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DISABLED LIMB STRAP

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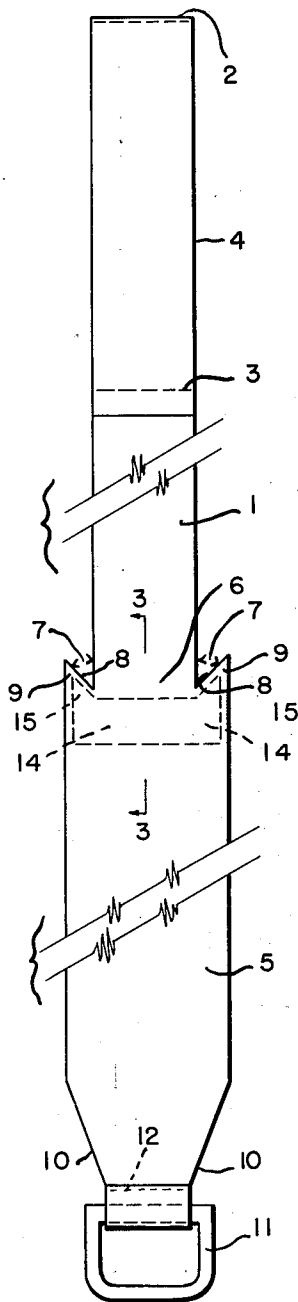


FIG. 2

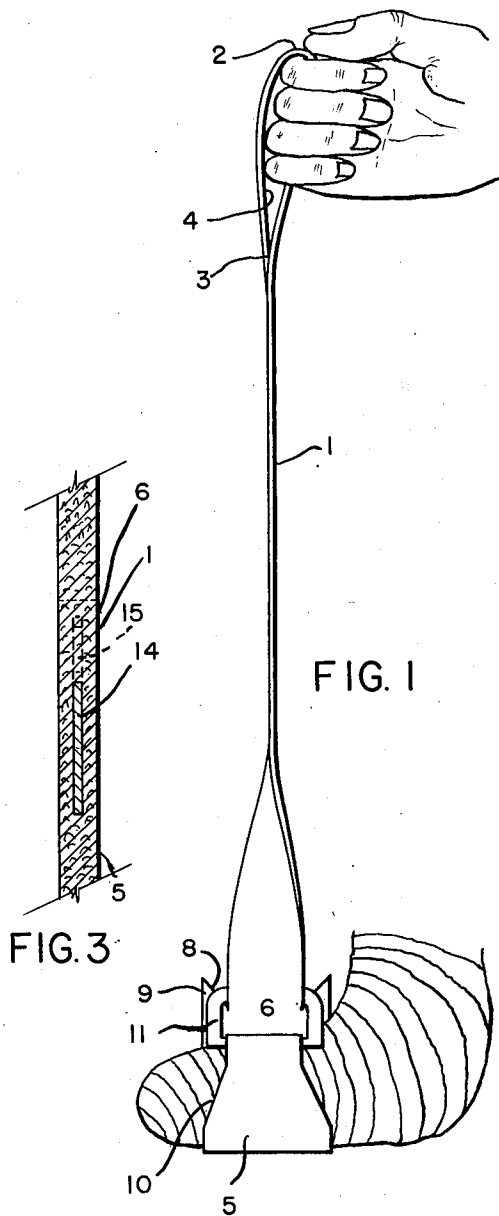


FIG. 1

FIG. 3

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DISABLED LIMB STRAP

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1 Claim. (Cl. 128—94)

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This invention relates to a device for use by persons with a leg disability, injury, or soreness to permit the limbs to be moved in a least painful manner.

It is well known, by persons who have suffered with injured or sore legs, that it is very painful to move the limb with its own muscular action. At times the pain is almost unbearable; however, the leg gets tired of being held in one position for any extended period and it is almost imperative that the position of the leg be changed at intervals to insure proper blood circulation as well as to rest the limb. At times it is even necessary to call a nurse or one of the household to move a disabled limb if the pain is extreme.

It is, therefore, one of my principal objects to provide a device with which a patient may move, or change the position of, his own leg at will with least pain or discomfort, thereby to eliminate the need for assistance from a nurse or other person.

Another object is to provide such a device which is simple but sturdy in construction, whereby a patient may put the device into operating position or remove same if desired.

Another object is to provide such a device which is inexpensive to manufacture and sell.

Another more specific object is to provide such a device in the form of a strap having a hand loop at one end, and means for forming a foot loop at the opposite end, the latter loop being of such construction as to most efficiently embrace and support an injured limb.

