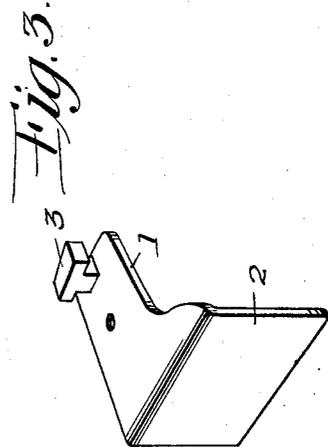
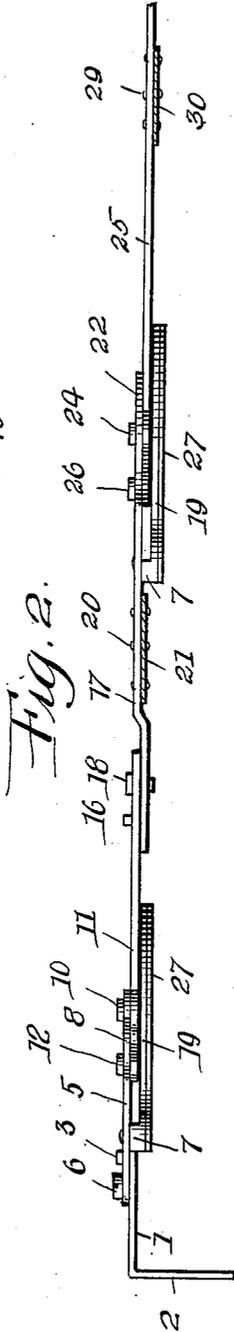
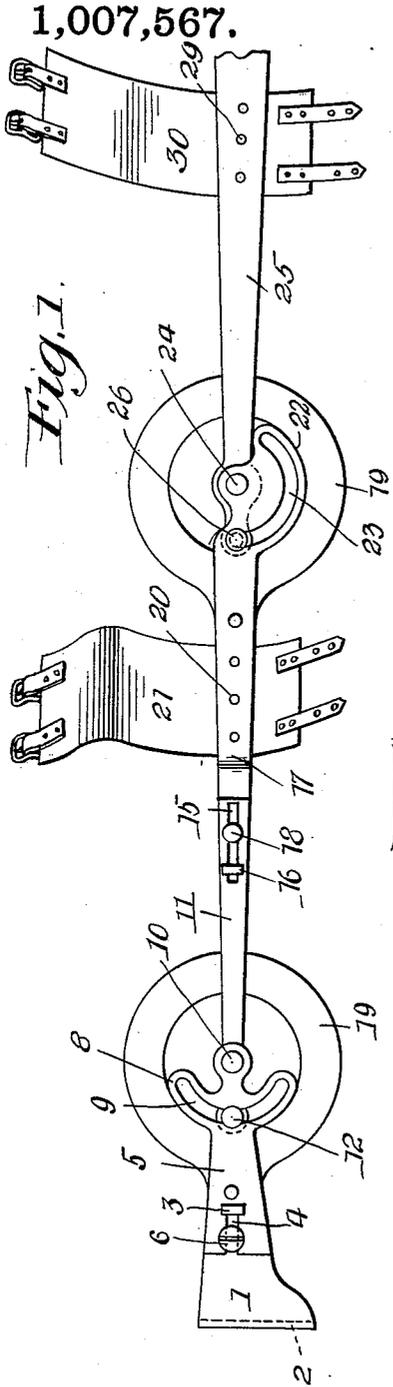


W. A. HOLDER.
 LIMB SUPPORT.
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Patented Oct. 31, 1911.



WITNESSES:

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LIMB-SUPPORT.

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To all whom it may concern:

Be it known that I, WILLIAM A. HOLDER, a citizen of the United States of America, residing at South Brownsville, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Limb-Supports, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a limb support particularly designed for bracing a natural or artificial limb.

The primary object of my invention is to provide an adjustable support that can be easily connected to an injured limb to prevent the same from being sprained by use, or connected to an artificial limb to brace the same.

A further object of this invention is to provide a limb support of the above type with novel adjustments and means whereby a natural or artificial limb cannot be injured by the support.

