

[54] **PHYSIOTHERAPEUTIC DEVICES AND METHODS**

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[76] Inventor: **Desmond K. Shiu**, Rystwood, Forest Row, England

Primary Examiner—Lawrence W. Trapp
Attorney—Sughrue, Rothwell, Mion, Zinn & Macpeak

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[52] **U.S. Cl.** 128/57, 128/68, 128/69

[51] **Int. Cl.** A61h 15/00

[58] **Field of Search** 128/57, 24.3, 69, 128/25 B

[56] **References Cited**

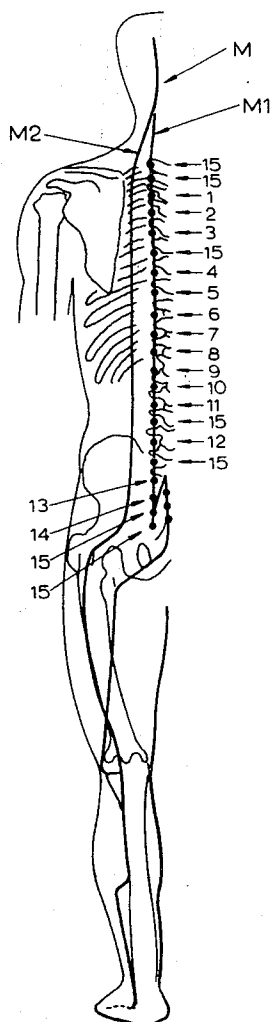
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[57] **ABSTRACT**

A roller of circular cross-section having a length approximately equal to the width of the back of a normal adult man or woman and having two rounded, circumferential projections so spaced as to straddle the spine when the roller is placed on the floor, and the user reclines, back down, on the roller; and a method of stimulating the first lines of bladder meridian in which the roller is caused to course along on the said lines while the user rolls on the roller with his body weight applied thereto.

9 Claims, 9 Drawing Figures



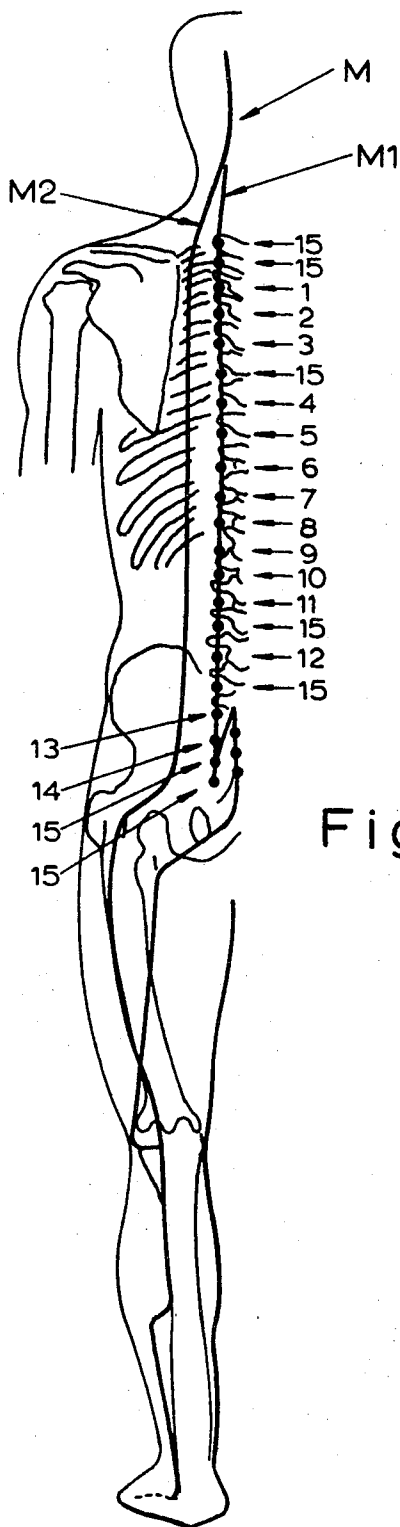


Fig. 1.

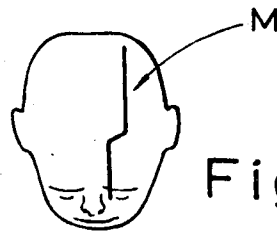


Fig. 1A.

INVENTOR

DESMOND K. SHIU

BY Sughrue, Rothwell, Minton,
Zinn & Macpeak
ATTORNEYS

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Fig. 3.

