

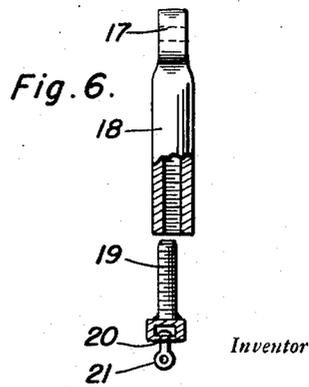
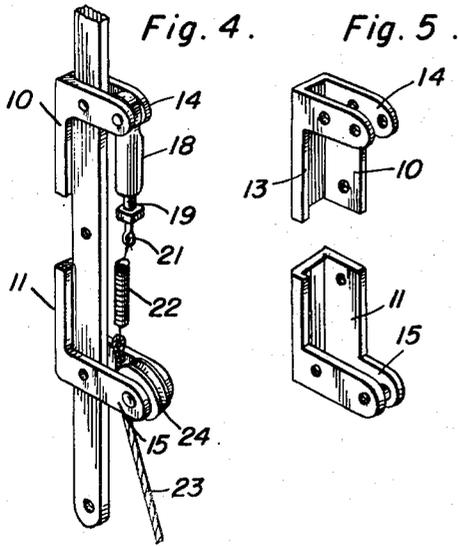
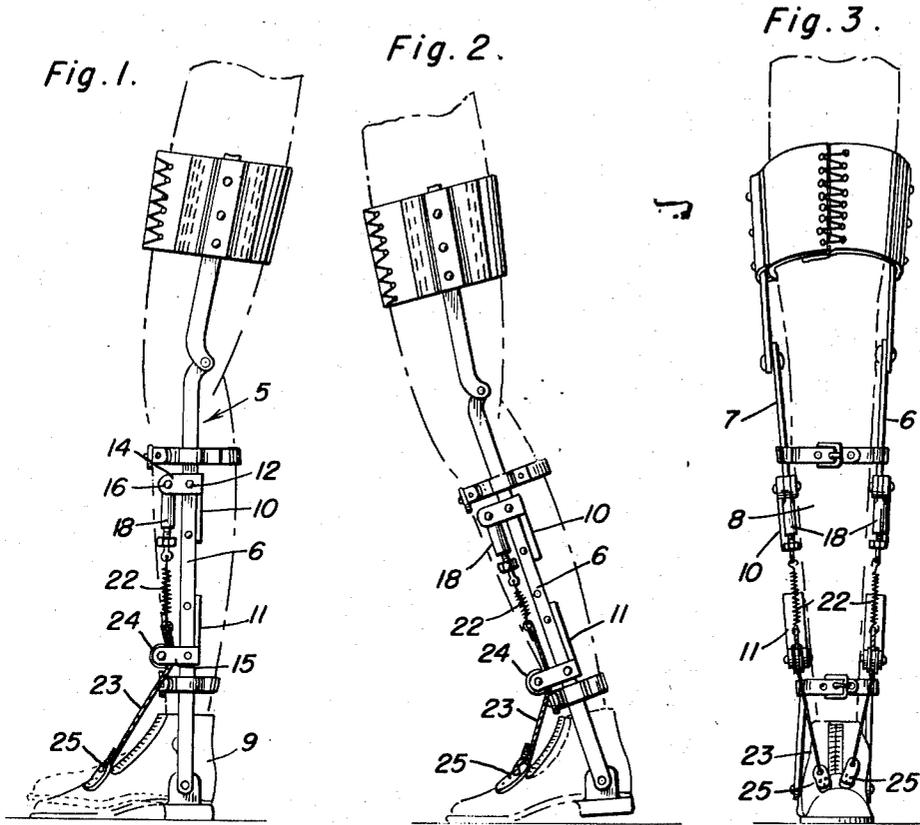
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TOE LIFT ATTACHMENT FOR LEG BRACES

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TOE LIFT ATTACHMENT FOR LEG BRACES

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2 Claims. (Cl. 128—80)

1

The present invention relates to new and useful improvements in leg braces and more particularly to means to aid in the lifting of the toe of a person to eliminate toe drag and create a more natural ankle movement where the use of ankle muscles for this purpose has been lost or impaired.

An important object of the invention is to provide a toe lift attachment which may be easily and quickly attached and positioned to a leg brace without necessitating any changes or alterations in the construction of the latter.

A still further object is to provide an attachment of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view showing the action of the toe lift attachment when the leg is in a forward walking position.

Figure 2 is a similar view showing the action of the attachment for aiding in the lifting of the toe when the foot is moved forwardly.

Figure 3 is a front elevational view.

Figure 4 is an enlarged perspective view showing the upper and lower attaching brackets for the toe lift attachment.

Figure 5 is a similar view of the attaching brackets removed from the leg brace, and

Figure 6 is a side elevational view, with parts shown in section, of the adjustable swivel for the toe lift attachment.

Referring now to the drawing in detail wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates a conventional type of leg brace which includes a pair of lower vertical brace bars 6 and 7 positioned at opposite sides of a leg 8, the lower ends of the bars being pivotally attached to the sides of a shoe 9 adjacent the heel thereof.

The present invention comprises upper and lower brackets 10 and 11 of substantially channel shape secured to each of the bars 6 and 7 by suitable fasteners 12, the open edge of the channels of the brackets facing forwardly and the outermost flange of each bracket being partially

2

removed as shown at 13 to reduce weight of the brackets.

Spaced parallel apertured ears 14 project forwardly from the upper end of upper bracket 10 and similar apertured ears 15 project forwardly from the lower edge of bracket 11. A pin 16 is positioned transversely between the upper ears 14 and on which an eye 17 at the upper end of an internally threaded tube 18 is pivotally mounted. A screw 19 is adjustable vertically in the lower end of tube 18 and a swivel 20 is suitably secured to the lower end of the screw and provided with an eye 21 to which the upper end of a coil spring 22 is attached.

A flexible cable or other suitable flexible member is attached at one end to the lower end of spring 22 and extends downwardly behind a pulley 24 journaled in the lower apertured ears 15 and with the lower end of cable 23 attached to a leather tab 25 suitably secured to the shoe 9 at a desired point adjacent the toe of the shoe.

In the operation of the device, the tension of spring 22 is adjusted by screw 19 to aid in the lifting of the toe of the foot when the latter is in its rearmost position while walking and thus to reduce or eliminate drag on the toe when the foot is brought forwardly.

A toe lifting attachment constructed in accordance with the present invention is attached to each of the bars 6 and 7 at the opposite sides of the leg of a person in order to prevent pulling of the toe toward one side as well as to increase the toe lifting action.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. In a leg brace and lift device for the toe portion of a shoe, a vertical leg brace bar, upper and lower brackets secured to the bar, a pulley journaled on the lower bracket, an elastic member attached at one end to the toe portion of the shoe and extending upwardly behind the pulley, and an adjustable tensioning means connecting

3

the upper end of the elastic member to the upper bracket.

2. In a leg brace and lift device for the toe portion of a shoe, a vertical leg brace bar, an upper bracket on said bar extending forwardly therefrom, an elastic member attached at one end to the toe portion of the shoe and extending upwardly therefrom with its other end attached to said bracket, and guide means for said member mounted on said bar between said bracket and shoe and slidably engaged by said member, said guide means holding said member parallel with said bar above the shoe with a portion below the

guide means inclining downwardly and forwardly to said toe portion.

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4

REFERENCES CITED

The following references are of record in the file of this patent:

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