Jan. 15, 1924. 1,481,038

M. E. STEPHENSON

FOOT MASSAGING DEVICE

Filed May 23, 1919

Fig.1.

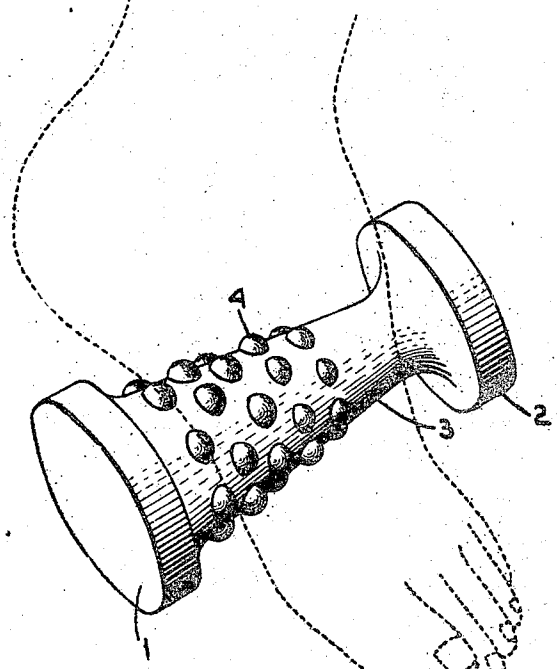
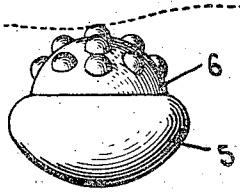



Fig.2.




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# UNITED STATES PATENT OFFICE.

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## FOOT-MASSAGING DEVICE.

Application filed May 23, 1919. Serial No. 299,163.

*To all whom it may concern:*

Be it known that I, MILTON E. STEPHENSON, a citizen of the United States, residing at Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Foot-Massaging Devices, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to improvements in a massaging apparatus, and particularly a mechanism in orthopedic massaging apparatus designed to take the place of the slow process of manual massaging and give just the right amount of manipulation to the foot that is required by the use of a series of soft rubber protuberances or fingers, which are so designed and positioned as to knead and press in place the flaccid muscles of the foot, which have lost their tone and natural elasticity and which will cause them to function naturally.

It has been generally recognized that weak feet have by reflex action much to do with the delicate nervous structure of the entire human system, and that many complaints of obscure origin are overcome when the feet have been restored to their proper condition.

The object of the present invention is to provide a massaging apparatus which can be operated by the individual to knead and manipulate the fascia and muscles of the foot, which particularly lie under the plantar and transverse arches of the foot in such a manner as to increase the circulation and to renew the flexibility of the muscles, to limber up the action of the toes, restore the feet to a healthy condition.

Other objects and features of the invention will more fully appear from the following description and the accompanying drawing and will be pointed out in the annexed claims.

Preferred embodiments of the invention are disclosed in the accompanying drawings in which

Fig. 1 is a perspective view of a massaging device particularly adapted to exercise the muscles of the plantar and transverse arches of the feet.

Fig. 2 is a perspective view of a modified form of device, particularly adapted to massage the muscles of the ball of the foot, but which likewise may be used to massage the plantar and other muscles.

The massaging device disclosed in Fig. 1 comprises a member preferably having cylindrical ends 1, 2 adapted to rest upon a flat supporting surface, said cylindrical end portions being connected by a central portion 3 of general conoidal shape conforming substantially to the plantar and transverse arches of the foot. This conoidal portion is provided with a series of rows of protuberances in staggered relation. The protuberances may be of any character, but desirably are of resilient material such as rubber, and which while comprising a firm surface will yield to pressure applied.

In operation the device is laid upon the floor, or any other suitable support, the foot placed upon the protuberances of the central section 3. The device is then rocked or rolled back and forth upon the floor by the user, as great amount of weight being applied to the foot as may be found desirable. By rolling the massaging device back and forth upon the floor the protuberances act through the superficial and deep plantar fascid and manipulate the underlying plantar muscles with a kneading action, which simulates very closely the operation of the fingers of a masseur. This massaging brings to the foot the glow of a renewed circulation, renews the flexibility of the muscles, limbers up the action of the toes and makes the feet feel as if new life had returned to them. The continued use of the device overcomes weakness of the foot, flat foot, distorted toes, painful heels, foot neuralgia, Hammer or Morton's toe, and by maintaining the proper circulation prevents the growth of corns and bunions. The massaging action upon the skin also maintains it in a healthy condition and prevents the annoyance of sweaty or too dry feet. By thus maintaining the feet in proper condition by the use of this apparatus many of the nervous diseases, due to reflex action arising from improper conditions of the feet, are overcome. It will be noted that the conoidal portion 3 has a length greater than the transverse dimension of the foot so that during the massaging operation the foot will not contact with the cylindrical portions 1 and 2.

The apparatus disclosed in Fig. 2 comprises a body portion having a curved base

5, preferably in the form of a segment of the sphere, and a superposed preferably spherical portion 6 of shorter radius having a series of protuberances 7 preferably of elastic material such as rubber. This device is adapted to be manipulated in substantially the same manner, except that in addition to the longitudinal rocking motion it may be given a rotary or gyratory movement, which will cause the protuberances to progressively knead the plantar muscles or the muscles of the ball of the foot in substantially the manner above described.

While I have disclosed the invention as particularly useful for massaging the muscles of the foot, it will be understood that it may be used for massaging the muscles of the hand, or of any portion of the body to which it can be readily adapted, and that instead of rocking or rolling the device upon the floor under the pressure of the foot or hand applied to the massaging surface, the device may be operated by the hand along the portion of the body to which the massaging portion of the device is applied.

It will be understood that the particular mechanisms disclosed herein are illustrative and not restrictive and that various modifications may be made within the meaning and scope of the following claims.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A foot massaging device comprising a rigid member having a curved portion adapted to rest upon a flat supporting surface, and a conoidal massaging surface, shaped to conform to the plantar arch of the foot, provided with a plurality of resilient convex protuberances adapted, when engaged under pressure by the foot and the base rocked upon its supporting surface, to manipulate, knead, and exercise the plantar fascia and muscles of the foot.

2. A massaging apparatus comprising a rigid member having cylindrical ends, an intermediate conoidal portion shaped to conform with the plantar arch of the foot, and having a plurality of resilient protuberances adapted, when engaged under pressure by the foot and the device rolled back and forth upon the supporting surface, to manipulate, knead, and exercise the plantar fascia and muscles of the foot said cylindrical ends being spaced a distance apart greater than the transverse dimension of the foot.

3. A massaging apparatus comprising a rigid member having cylindrical ends, an intermediate conoidal portion shaped to conform with the plantar arch of the foot, but having a length greater than the transverse dimension of the foot, and provided with a plurality of series of resilient protuberances disposed in staggered relation and adapted, when engaged under pressure by the foot and the base rolled back and forth, to manipulate, knead, and exercise the plantar fascia and muscles of the foot.

In testimony whereof, I have signed my name to this specification.

MILTON E. STEPHENSON.