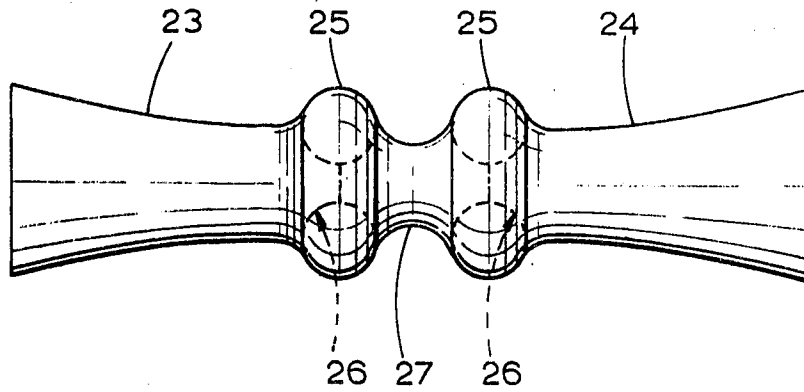


Fig. 2.

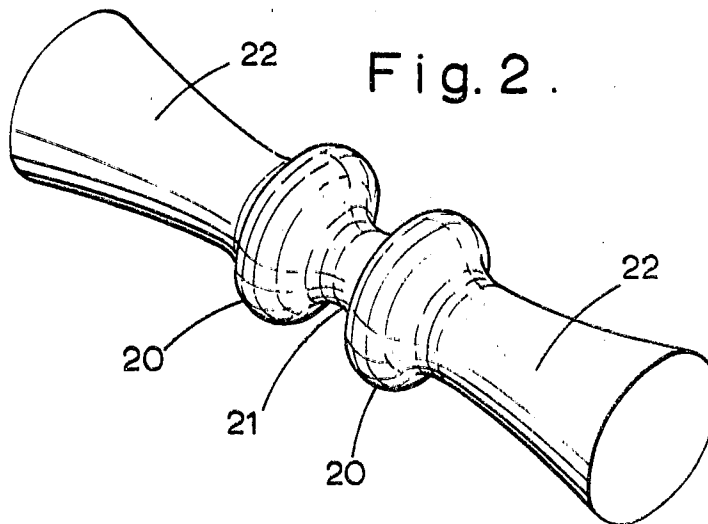




Fig. 4A

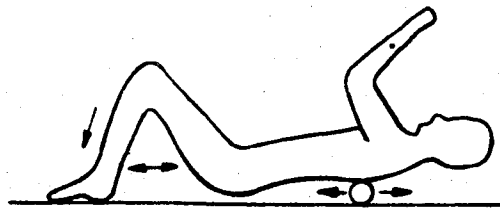


Fig. 4B

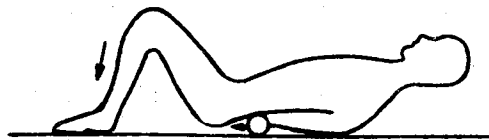


Fig. 4C



Fig. 4D

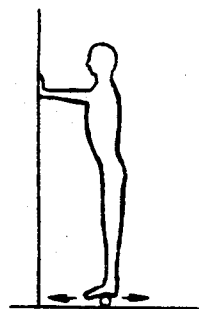


Fig. 4E

PHYSIOTHERAPEUTIC DEVICES AND METHODS

BACKGROUND OF THE INVENTION

The science of acupuncture is of Chinese origin but in recent years has been the subject of considerable interest and research in western countries, where a number of clinics have been set up to promote acupuncture methods. One such clinic is at Guy's Hospital, London, England, a hospital which is managed under the auspices of the British National Health Service.

In accordance with acupuncture teaching, the function of the internal organs of the body can be augmented by external stimulation of various anatomical parts and certain points, the so-called "associated effect points" located along the so-called bladder meridi-
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SUMMARY OF THE INVENTION

