Feb. 13, 1945. T. A. DOLAN 2,369,544

FOOT MASSAGE DEVICE

Filed Feb. 7, 1942

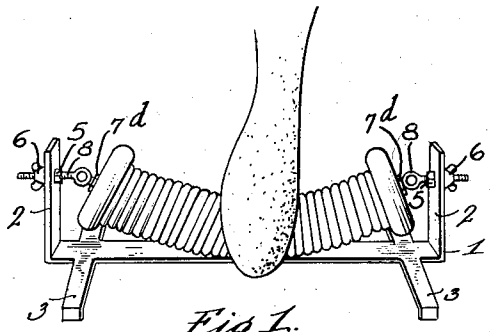


Fig 1.

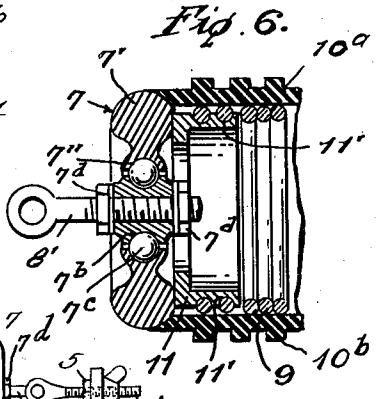


Fig. 6.

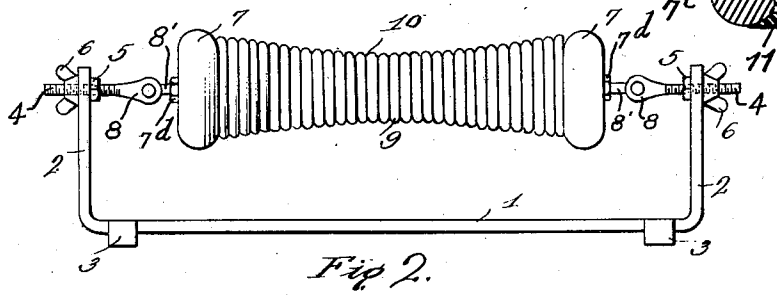


Fig 2.

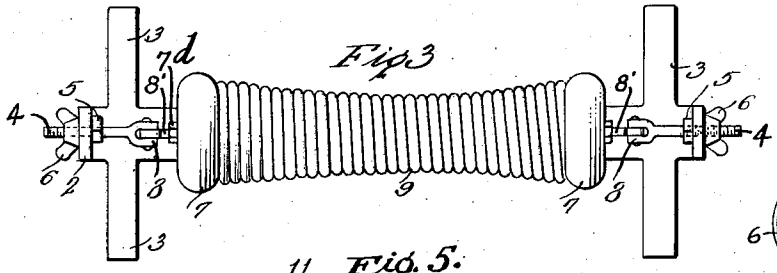


Fig 3

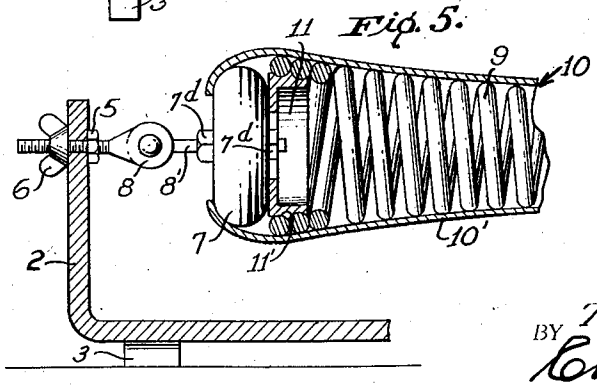


Fig. 5.

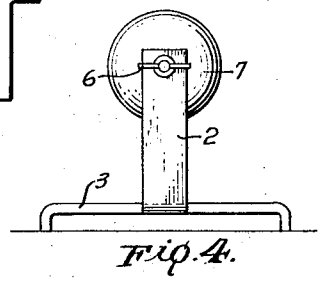


Fig. 4.

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# UNITED STATES PATENT OFFICE

2,369,544

## FOOT MASSAGE DEVICE

Thomas A. Dolan, Chicago, Ill.

Application February 7, 1942, Serial No. 429,942

3 Claims. (Cl. 272—57)

This invention relates to a foot massager, and it consists in the constructions, arrangements and combinations herein described and claimed.

It is the cardinal object of the invention to provide a foot massage device embodying a novel construction of massaging roller of such elasticity and flexibility as to readily conform to the arch of any person employing the device, and in which the massaging action imparted is such as to greatly improve the circulation of blood and to impart a corrective massage to the muscles of the arch of the foot and tone the entire nervous system.

More specifically, it is an important object of the invention to provide a novel construction of elastic massage roller which is rotatably and swivelly mounted between suitable support members, so that all structural features of the foot may be operated upon simultaneously rather than upon a single portion of the foot.