These and other objects and advantages will become more apparent as the description of the invention proceeds.

In the accompanying drawing forming a part of this application:

Figure 1 is a side elevational view of my limb-moving strap as it might appear in operation.

Figure 2 is a broken plan view of the strap in open position.

Figure 3 is a sectional view on the line 3—3, Figure 2.

In the drawing, the reference numeral 1 indicates the strap which is preferably of leather or other suitable material, and has one end thereof folded back upon itself, as at 2, and the end secured as at 3 to form a hand-hold or loop 4 to facilitate handling the device (see Figure 1).

The hand-hold end of the strap 1 is preferably of uniform width throughout a large portion of its length from the hand-hold, and the opposite end 5 of the strap is of wider width, as shown. The point at which the wide and narrow width portions of the strap meet is the base of the hold-

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ing area 6. From each side of the base of the holding area, the portion 5 of the strap extends outwardly at an acute angle, as at 7, forming substantially V-shaped notches 8—8 disposed between each of the projections 9—9 and the narrow portion of the strap 1, the inner ends of the notches forming the base of the holding area.

At the extreme end of the wide portion 5 of the strap, the latter tapers inwardly, as at 10, to substantially the same width as the narrow portion of the strap, as shown, and a D-ring 11 is mounted on the outer end of the portion 5 as by inserting the strap through the ring, forming a loop around one side of the ring and then fixing the end of the body of the strap, as at 12.

In operation, the loop 4 of the strap 1 is inserted through the D-ring to form a loop which one may engage around the foot of the injured limb (see Figure 1), preferably adjacent the arch of the foot. The loop 4 may then be pulled through the D-ring until the latter enters the V-notches 8 in the holding area 6 and stops against the lugs 9. This forms a stop for the ring and forms a loop of fixed size so that it cannot tighten around one's foot and be uncomfortable, nor will it be difficult to remove one's foot from the loop when desired. The wide portion 5 of the strap also provides a wide bearing surface or cradle in which the foot may be engaged and carried, whereby there is least possibility of causing pain to a foot injury, and whereby there is less possibility of the strap's slipping out of place.

It will readily be seen that when using my device, one need exert no muscular effort of his foot or leg to move the disabled limb when desired. One's hand engaged in the loop 4 of the strap may raise the limb and/or move it to either side as desired without undue pain or discomfort, it being remembered that the exertion of injured or sore muscles is very painful; but when the limb is moved without its muscles being exerted, there will be considerably less, if any, pain in the movement.

In addition, the instant invention is beneficial to persons having disabled limbs in that it relieves their minds from the fear of pain when the limb must be moved and relieves the tenseness or muscular tension of the disabled limb when a movement thereof is contemplated, thereby reducing pain materially.

As will be apparent from the above, the holding area 6 withstands the burden of the limb carriage and weight, and I have provided a reinforcement for the holding area to prevent accidental slippage of the foot loop when in use and to increase the life of the device. The rein-

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forcement comprises a metallic member 14 which is embedded in the portion 5 of the strap adjacent the inner end thereof, the member 5 extending transversely of the strap and having angular lugs 15 extending therefrom into the lugs 9, as shown, whereby the D-ring is cradled between the lugs 9—9 and 15—15 in the holding area 6, and is thereby prevented from slipping onto the portion 5 of the strap, as the lugs 15 support the lugs 9 and prevent their collapsing under excessive strains which might be applied thereto, as when lifting one's leg.

Thus, it may be seen that I have provided a means whereby a person having a disabled limb may be relieved from unnecessary pain and discomfort and whereby he may feel more self-reliant and capable in spite of his disability, thereby making for better and more rapid recovery.

It is to be understood that I have herein shown and described one specific embodiment of my invention, and that my appended claim is not necessarily limited specifically thereto, but should be construed as broadly as permissible in view of the prior art.

Having thus described my invention, what I claim is:

A device for use in moving one's disabled leg

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comprising a strap, said strap having a wider end and a narrow end, a hand loop formed in said narrow end, a D-ring of the same width as said narrow end secured to the said wider end, the point at which said narrow and wider ends meet forming the holding area of said strap, and said wider end extending beyond said narrow end to form lugs which join with said narrow end in an acute angle, and a rigid member carried transversely of said strap and including said lugs so that the latter are reinforced and prevented from collapsing under stress whereby said narrow end may be inserted through said D-ring and the latter will be engaged against said lugs to form a loop of fixed size in which the disabled limb may be cradled and supported for movement by one holding said narrow end of said strap.

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