Dec. 22, 1953 W. M. ELLIOTT 2,663,293

FOOT MASSAGER

Filed Aug. 5, 1952 2 Sheets-Sheet 1

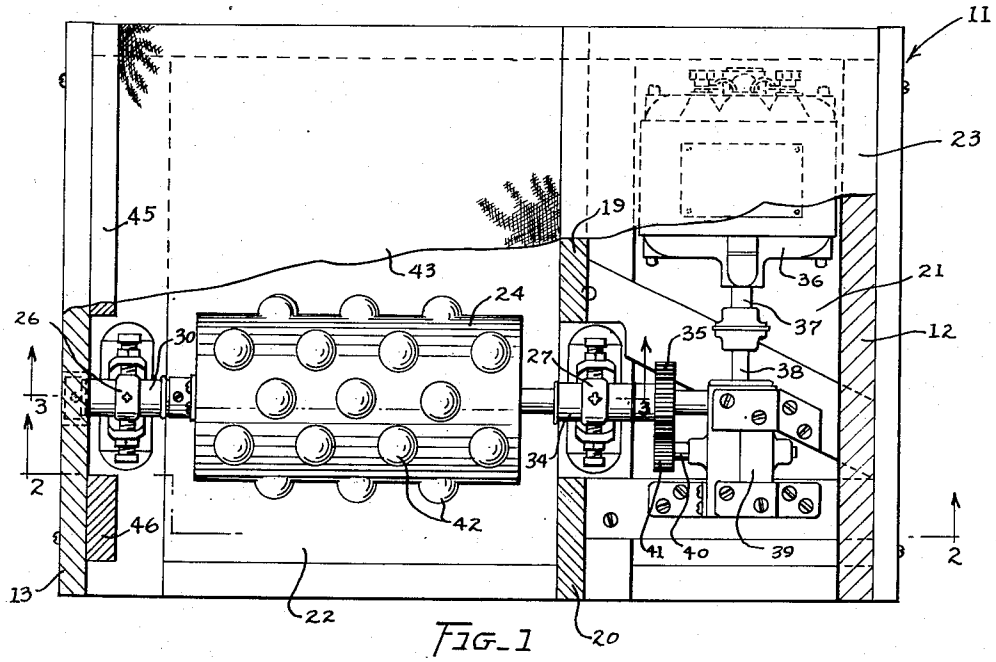


FIG_1

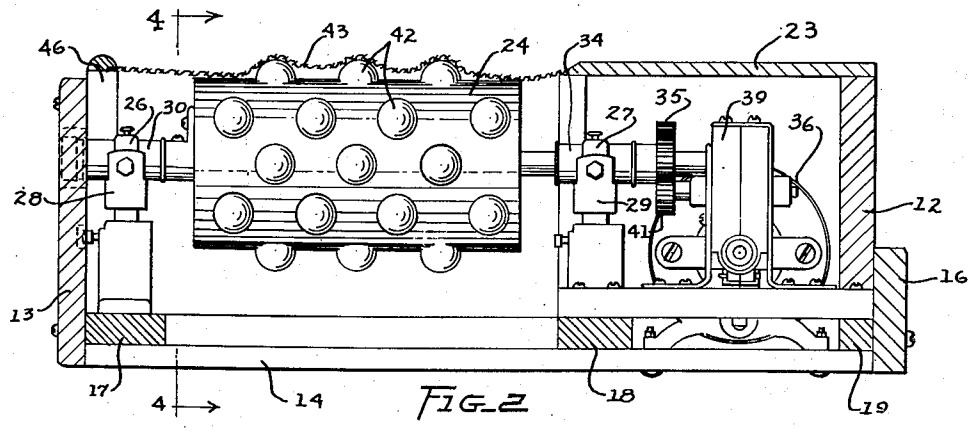


FIG_2

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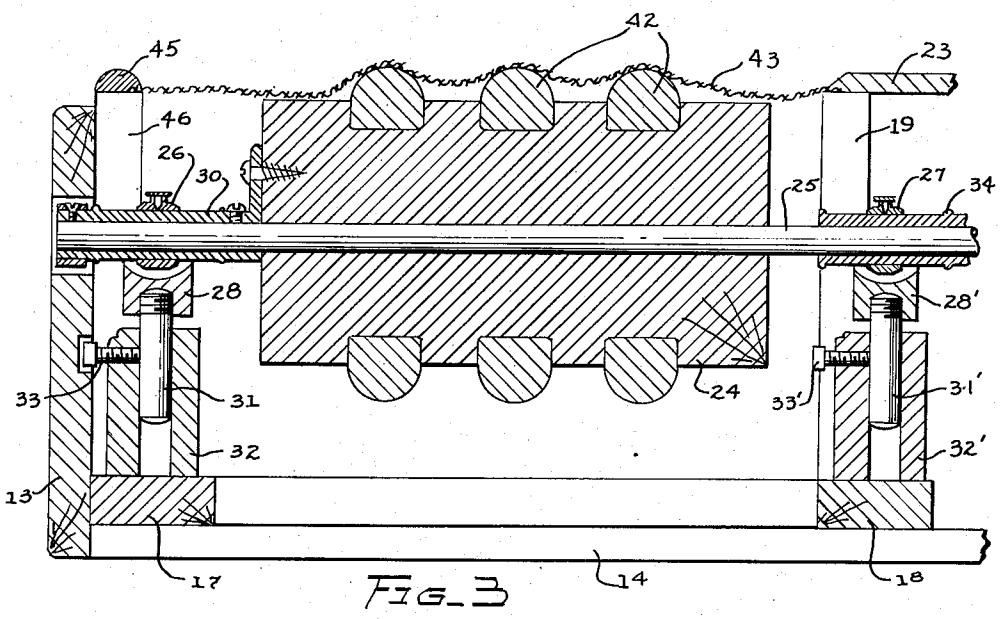


FIG_3

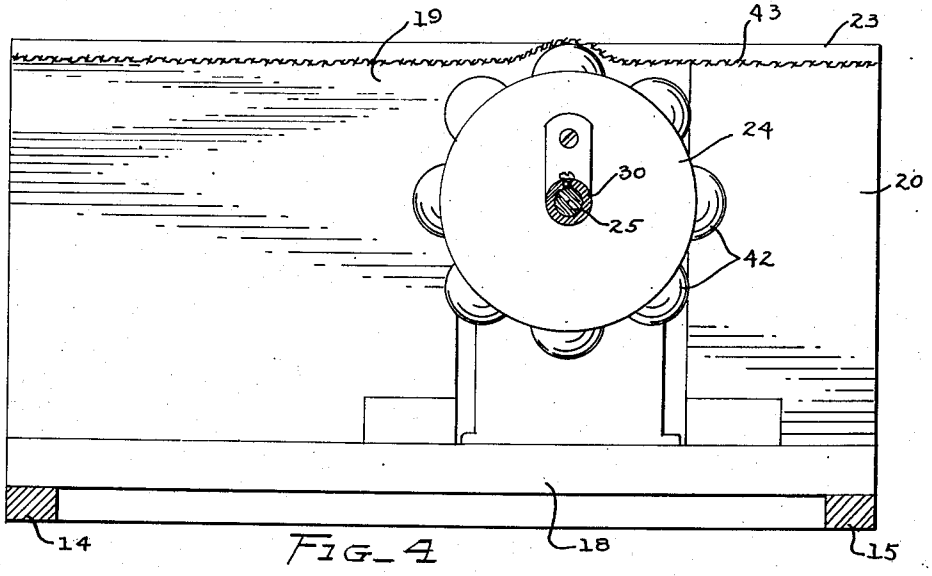


FIG_4

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UNITED STATES PATENT OFFICE

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FOOT MASSAGER

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1 Claim. (Cl. 128—56)

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This invention relates to exercising devices, and more particularly to an improved foot massaging device.

The main object of the invention is to provide a novel and improved foot massaging device which is simple in construction, which is mechanically driven, and which will automatically exert massaging action upon the muscles of the foot without effort on the part of the person using the machine.

A further object of the invention is to provide an improved foot massaging device which is inexpensive to manufacture, which is sturdy in construction, which is arranged to apply rapid intermittent pressure to the various muscles of the foot and which is especially adapted to improve the circulation in the foot, strengthen the muscles thereof, remove stiffness therein, and to generally stimulate the tissues of the foot.

Further objects and advantages of the invention will become apparent from the following description and claim, and from the accompanying drawings, wherein:

Figure 1 is a top plan view, partly in horizontal cross section, of an improved foot massaging device constructed in accordance with the present invention.

Figure 2 is a vertical cross sectional view taken on the line 2—2 of Figure 1.

Figure 3 is an enlarged fragmentary vertical cross sectional view taken on the line 3—3 of Figure 1.

Figure 4 is an enlarged transverse vertical cross sectional view taken on the line 4—4 of Figure 2.

