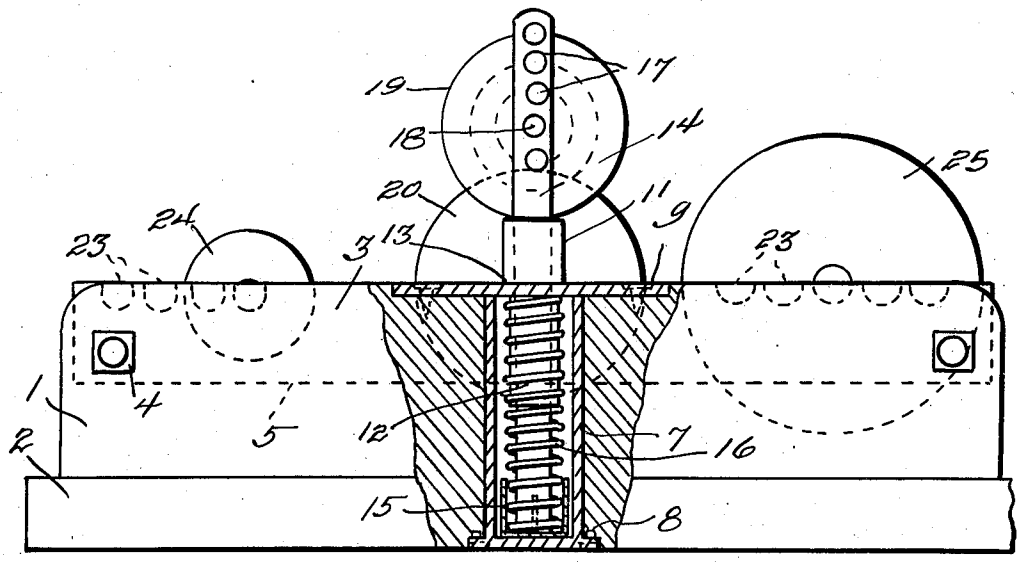
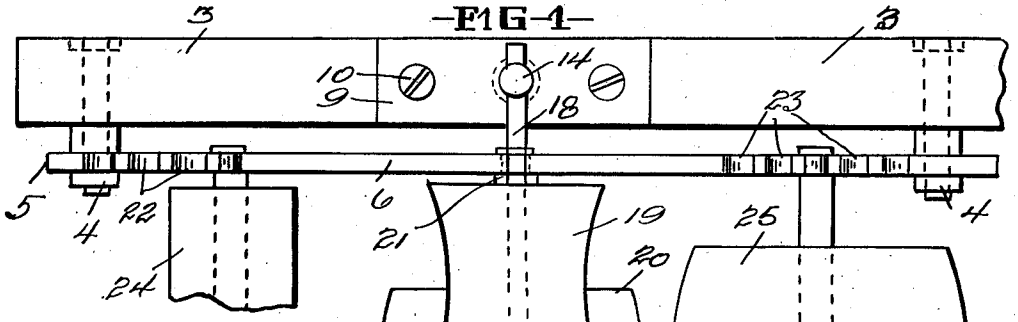
June 13, 1939. H. F. THOMAS 2,161,986

MASSAGE APPARATUS

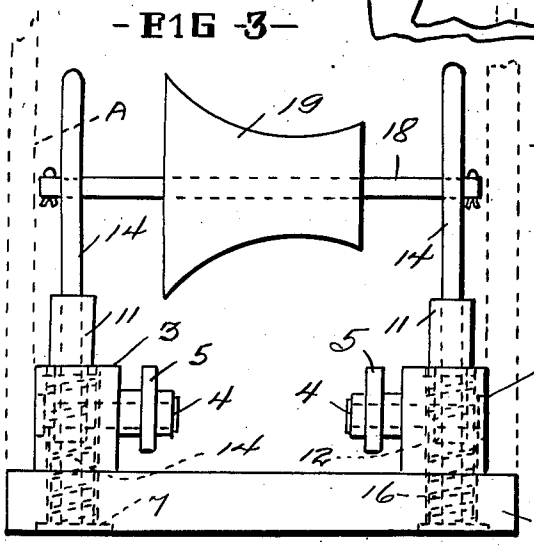
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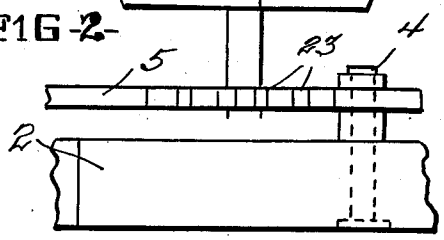
-FIG-1-



-FIG-3-



-FIG-2-



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MASSAGE APPARATUS

Henry F. Thomas, Tulsa, Okla.