The present invention has for its object the provision of a method and apparatus adapted to take advantage of the teachings of the science of acupuncture and to permit stimulation of the parts and points of the body which give rise to beneficial internal effects. Accordingly, the invention provides a roller of substantially circular cross-section having a length substantially equal to the width of the back of an average human being, the roller having two rounded projections which are spaced apart by a distance such that when the roller is in contact with the back the projections may be located on opposite sides of the spine. The invention also provides a method in which the user places the roller against a surface and produces relative rolling movement between the roller and the body so that the projections course along the acupuncture bladder meridi-
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In use, in accordance with a preferred mode of operation the roller is placed on a horizontal plane surface such as the floor, and the user reclines back down on the roller, allowing it to bear substantially his full weight. When the groove straddles the user's spine, the ridges align with the first lines of the bladder meridian and are pressed against it by the weight of the user. The user then propels himself horizontally, initially, for example, in the headward direction, and the roller rolls relative to the user in the tailward direction. The parts of the back on both sides of the spine, the antigravity muscles, more particularly the first lines of bladder meridian, are stimulated. The result is stimulation of the various associated effect points with the resulting benefit to the associated internal organs, the digestive organs in particular. Such stimulation additionally results in bodily processes which give a subjective sensation of lightness and buoyancy and an objectively observable effect of the same. The roller can, to a certain degree,

produce displacement of the vertebrae and to stretch or correct the spine.

In a similar fashion, the user may stimulate other parts of the body by body weight including the back of the head and neck, thighs, calves and soles of the feet.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a rear view of one half of a human being to relate the acupuncture bladder meridian to the skeletal
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FIG. 1a is a view looking downwardly on the head of a human being showing the position of the meridian, near its origin,

FIG. 2 is a view showing one embodiment of roller in accordance with the invention,

FIG. 3 is a view showing a second embodiment of roller, and

FIGS. 4A to 4E show the roller in use during a physiotherapeutic treatment in accordance with the invention.

DETAILED DESCRIPTION OF INVENTION

In accordance with the teachings of the science of acupuncture, a meridian M, termed the bladder meridian, existing bilaterally, extends from the medial corner of each eye upwards across the top of the head (FIG. 1a) to descend along a respective side of the spine and one leg so as to terminate at the lateral aspect of the small toe, as shown in FIG. 1. In the region of the neck, the meridian divides in two, so as to form the first line M1 in the adult about 1½ inches from the spine and the second line M2 somewhat further from the spine. The two lines recombine in the region of the back of the knee. A meridian is to be found on each side of the spine although only that associated with one side is shown in the drawing. Spaced at intervals along the meridian are a number of points so called "associated effect points," stimulation of which has beneficial effects on the working of various internal organs. Certain of these points on the first line of the meridian are indicated in FIG. 1, being referenced 1 to 15. The organs which can be benefited by stimulation of the associated effect points 1 to 14 are listed in the table below:

1. Lungs
2. Pericardium
3. Heart
4. Diaphragm
5. Stomach
6. Liver
7. Gall Bladder
8. Spleen-pancreas
9. Stomach
10. Peritoneum
11. Kidney
12. Colon
13. Ileum
14. Bladder.

The remaining points referenced 15 are not related to any specific individual organ.

The present invention provides a method for stimulating the associated effect points on the first line of the bladder meridian as well as the entire set of anti-gravity muscles of the back, thighs, legs and feet, which method makes use of the roller shown in FIG. 2. This roller is of generally circular cross-section having a length about equal to the width of the back of an average human being. The roller has two bulbous ridges 20

between which is defined a groove 21 dimensioned to allow the spinal column to pass through. The end portions 22 of the roller increase in diameter from the ridges to the roller ends so as to have a generally flared form. As can be seen from FIG. 3, the roller ends have a diameter approximately equal to the diameter of the bulbous ridges 20, which permits roller to be supported at its ends when set down upon a plane surface. The roller may be turned from wood in a single piece, moulded from plastics, or formed from other material, or it may be constructed in separate pieces 23, 24, 27, which screw together. The projections may then be formed by rubber rings 25 seated in grooves 26.

The ridges are spaced by 2 to 5 inches, that is, each ridge is centered at about 2 inches from the center point of the roller and the roller has a diameter of from about 2 to about 6 inches.

The roller is used, in accordance with a preferred series of exercises as shown in FIGS. 4A to 4E.

As shown in FIG. 4A, the user lies back down on the floor and, starting at the occiput where the back muscles are inserted in the skull. By manipulating the end portions of the roller, the latter is gradually rolled or shifted down the neck. If the user now raises his shoulders and gives the roller a slight push with the hands curled overhead as shown in FIG. 4A, the roller is slipped under the upper back and is gripped there. With the knees bent and feet pushed against the ground, the trunk is now raised so that the weight of the body nests on the roller across the upper back. Greater pressure may be provided by raising the arms limply at the elbow. By repeated stretching and flexing of the knees, the roller rolls as indicated in FIG. 4B against the upper back and shoulders stimulating the meridian. The roller is then manipulated by the hands into a position where it is suitably located to stimulate the bladder meridians in the lumbar region, a deeper and more prolonged pressure here being required.