Referring to the drawings, the improved foot massaging device is designated generally at 11 and comprises a rectangular supporting frame consisting of the transverse vertical end walls 12 and 13 which are connected at their lower corner portions by the respective longitudinally extending side bars 14 and 15. As shown in Figure 2, the right ends of the bars 14 and 15 are secured to a transverse vertical bar member 16 which in turn is secured to the end wall 12. Secured on the longitudinal bars 14 and 15 are the spaced horizontal transverse bars 17, 18 and 19. Secured in the intermediate portion of the rectangular frame thus defined are the transversely aligned vertical bore members 19 and 20 defining a first compartment 21 on the right side thereof, as viewed in Figure 1, and a second compartment 22 on the left side thereof.

The compartment 21 is provided with the rigid top cover 23. Designated at 24 is a longitudinally extending horizontally arranged roller secured on

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a shaft 25 in the compartment 22, the shaft 25 being rotatably supported on respective longitudinally aligned bearings 26 and 27 which are respectively supported on vertically adjustable pivot members 28 and 29. As shown in Figure 3, the left end of the shaft 25 is secured in a sleeve member 30 which is in turn secured to the left end of the roller 24. The sleeve member 30 extends rotatably through the bearing 26 and said bearing is pivotally supported on the member 28, the member 28 being in turn supported on a vertical rod member 31 threadedly engaged therewith and adjustably secured in an upstanding supporting sleeve 32 secured on the transverse bar 17. The supporting sleeve 32 is provided with the set screw 33 which clampingly engages the rod element 31 to secure the bearing 26 in desired vertically adjusted position. Similarly, the bearing 27 is pivotally supported on another member 28 which in turn is supported on a vertically adjustable rod element 31 mounted in a vertical sleeve 32' secured on the bar 18, the sleeve element 32' being provided with the set screw 33' to lock the vertical rod element in adjusted position. The right end of the shaft 25 is secured in a sleeve member 34 which is rotatable in the bearing 27, said sleeve member 34 being provided with the gear 35 rigidly secured thereto. Designated at 36 is an electric motor mounted in the compartment 21 with its shaft extending transversely, said shaft, shown at 37, being connected to the driven shaft 38 of a speed reducing device of conventional construction, shown at 39, the output shaft of said device, shown at 40, extending longitudinally and being provided with the gear 41 which meshes with the substantially larger gear 35, as shown in Figures 1 and 2. It will therefore be clearly apparent that the electric motor 36 is drivingly connected to the roller 24 through the speed reducing device 39 and the meshing gears 41 and 35.

Secured in the periphery of the roller 24 are the longitudinal rows of evenly spaced rounded projections 42, said projections being arranged in staggered relationship, as shown in Figures 1 and 2 and the head of the roller being adjusted so that its upper peripheral portion is substantially in the horizontal top plane of the frame of the device. The projections 42 are of substantial diameter and may be of any suitable material, such as wood or the like. Secured over the compartment 22 and engaging the projections 42 is a cover member of flexible sheet material, shown at 43, said cover member being of suitable flexible fabric, plastic sheet material, or other similar material. As shown in Figure 3, one end of the sheet of mate-

rial **43** is clamped beneath the left marginal portion of the top cover **23** and the compartment walls **19** and **20** and the other end of the sheet **43** is secured to a rigid clamping strip **45** which is secured at its end portions to the top ends of vertical support bars **46** fastened to the inside end portions of the end wall **13**.

In using the device the foot is placed on the flexible sheet **43** overlying the projections **42** and the motor **36** is energized, whereby the roller **24** rotates, providing the massaging action on the foot as the projections **42** move beneath the foot. The foot is protected against abrasion or chafing by the protective flexible cover **43** which does not in any way interfere with the massaging action. No effort is required on the part of the user except to position his foot on the flexible sheet **43** over the roller **24**.

While a specific embodiment of an improved foot massaging device has been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore, it is intended that no limitations be

placed on the invention except as defined by the scope of the appended claim.

What is claimed is:

A foot massaging device comprising a supporting frame, a roller journaled horizontally in said supporting frame, a motor mounted in said frame, means drivingly coupling said motor to said roller for rotating the roller in the frame, a plurality of longitudinal rows of evenly spaced rounded projections arranged in staggered relationship on said roller, the upper peripheral portion of the roller being substantially in the horizontal top plane of the frame, and a cover member of flexible sheet material secured to the top portion of said frame in overlying contact with said roller.

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