

(No Model.)

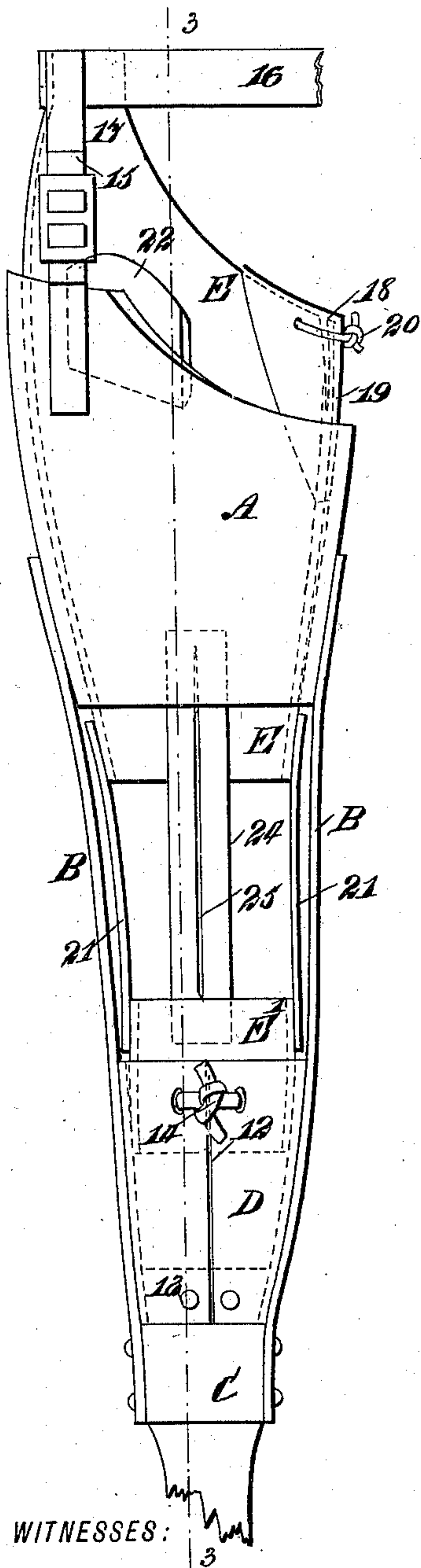
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S. M. KELLUM.
ARTIFICIAL LIMB.

No. 558,816.

Patented Apr. 21, 1896.

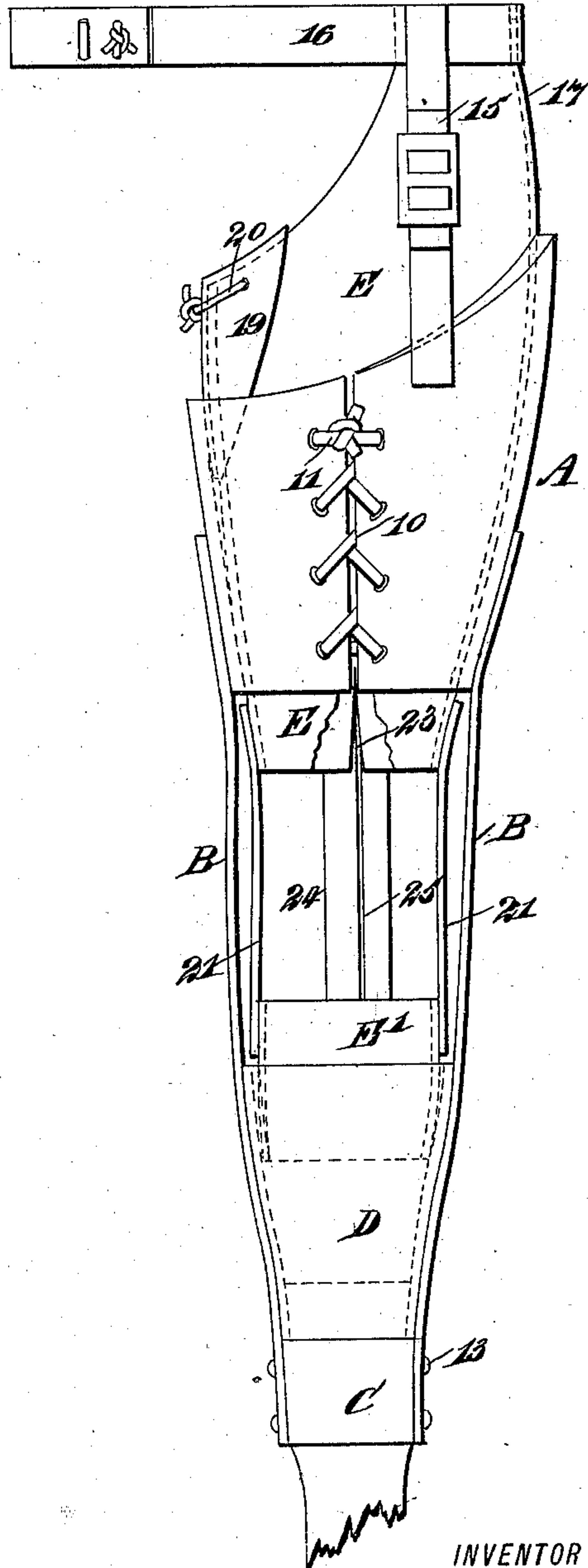
Fig. 1



WITNESSES:

J. B. Walker.
J. B. Walker.

Fig. 2



INVENTOR

S. M. Kellum.

BY

Munn & Co

ATTORNEYS.