Application March 8, 1938, Serial No. 194,665

4 Claims. (Cl. 128—57)

My present invention, in its broad aspect, has to do with improvements in means for massaging, increasing circulation, strengthening, relieving pain, and otherwise functioning as a corrective for disorders of the pedal extremities, and more particularly it is my purpose to mechanically apply by improved massage means corrective treatment to the feet.

Among the many desirable objects of my invention may be included the following; first, the provision of a massage device including suitable rubber rollers and cooperating structure, whereby a foot may be given passive exercise to the end that the circulation of blood is improved, the tone and strength of the muscles increased, and other corrective measures applied to the foot to more nearly approach or reach an ideal condition of the foot from the health standpoint; second, my apparatus is simple in construction and requires a minimum of exertion on the part of the user to obtain its benefits; third, my apparatus is so constructed that it operates with equal facility upon different sizes, shapes, and structural make-up of different feet without the necessity of making complicated or precise adjustments of the apparatus; fourth, my apparatus is relatively inexpensive to manufacture and may be sold at a price within the reach of any ordinary person, and may be used without any particular skill or professional knowledge on the part of the user, and is sufficiently small and compact to be transported from place to place, or stored in a closet or bureau drawer or the like, and has no parts which are liable to get out of order, or broken, or deranged; fifth, my apparatus is so constructed that all of the principal structural features of the foot are operated upon simultaneously, as for instance the phalanx, dorsal, ventral and metatarsal portions, so that a treatment extends to the entire foot rather than to a single part thereof, and; sixth, a degree of cushioning, or resiliency, and of adjustment is provided, which will render the apparatus most effective, comfortable to the user, and adaptable to different conditions of use, as for instance difference in sizes of feet and their shape and construction from the standpoint of individuality.

Other and equally important objects and advantages of my invention will be apparent to one skilled in the art as the detailed description of its several parts proceeds, but it is to be understood that in the detailed description following, that changes may be made in size, shape, construction, relative arrangement and disposition of parts, and the like without departing from the broad inventive concept of my invention.

In the drawing wherein I have illustrated a preferred form of my invention:

Figure 1 is a side elevation of the same, partly broken away, to show certain operating parts;

Figure 2 is a top plan view of the same, partly fragmentary, and shows the relative shape and arrangement of the several rollers, and;

Figure 3 is an end elevation with some of the rollers removed.

In the drawing wherein like characters of reference are used to designate like or similar parts throughout the several views thereof:

The numeral 1 designates a suitable frame which may be of wood, plastic material, light metal or the like, and which has a bottom part 2 or base on which the frame rests, and parallel, spaced, up-standing side pieces 3. Attached to each side piece 3 by a pair of suitable bolts, or the like, designated 4 is a longitudinally arranged rail 5 the upper edge 6 of which lies substantially flush with the top edge of the side piece to which it is attached. Each side piece has an opening drilled therein from top to bottom midway its ends in which is seated a housing member 7 attached to the frame at 8, and over which is mounted flush with the top of each side piece a plate 9; suitable attaching means 10 being provided for that purpose. In an opening provided in each plate is a cylindrical guide member which has an upper part 11 above the side pieces, and a lower part 12 in the housing member which is reduced in exterior circumference to provide a shoulder 13 to seat the guide on the plate. Slidably mounted in each guide is a vertically arranged standard 14 which extends from substantially the bottom of each housing, to a point well above the top end of the upper part 11 of each guide, the purpose of which will hereinafter appear. At the lower end of each standard 14 is a cup 15 and between each cup and the companion plate 9 and about the standard and the reduced part or lower part 12 of each guide is a compression spring 16 so that movement of either standard in an upward direction is resisted by a spring 16.

