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1,546,551

F. E. PETRI

ANKLE BRACE

Filed Feb. 4, 1924

Fig. 1.

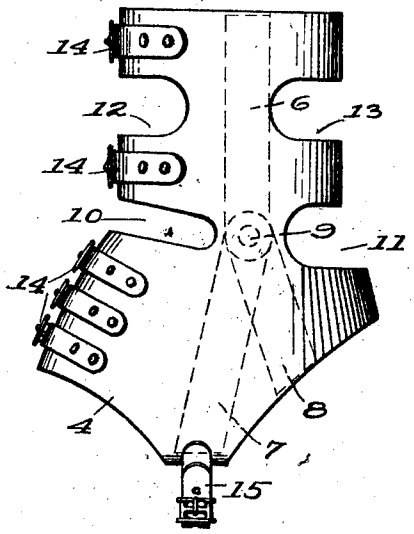
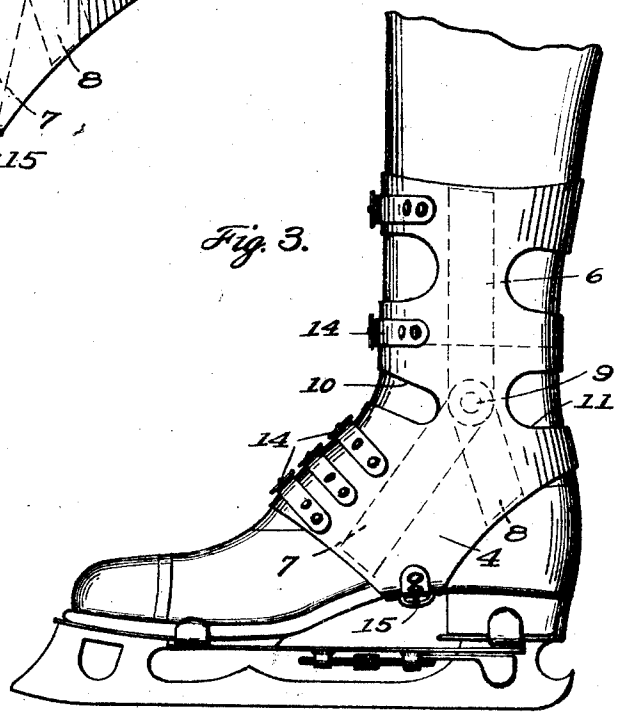


Fig. 2.



Fig. 3.



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UNITED STATES PATENT OFFICE.

FRANK E. PETRI, OF PEORIA, ILLINOIS.

ANKLE BRACE.

Application filed February 4, 1924. Serial No. 690,437.

To all whom it may concern:

Be it known that I, FRANK E. PETRI, a citizen of the United States, and a resident of Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Ankle Braces, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification.

My invention relates more particularly to ankle braces used by skaters to support the ankle joint against lateral movement while permitting free normal movement of the joint.

One object of my invention is the provision of a brace which is light, easily attached, fully adjustable, and which extends far enough above the top of the ordinary shoe to afford a substantial bracing effect.

Another object of my invention is the provision of spring metal braces, imbedded in the structure of the device, and pivotally connected at or near the ankle joint.

Other objects of my invention will more fully appear hereinafter.

The novelty of my invention will be more fully set forth and specifically pointed out in the claims.

In the accompanying drawing:

Fig. 1 is a side view of a brace embodying my invention.

Fig. 2 is a detailed sectional plan view of a portion of one of the sides of the brace.

Fig. 3 is a side view of the brace showing it in position for use.

The same numerals of reference are used to indicate identical parts in all the figures.

In its preferred form of construction my brace consists essentially of a casing formed of an outer portion 4, and an inner portion 5, these parts being preferably made of leather, or canvas, or other suitable material, and at each side of the casing a brace between the outer and inner portions thereof, a spring metal stiffening device consisting of an upper portion 6 and lower portions 7 and 8, these portions being pivoted together as at 9, the pivot being located approximately in line with the ankle joint when the device is in use.

To insure maximum flexibility in line with the ankle joint movement the casing is cut away as at 10 and 11, and it may also be lightened by being cut away as at 12 and 13.

The forward meeting edges of the casing are provided with straps and buckles 14 so that the device may be properly adjusted for use, and a similar strap and buckle connection 15 extends across from one side of the casing to the other at its lower extremity, this connection serving as a means for vertically adjusting the position of the pivotal point 9 so that it may be properly placed over the ankle joint, the strap 15 occupying a position under the shoe of the wearer and forward of the heel as clearly shown in Fig. 3.

I prefer to arrange the lower members 7 and 8 of the spring metal brace as shown in Fig. 1, though if desired they may be spread apart further and placed in the position of Fig. 3 though it is not my intention to permit these parts to be moved after the brace has been made, as I propose to join the outer and inner portions of the casing as by stitching along the sides of the brace members 6, 7 and 8 in the process of making the device.

By inserting the brace members 6, 7 and 8 the device has no tendency to work down on the wearer and fold at the ankle joint, and by making the brace members of spring metal such as that used in very heavy clock springs, sufficient rigidity is provided to thoroughly brace the ankle of the wearer, while at the same time sufficient lateral flexibility is provided so that all of the movements required in skating may be performed, while at the same time the normal movement of the ankle, namely such a movement as would be produced in raising or lowering the toes, is not interferred with to any appreciable extent.

By constructing the device as shown and described, it may be worn without discomfort, and at the same time is not clumsy or so constructed as to be unsightly.

It will also be noted that the construction is such that the brace may be adjusted before leaving the home so that when the skater reaches the ice, he attaches his skates in the ordinary manner, and afterwards removes them and proceeds homeward, the construction being such that he may walk as freely with the device in place as he would without it, thereby saving the necessity of adjusting it outdoors in the cold.

Having thus fully described my invention, I claim:

1. In an ankle brace the combination of a casing cut to a point near the ankle joint

to afford flexibility at the ankle joint, means for adjustably securing the casing in place, and pivoted stiffening members attached to the casing with the pivot approximately in line with the ankle joint whereby freedom of the ankle movement is permitted to raise or lower the toes while lateral movement of the ankle joint is restricted.

2. In an ankle brace the combination of a casing formed to engage above and below the ankle joint and partly cut away to afford fore and aft flexibility at the ankle joint, straps for adjustably securing the casing in place on the wearer, and pivoted spring metal stiffening members carried by the casing with their pivotal connections approximately in line with the ankle joint.

3. In an ankle brace the combination of inner and outer portions forming a casing to embrace the wearer above and below the ankle joint and cut to permit freedom of fore and aft movement of the ankle joint, straps for adjustably attaching the casing to the wearer, pivoted stiffening members interposed between the inner and outer portions and arranged with their pivotal connection adjacent the ankle joint, and a strap for adjusting the elevation of the pivotal connection.

FRANK E. PETRI.