With the above and other objects in view the invention resides in a novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing wherein like numerals designate corresponding parts throughout the several views, in which:—

Figure 1 is a side elevation of the support. Fig. 2 is a plan of the same, and Fig. 3 is a perspective view of a portion of the support.

A support in accordance with this invention consists of a foot section, an ankle section, a tibia section, a knee section and a femur section.

The foot section is designated 1 and has a right angular extension 2 adapted to engage under the heel. The upper end of this section has a T-shaped head 3 adapted to ride in a slot 4 provided therefor in the ankle section 5. The foot section 1 is provided with a screw 6 extending downwardly through the slot 4, whereby the foot section 1 can be locked in an adjusted position relatively to the ankle section 5. The ankle section 5 has an enlargement 8 provided with a segment-shaped slot 9. Pivotally connected by a pin 10, rivet or other means to the enlargement 8 is the lower end of the tibia section 11, this section having a headed pin 12 riding in the segment-shaped slot 9. The upper end of the tibia section is provided with a longitu-

dinal slot 15 and extending through this slot is a T-shaped head 16 of the knee section 17. The knee section 17 has a screw 18 whereby it can be fixed relatively to the tibia section. The elements 16 and 18 are similar to the elements 3 and 6.

Riveted or otherwise connected, as at 20, to the knee section 17, is a strap 21 by which the knee section is clamped to the calf of the limb. The upper end of the knee section 17 is enlarged, as at 22 and provided with a segment-shaped slot 23. Pivotally connected to the enlarged end of said section by a pivot 24 or other means is the lower end of the femur section. This section has a headed pin 26 adapted to ride in the slot 23. Riveted or otherwise connected, as at 29, to the femur section is a strap 30, similar to the strap 21 and adapted to connect the femur section 25 to the upper part of the limb.

Soldered, riveted or otherwise connected to the sections 1 and 17 are the enlarged portions 7 of disks 19, said disks extending over the enlarged ends of the sections 5 and 17. Suitably secured to the outer sides of said disk are circular pieces of felt, leather or other soft material 27 adapted to prevent the limb from being injured when one of the sections is moved relatively to the other section.

The sections 1, 5, 11, 17 and 25 are made of light and durable metal and it is preferable to gradually taper each section from the upper end thereof to the lower end. The adjustments of these sections permit of the support being fitted to limbs of various lengths and the pivotal connection between some of the sections allows free movement of the ankle and end joints. To maintain the sections 11 and 17 in longitudinal alignment, it is preferable to off-set the lower end of the section 17, whereby the upper end of the section 11 can slide upon said section.

From the foregoing it will be observed that I have devised a simple, inexpensive and durable support for thoroughly bracing a limb, and while in the drawing there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements thereof are susceptible to such variations as fall within the scope of the appended claims.

What I claim is:—

1. A limb support comprising a foot section having an angularly disposed extension for engagement under a heel, an ankle sec-

tion having its upper end enlarged and provided with a segment-shaped slot, means for adjustably connecting the ankle section to the foot section, a tibia section, means for pivotally and adjustably connecting said tibia section to the slotted enlargement of the ankle section, a knee section adjustably connected to the tibia section, a femur section, said knee section having its upper end formed with a lateral enlargement having a segment-shaped slot, means for pivotally and adjustably connecting said femur section to the knee section, straps carried by the knee and femur sections, and padded disks carried by the ankle and femur sections.

2. A limb support comprising a foot, ankle, tibia, knee and femur sections, said ankle section having its upper end formed with an enlargement provided with a segment-shaped slot, said enlargement projecting from each side of the ankle section, said knee section having its upper end formed

with a lateral enlargement disposed wholly to one side of said section and formed with a segment-shaped slot, means for adjustably connecting the ankle section to the foot section, means for adjustably connecting the knee section to the tibia section, means for pivotally connecting the tibia section to the upper end of the ankle section, a headed pin for connecting the lower end of the tibia section to said slotted enlargement, means for pivotally connecting the femur section to the knee section, a pin for coupling the lower end of the femur section to the enlargement of the knee section, and coupling straps carried by the knee and femur sections.

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

WILLIAM A. HOLDER.

Witnesses:

ALBERT BOOTH,
W. MILLAR GALLAUTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."