As the roller reaches the pelvis (FIG. 4C) especially where it is bony, a nicely graded degree of pressure is given by lowering gently the weight of the body onto the roller, the knees being bent and the feet pushed against the floor. Stimulation of this region should not be carried out for too long.

As the flesh portion of the buttocks is reached, the roller is manipulated by the hands, being restrained by means of the fingers curled over the edge of the roller so that at the right moment it is released and bounds down. The user should then relax for five minutes before sitting up on the floor and allowing the thighs and calves to rest on the end portions of the roller in succession. By pushing against the floor with the hands, as in FIG. 4D, the roller is moved backwards and forwards on the thighs and calves right down to the heels.

After further relaxation, the soles of the feet are stimulated as shown in FIG. 4E, the user supporting himself against a wall.

Through using the roller, the function of all the internal organs of the body are augmented and the digestive processes in particular are greatly enhanced.

It will be appreciated that modifications may be made to the shape and construction of the roller which may, for example, have a sheath of foamed material, and to the methods of using the roller without departing from the spirit and scope of the present invention.

I claim:

1. A roller for use in stimulating the first lines of the bladder meridian, said roller being of circular cross-section and having a length about equal to the width of the back of a typical adult human being, and comprising:

- a. a central part having two bulbous ridges defining a groove dimensioned to receive the spinal column of said human being, said ridges being spaced by a distance substantially equal to that separating the first lines of the bladder meridian of said human being,
- b. two end portions, each of said end portions being disposed axially outwardly of a respective one of said bulbous ridges, each of said end portions being flared so as to increase in diameter from a minimum adjacent the respective ridge to a maximum at the end of the roller.

2. A roller as claimed in claim 1, wherein each ridge is centered at about two inches from the center point of the roller.

3. A roller as claimed in claim 1, wherein said roller is made in one piece.

4. A roller as claimed in claim 1, wherein said roller is turned from wood.

5. A roller as claimed in claim 1, wherein each roller is turned from wood in one piece and each ridge is centered at a distance of about two inches from the center point of the roller.

6. A method of bodily treatment, comprising the steps of:

- a. disposing upon a horizontal plane surface a roller having spaced bulbous ridges and outwardly flared end portions,
- b. causing the body to bear upon the roller such that the spinal column is disposed between the bulbous ridges,
- c. moving the body back and forth so as to produce rolling movement of said roller relative to the surface and relative to the body, whereby the bulbous ridges follow paths parallel to the spine, the dimensions of the roller end of the bulbous ridges and the hardness of the latter being such that sufficient pressure is applied to the back to stimulate the first lines of the bladder meridian and produce beneficial effects on the working of organs corresponding to the associated effect points on the said lines.

7. A roller for use in stimulating the first lines of the bladder meridian, said roller being of circular cross-section and having a length about equal to the width of the back of a typical adult human being, and comprising:

- a. a central part having two bulbous ridges defining a groove dimensioned to receive the spinal column of said human being, said ridges being spaced by a distance about equal to that separating the first lines of the bladder meridian of said human being,
- b. two end portions, each of said end portions being disposed axially outwardly of a respective one of said bulbous ridges, each of said end portions having adjacent its end a diameter about equal to the diameter of the bulbous ridges.

8. A roller as claimed in claim 7, wherein the end portions are flared so as to increase in diameter from a minimum adjacent the ridges to a maximum at the roller end.

9. A method of bodily treatment, comprising the steps of:

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- a. disposing upon a horizontal plane surface a roller having spaced bulbous ridges and axially extending end portions having sections of maximum diameter near their ends, which sections contact the plane surface and support the roller thereon,
- b. causing the body to bear upon the roller such that the spinal column is disposed between the ridges,
- c. moving the body back and forth as to produce rolling movement of said roller relative to the surface

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and relative to the body, whereby the bulbous ridges follow paths parallel to the spine, the dimensions of the roller and of the bulbous ridges and the hardness of the latter being such that sufficient pressure is applied to the back to stimulate the first lines of the bladder meridian and produce beneficial effects on the working of organs corresponding to the associated effect points on the said lines.

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