SPINAL MASSAGE AND EXERCISING DEVICE

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3 Claims. (CL 128—57)

This invention relates to improvements in mechanical therapeutic devices and has reference more particularly to a mechanical spinal massage and reducing device.

It is well understood that many ills are due to displaced vertebrae and the method of treating disease by manipulating the spinal column is known as chiropractic and is used extensively by chiropractors.

It is the object of this invention to produce a device by means of which a person can by himself manipulate his spinal column to make it more flexible, strengthen the muscles, and prevent rigidity due to calcification.

Another object is to produce a device for the purpose specified, that shall be of a pleasing design and of a substantial construction with the parts so related that its form can be changed to adapt it for special uses, as for example for massaging the abdominal muscles.

A further object is to produce a device having a plurality of rollers or wheels of such a construction that they will be resilient to an extent that they will not cause excessive discomfort and at the same time have sufficient rigidity to effect the result desired.

The above and other objects that may become apparent as the description proceeds are attained by means of a construction and an arrangement of parts that will be described in detail for which purpose reference will be had to the accompanying drawing in which the device has been illustrated, and in which:

Figure 1 is a top plan view of the device;

Figure 2 is a side elevation looking upwardly in Figure 1;

Figure 3 is a section taken on line 2—3, Figure 1, only one of the rollers being shown because they are of identical construction;

Figure 4 is a diagram showing the device supported on an upwardly convex surface and the position of a human body relative thereto; and

Figure 5 shows the device arranged for abdominal massage.

The device consists of an assemblage of several pairs of resilient rollers, each pair being mounted on an axle and the several axles hingedly interconnected by links.

In the drawing the rollers have been designated by letter R, the axles by A and the links by L.

Mounted on each axle are two rollers each of which has a hub formed from a tubular portion 16 provided at its ends with flanges 17 whose peripheries are grooved as shown. In the drawing the hub has been shown as formed from three parts, the flanges being formed by disks 11 attached to the central portion 10 by screws 12.

Other equivalent constructions may, of course, be substituted. The peripheral surfaces of the flanges are provided with grooves 13 in which are positioned tubular tires or rings 14 of resilient material such as rubber. Over the assembly just described a short section of rubber tubing 15 is stretched. The rubber tube is normally of smaller diameter than rings 14 and after it is in position it will assume a shape that is substantially like that shown in Figure 3. The ends 16 of the tube are bent inwardly and attached to the outer surfaces of the disks by cement and/or tacks and the ends are then covered by disks 17 which are secured in place by tacks or screws (not shown) and the fastening means are covered by smaller disks 18 which are secured by tacks or screws.

The ends of the axles are threaded for the reception of acorn nuts. The two rollers on each axle are spaced by round wooden wheels 20 and washers 21. The several axles are joined by links L, the whole forming an articulated assembly that can flex about axes A so that it can be supported on a flat surface or on an upwardly convex surface similar to that shown in Figure 4. The convexity may be, and preferably is, greater than that shown in Figure 4.

It will be observed from Figures 1 and 3 that there are three sets of links, one set being positioned between the spacer wheels 20 in the manner shown.

The axles at the end assemblies are longer than the other axles and are provided with handles 22.

The line figures in Figures 4 and 5 are intended to illustrate in a general way the manner in which the device is employed. The patient may lie face up or face down, and by pulling himself back and forth gets a massage. By having the supporting surface of shorter radius of curvature the spine gets a greater flexure than with the curvature shown.

The assembly can be made shorter or longer than that shown, and may have three rollers on each shaft if desired.

The tubular tires or rings may be made from rubber or plastic and may be replaced by rings made from sponge rubber of suitable hardness if desired.

The device described above and shown on the drawing, due to its articulated construction, can be folded into a shape like that shown in Figure 5 for transportation, and may also be employed in that manner for abdominal massage. For abdominal massage it is recommended that the de-
vice be supported as in Figure 4, but on a surface of greater convexity. Having described the invention, what I claim as new is:

1. A roller for use in a device of the class described, comprising in combination a rigid hub having an axial opening for the reception of an axle, the hub having peripheral grooves adjacent its ends, a resilient tubular ring in each groove, an elastic tube enveloping the hub and the tubular rings, and means for securing the ends of said elastic tube to the ends of the hub.

2. A roller for use in a device of the class described, comprising in combination an elongated rotatable hub having an axial opening for the reception of an axle, the hub having peripheral grooves adjacent its ends, a resilient ring in each groove, and a tube of flexible material enveloping the hub and the rings.

3. A roller for use in a device of the class described comprising; a rotatable hub having an axial opening for the reception of an axle, an axle in the opening on which the roller turns, a tubular resilient ring encircling each end of the hub, and a tube of flexible material enveloping the hub and rings, the central portion of the tube being of lesser diameter than the diameter of the rings.

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