(No Model.)

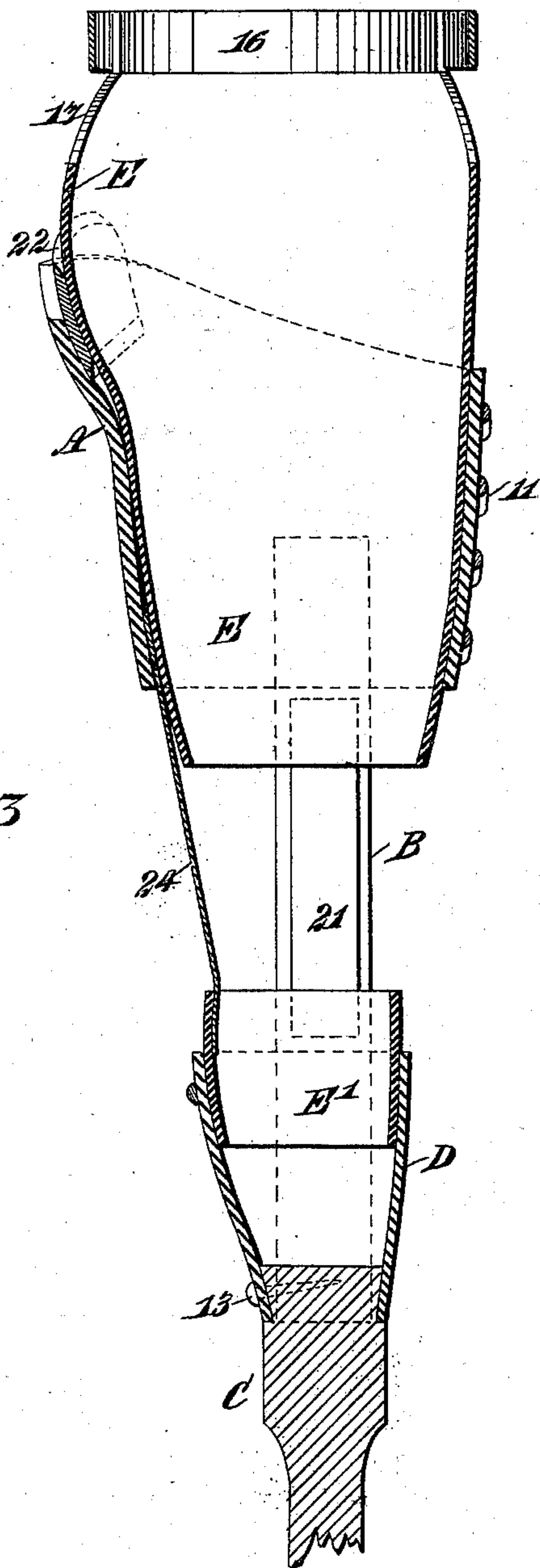
2 Sheets—Sheet 2.

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Fig. 3



WITNESSES:

J. B. Walker.
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UNITED STATES PATENT OFFICE.

SAMUEL M. KELLUM, OF ALTMAN, COLORADO.

ARTIFICIAL LIMB.

SPECIFICATION forming part of Letters Patent No. 558,816, dated April 21, 1896.

Application filed August 27, 1895. Serial No. 560,666. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL MORE KELLUM, of Altman, in the county of El Paso and State of Colorado, have invented a new and useful Improvement in Artificial Limbs, of which the following is a full, clear, and exact description.

My invention relates to an improvement in artificial limbs, and the object of the invention is to so construct an artificial limb that it will be prevented from having frictional contact with the skin, the socket-sections of the limb being supported by a belt adapted to be passed around the waist, and each socket-section, being in duplicate, comprising an inner and an outer one, each inner socket-section being adapted to be fitted closely to the limb, the outer socket-sections which constitute the limb proper having free movement upon the inner sections.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is substantially a rear elevation of the improved artificial limb. Fig. 2 is substantially a front elevation of the said limb, and Fig. 3 is a longitudinal section taken substantially on the line 3 3 of Fig. 1.

In carrying out the invention the limb proper usually comprises an upper socket-section A, adapted to receive the thigh portion of a limb, and this upper socket-section A is higher at the upper outer portion than at the inner upper portion thereof, as illustrated in Figs. 1 and 2. The said upper section of the artificial limb is connected by side straps B with a foot-piece C, of any approved construction, and usually a lower socket-section D is secured to the upper portion of the foot-piece and is of sufficient length to extend substantially from a point below the knee to a point at the ankle, if necessary.