Each standard, in the part thereof extending above the part 11 has a series of uniformly spaced openings 17 in any two of which are journalled the axle 18 of a concave roller (hereinafter termed the dorsal roller) designated 19. It will therefore be seen that the dorsal roller 19 is

movable up and down with the standards 14, but against the compression of springs 16.

Beneath the dorsal roller 19 is a transverse roller 20 which cooperates therewith and which is journalled in the rails 5 as indicated at 21. Each of the rails 5 have a series of suitably and uniformly spaced bearings near their forward and rear ends, and designated respectively 22 and 23, and in any pair of forward bearings 22 is mounted a small diameter roller 24—hereinafter termed the phalanx roller—which is adjustable toward and away from said transverse roller by means of said selective bearings. In any pair of rear bearings 23 is mounted a large roller 25—hereinafter termed the metatarsal roller—which is adjustable toward and away from said transverse roller by means of said selective bearings.

All of said rollers 19, 20, 24 and 25 are formed of a suitable rubber or other resilient composition suitable for comfortable, resilient, and unharmful contact with the surface of a foot.

A suitable cover A which may have a handle is shown in dotted lines in Figure 3.

It is also to be noted that the dorsal roller 19 is of approximately the same length as the phalanx roller 24; that the metatarsal roller 25 has a slightly convex surface contour, and is of less length than the dorsal roller; and that the transverse roller 20 is of the least length of all of the rollers and also has a slightly convex surface contour.

The operation of my invention is suggested by the names given the various rollers. The foot is placed in the apparatus with the metatarsal part thereof on the roller 25 and the dorsal part thereof between rollers 19 and 20, and the toes on the phalanx roller 24. It will be noted that the dorsal roller 19 exerts desirable pressure through the medium of springs 16 on the dorsal part of the foot—the upper part thereof—and that the entire foot is desirably and effectively massaged by moving it slightly forward and backward on rollers 20, 24 and 25 with the roller 19 bearing upon the upper part thereof with a sustained and relatively uniform pressure. It has been found that a treatment of relatively short duration will give the desired benefits.

It is again emphasized that interpretation of my invention should only be conclusive in the light of the subjoined claims, and that changes may be made in the construction thereof provided such changes fall within the purview of such claims and my broad inventive concept.

I claim:

1. A massage device comprising more than two rollers arranged in the same plane with their axes parallel; said rollers being spaced and of relatively different diameters and lengths and arranged in spaced relationship with the largest roller at one end and the smallest at the other the largest and the intermediate rollers having convex exterior contours; another roller above said set of two or more rollers and having a concave exterior contour and resiliently mounted to be urged toward said first mentioned rollers, and said latter roller being adjustable.

2. A massage device comprising a frame, a series of three rollers carried by the frame, said rollers being of different shapes and sizes and at least two of said rollers having an exterior convex contour and arranged with the largest diameter roller at one end and the smallest diameter roller at the other; said rollers being resilient in construction and adjustable on the frame, and another resilient roller above the first mentioned rollers and having a concave exterior contour, and means carried by the frame for supporting said latter roller, said means being adjustable.

3. A foot massage apparatus comprising a frame, journal plates carried by the frame, a pair of resiliently mounted standards carried by the frame, a series of three rubber rollers carried by the journal plates and adjustable with respect to each other, said rollers being of different diameters with the largest diameter roller at one end of the frame and the smallest at the other, the largest diameter roller having a convex exterior contour designed to receive the metatarsal part of the foot, the intermediate roller having a convex exterior contour and designed to receive the transverse arch ball of foot, and the smallest designed to receive the phalanx; a concave rubber roller adjustably carried by the standards to press down upon the dorsal part of the foot, and said series of three rollers being of different lengths.

4. A foot massage apparatus comprising a frame having parallel spaced side pieces, side rails carried on said side pieces and having journal openings therein, a pair of spring adjusted standards carried by said frame between its ends, a concave resilient roller adjustably carried by said standards and having a greater diameter at one end than the other; a series of three resilient rollers carried by said side rails and journalled therein for adjustment individually and relative each other, said rollers graduating in size from one end to the other of said frame, and the largest roller and the intermediate size roller having slightly convex exterior peripheries; the roller carried by the standards being located above the intermediate of the three rollers.

HENRY F. THOMAS.