It is a further object of the invention to provide a massage device in which the resilience and cushioning effect may be readily varied to accommodate different foot massage treatments.

It is a still further object of the invention to provide a foot massage device in which roller bearing supports are inherent, permitting free and rapid rotation thereof with but slight effort on the part of the user.

Additional objects, advantages and features of invention will be apparent from the following description considered in conjunction with the accompanying drawing, wherein,

Figure 1 is a perspective view illustrating the massage device in use.

Figure 2 is a front elevation of the device, slightly enlarged.

Figure 3 is a top plan view thereof.

Figure 4 is an end view thereof.

Figure 5 is a fragmentary sectional view illustrating one end of the roller mounting.

Figure 6 is a detail sectional view illustrating the roller mounting.

Referring to the drawing and particularly Figures 1 to 5, inclusive, there is shown a base member 1 having integral spaced upright standards 2, and inwardly of each standard integral with the base, outwardly extended arms 3 are provided, the arms being of such length as to afford stability to the base and prevent tilting when in use.

Each of the standards 2 are apertured adjacent their upper ends so as to receive a shank 4. The shanks 4 are identical in construction and mounting, and a description of one will be sufficient for an understanding thereof. As shown, the shanks are threaded to receive a nut 5 positioned next adjacent one side of the standard and a wing nut 6 is engaged upon the outer end of the shank in bearing engagement with the standard in opposed relation to the nut 5.

The shank is provided with a clevis 8 for pivotal mounting of a bearing axle 8', the latter revolubly supporting a roller bearing 7. The hinged mounting between the shank 4 and axle 8' permits up and down movement of the massage roller 10 when in use, as shown in Figure 1.

As shown in Figure 6, the roller bearing 7 consists of a peripheral metal rim 7' having a hub portion formed with a raceway 7''. The axle 8' has a bearing race 7—*b* positioned within the raceway 7'' and any suitable bearings 7—*c* are housed within the raceways. The axle 8' is secured within the hub by means of washers and nuts 7—*d*.

On the inner side of the rim 7' opposite the axle 8' an annular drum 11 is secured thereto, by spot welding or otherwise. The drum 11 is of a diameter slightly less than that of the rim and upon its periphery there is formed one or more grooves 11' for reception of the end coils of a helical spring 9, for uniting the spring to the roller bearing. An elastic covering 10—*a* is provided encasing the spring throughout its length and extending partly over the rim 7' at respective ends, as shown. The covering is provided with spaced circumscribing ribs 10—*b*.

As shown in Figures 1, 2, 3 and 5, the spring is shown as having a tapering formation in the direction of the medial portion of the spring, thereby presenting an arcuate external surface which will readily accommodate the foot of a user, the coils of greater diameter contacting and massaging the side portions of a foot.

It will be apparent that the tension of the spring may be varied by adjustment of the shank 4. By loosening the nuts 5, the wing nuts 6 may be advanced upon the threaded portion of the shanks so as to separate the coils of the spring, producing in effect a series of spaced massaging disks. The reverse adjustment of the shanks 4 will allow the coils to assume a close abutting relation and will present a smoother exterior surface.

If desired, the coil spring 10 may be provided with a covering 10', as shown in Figure 5, presenting a continuous smooth surface, although the covering may include a series of spaced ribs, extending circumferentially of the spring as indicated at 10—*a* in Figure 6.

While I have shown and described a preferred form of the device, this is by way of illustration only, and I consider as my own all such modifications as fairly fall within the scope of the appended claims.

I claim:

1. A foot massage device comprising a base having a pair of upright, spaced support members, a clevis mounted in each support member adjacent its upper end; a resilient elastic roller, said roller having a ball bearing roller fixed to each end and having an axle for pivotal connection with respective clevises, and said clevises having means cooperable with respective support members for adjusting the tension of the elastic roller.

2. A foot massage device comprising a base having a pair of upright spaced support members, and lateral extended foot members, a clevis mounted in each support member adjacent its upper end; a resilient, elastic roller consisting of a helical spring having coils of a progressively reduced diameter in the direction of the medial portion of the roller, a ball bearing roller fixed to each end of the elastic roller and having an axle for pivotal connection with each clevis and said clevises having means cooperable with respective support members for adjusting the tension of the elastic roller.

3. A foot massage device comprising a base having a pair of spaced upright support members, a clevis mounted on each support member; an elastic roller having a ball bearing assembly fixed to each end of the elastic roller, the overall length of the roller and bearing assemblies being substantially less than the spacing between said support members, each bearing assembly having an axle for pivotal connection with respective clevises of the support members, and each of the clevises having means cooperable with respective support members for adjusting and maintaining a longitudinal tension of the elastic roller.

THOMAS A. DOLAN.