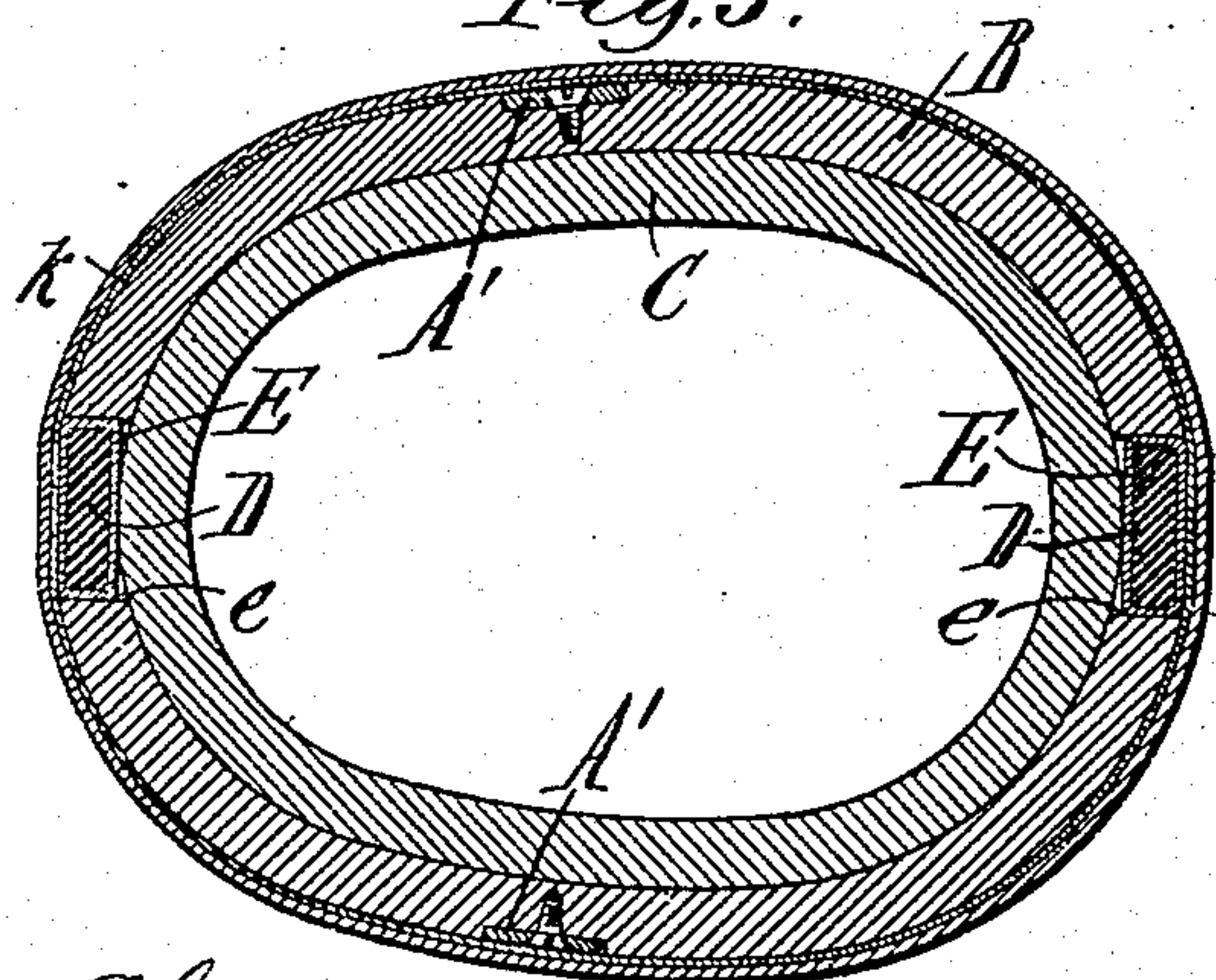


Fig. 4.



Witnesses:
Louis W. Gratz.
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Fig. 5.



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ARTIFICIAL LEG.

SPECIFICATION forming part of Letters Patent No. 787,250, dated April 11, 1905.

Application filed January 14, 1905. Serial No. 241,024.

To all whom it may concern:

Be it known that I, CHESTER B. WINN, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Artificial Legs, of which the following is a specification.

This invention relates to artificial legs of the class having a so-called "slip-socket," which is cushioned on the ankle-piece in order to obtain an elastic action of these members and render the leg more comfortable to the wearer.

One of the objects of my invention is to provide the leg with improved cushions or springs which will retain their resilience for a comparatively long period and which do not obstruct the hollow central portion of the slip-socket and ankle-piece, so as to adapt the leg to a long as well as a short stump.

Further objects of the invention are to apply the cushioning-springs to the leg in a neat and inexpensive manner and to render them adjustable for regulating their resistance, as required.

In the accompanying drawings, Figure 1 is a sectional elevation of the lower portion of an artificial leg embodying the invention. Fig. 2 is a fragmentary view thereof on an enlarged scale. Fig. 3 is a vertical section in line 3 3, Fig. 2. Fig. 4 is a perspective view of one of the cushion-casings. Fig. 5 is a horizontal section in line 5 5, Fig. 1, on an enlarged scale.