The upper socket-section of the artificial limb is provided with an opening 10 at the front extending through from the top to the bottom, and the edges thus formed are usu-

ally drawn together by a lacing 11, while the lower socket-section D is provided with a like opening 12, but at its lower end it is secured to the foot-piece by means of screws or pins 13 or equivalent fastening devices, the upper portion of the edges formed by the opening 12 being connected by a lacing 14.

Straps 15, preferably of elastic material, are secured to the front and the rear of the upper socket-section A, preferably nearer the outer than the inner side thereof, and these elastic strips are likewise secured to a belt 16, of any desired material, adapted to be passed around and fastened at the waist of the wearer of the limb.

The upper main socket-section A of the artificial limb is provided with an inner auxiliary socket-section E, and the lower main socket-section D contains substantially a duplicate or auxiliary socket-section E'. The upper side portion of the upper auxiliary socket-section is projected upward, and connected in any suitable or approved manner to the belt 16, as shown at 17 in the drawings. The auxiliary upper socket-sections are adapted to fit snugly to the thigh portion of the natural limb, and to that end at the upper inner side portion of the upper auxiliary socket-section a substantially V cut 18 is made, covered at the inside or at the outside, as may be desired, by a preferably correspondingly-shaped strip 19, which extends beyond both sides of the opening 18 a predetermined distance, and a lacing 20 is passed through the aforesaid strip and through the upper auxiliary socket-section at each side of the opening 18, in order that the upper portion of this socket-section may be rendered large or small, as occasion may demand. The strip 19 is virtually a reinforcing-strip and prevents the lacing from tearing out from the auxiliary socket-section, and it furthermore prevents the skin from appearing at the aforesaid opening 18.

The upper and lower inner socket-sections E and E' are connected by tie-strips 21, placed preferably parallel with the connecting-strips B of the outer socket-sections, as is shown in both Figs. 1 and 2.

Ordinarily at the rear lower portion of the upper auxiliary socket-section a V-opening 23 is made, as shown in Fig. 2, the section being

broken away in order to show the same, and an elastic strip 24, provided with a longitudinal slot 25, is secured to the outer face of the upper auxiliary socket-section in such manner that a portion of the slot 25 of said strip will be brought over the V-opening 23 in the socket, the lower end of the elastic strip 24 being attached in any approved manner to the lower inner socket-section E'. The edges of both of these inner or auxiliary socket-sections may be laced or sewed together, or connected by cement or otherwise, except at the points where the openings 18 and 23 occur.

It will be understood that, if occasion shall demand, the artificial leg may consist of the two upper socket-sections with their upper connections only; but when the natural limb is of sufficient length the lower socket-sections are preferably employed.

A guard or shield 22 is secured either at the inner or at the outer side of the upper portion of the upper main socket-section A, preferably at the back portion, as shown in Figs. 1 and 3, and this guard or shield serves to prevent the artificial limb from rubbing under the bone in the rump, and likewise serves to cause whatever friction that occurs to be directed at the outside of or above the aforesaid bone. This guard or shield 22 may be of any desired size and shape and may be moved either to the right or to the left, as occasion may demand.

It is evident from the above description that the entire artificial limb is supported from the waist, and that when the inner socket-sections are closely fitted to the natural limb or stump the outer socket-sections or those of the artificial limb proper cannot possibly irritate the skin, since any friction there may be will be sustained by the inner socket-sections; and it is further obvious that the aforesaid inner socket-sections in no manner interfere with the proper manipulation of the artificial limb.

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

1. In the construction of artificial limbs, an inner and an outer socket-section, the outer section having free movement upon the inner one, the inner one being provided with means for binding it closely to the natural limb or stump, and a waist-belt having independent connections with both the inner and the outer socket-sections, substantially as and for the purpose set forth.

2. In the construction of artificial limbs, an inner and an outer socket-section, a support common to both, the outer section having free movement upon the inner section, means, substantially as described, for binding the inner socket-section to the stump or natural limb, and a guard or shield carried by the outer socket-section, located at the rear and extending above an upper portion of the said socket-section, as and for the purpose specified.

3. In the construction of artificial limbs, the combination, with the socket-sections of the artificial limb proper and the connecting-strips for the same, of auxiliary socket-sections loosely fitted in the main socket-sections, the upper auxiliary socket-sections being provided with openings and closing devices for the same, whereby said auxiliary sections may be fitted snugly to the natural limb or stump, a belt connected with the upper main socket-section and the upper auxiliary socket-section, and a protecting shield or guard carried by the upper back portion of the upper main socket-section, as set forth.

4. In an artificial limb, the combination of upper inner and outer sections arranged to embrace the thigh portion of a natural limb, lower inner and outer sections arranged to embrace the lower portion of a natural limb, and independent connections between the inner and outer sections, substantially as set forth.

SAMUEL M. KELLUM.

Witnesses:

EDGAR H. CARPENTER,
ELMO F. KELLUM.