Similar letters of reference indicate corresponding parts throughout the several views.

A indicates the customary upper straps carried by the thigh-lacing, (not shown in the drawings,) and A' the lower straps, which latter are secured to opposite sides of the ankle-pieces or hollow lower member B of the artificial leg and hinged to the upper straps in a well-known manner.

C is the stump-socket or hollow upper section, which receives the stump of the natural leg and slides vertically on the ankle-piece, the socket being preferably reduced at its lower end and fitted into the upper end of the ankle-piece, as shown in Fig. 1.

D D indicate cushions or springs interposed between the ankle-piece and the stump-socket to yieldingly resist the downward movement

of the socket on the ankle-piece. These springs are preferably located at the front and rear sides of the leg, as shown in the drawings, and in the preferred form of the invention each spring consists of a block of soft rubber seated or confined in a rectangular socket or casing E, which is open at its upper end and closed at its lower end. This casing is countersunk in a recess *e*, formed in the face of the ankle-piece, so as to be substantially flush with the surface thereof. The casing rests upon the bottom of the recess *e* and is secured in place therein by screws passing through perforated lugs *e'*, projecting from the upper end thereof and entering the upper edge of the ankle-piece, or by other suitable means. The rubber cushion terminates short of the upper end of the casing to leave room for a plunger or rigid block F, which rests upon the cushion and bears at its upper end against the shoulder *f*, formed by contracting the lower end of the stump-socket. By this construction the cushion is confined within the casing on all sides, and the weight of the wearer is exerted upon the cushion through the plunger, thus preventing spreading or buckling of the cushion, which would be liable to occur if the same were extended above the casing in contact with the stump-socket. Each rubber cushion may rest directly upon the bottom of its casing E; but it is preferably seated upon a suitable adjusting device, by which it may be raised or lowered in the casing for increasing or diminishing its resistance, according to the weight of the person wearing the artificial leg. The preferred adjusting device shown in the drawings consists of a follower *g*, arranged in the casing E underneath the cushion, and a screw or bolt *h*, passing through an internally-screw-threaded neck *i* at the lower end of the casing and bearing against the underside of the follower. This adjusting-screw is arranged in a recess *j*, formed in the ankle-piece, and may be turned by a pin or wrench inserted in holes formed in its head or by any other suitable means.

The ankle-piece and stump-socket are provided with the usual rawhide covering *k*, and the space between the upper end of the ankle-

piece and the shoulder f of the stump-socket is closed by the customary band l , carried by the ankle-piece. The covering has an opening k' to admit the above-mentioned wrench.

5 As before stated, the rubber cushions are preferably located at the front and rear sides of the leg, as shown; but, if desired, they may be located at other suitable points. These cushions being subjected to compression-
10 strains and confined against lateral expansion by their inclosing sockets or casings retain their resilience for a long time and when necessary can be renewed at small expense. As the cushions are arranged at the surface or
15 outer side of the leg, they do not obstruct or occupy any portion of its hollow interior, enabling the leg to receive a comparatively long stump and also permitting free ventilation of the same.

20 I claim as my invention—

1. The combination with an ankle-piece and a stump-socket slidable thereon, of rubber cushioning-blocks interposed between said
25 members and arranged at the outer sides thereof, substantially as set forth.

2. The combination of an ankle-piece, a stump-socket slidable thereon, a casing inserted between said members, and a cushion seated in said casing and arranged to resist the
30 downward movement of the stump-socket on the ankle-piece, substantially as set forth.

3. The combination with an ankle-piece and a stump-socket slidable thereon, of rubber cushioning-blocks interposed between said
35 members and arranged at the outer sides thereof, and adjusting means for regulating the resistance of said blocks, substantially as set forth.

4. The combination with an ankle-piece and
40 a stump-socket slidable thereon, of a guide-casing secured to the ankle-piece, a cushion

seated in said casing, and a plunger arranged in the upper portion of the casing and interposed between the cushion and the stump-socket, substantially as set forth.

5. The combination with an ankle-piece and a stump-socket slidable thereon, of a guide-casing secured to the ankle-piece and open at its upper end, a follower arranged in the casing, adjusting means for the same, a cushion arranged in the casing and seated on the
follower, and a plunger arranged in the casing and bearing at its ends against the cushion and the stump-socket, respectively, substantially as set forth.

6. The combination with an ankle-piece provided in its surface at its upper end with a recess, a casing seated in said recess, a stump-socket slidable on the ankle-piece, a cushion arranged in said casing, and a plunger guided in the casing and interposed between the cushion and the stump-socket, substantially as set forth.

7. The combination with an ankle-piece and a stump-socket slidable thereon, of a guide-casing secured to the ankle-piece and provided at its upper end with attaching-ears and at its lower end with a screw-threaded opening, a stump-socket slidable on the ankle-piece, a follower arranged in the lower portion of said casing, an adjusting-screw engaging said threaded opening and bearing against the follower, a rubber cushion seated on the follower, and a plunger guided in said casing and interposed between the cushion and the stump-socket, substantially as set forth.

Witness my hand this 13th day of January, 1905.

CHESTER B. WINN.

Witnesses:

C. F. GEYER,

E. M. GRAHAM.