

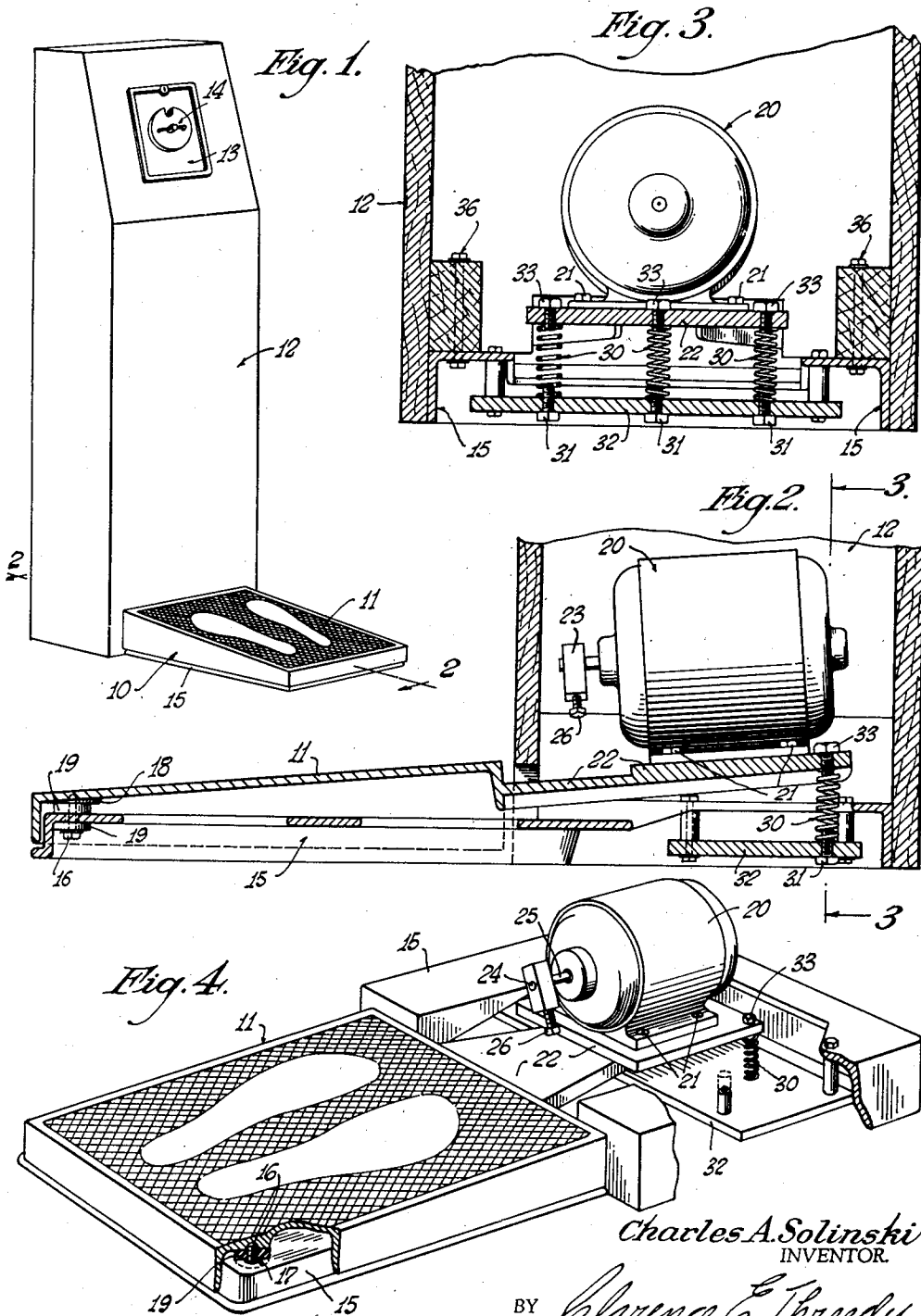
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VIBRATOR

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VIBRATOR

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2 Claims. (Cl. 128—33)

This invention relates to kinesitherapy apparatus and has as its principal object the provision of a device of this class including a vibrating pedestal upon which the patron or patient stands, electrically driven means for vibrating the pedestal, coin-controlled mechanism for actuating the vibrating means, and a housing for the entire apparatus and which is especially suitable for installation in places frequented by the public.

A more specific object is the provision of improved vibrating mechanism which will be quiet in operation and require a relatively small driving mechanism, and yet be adequately energetic to vibrate the platform vigorously regardless of the weight of the person thereon.

A still more particular object is the arrangement of a vibrator platform fulcrumed at one end and supported on resilient means opposite its fulcrum, and having an electrically powered motor rigid on the platform in the region of the resiliently supported end thereof and having a weighted member moved periodically thereby to set up reactionary forces which will vibrate the platform.

Other objects and advantages of the invention reside in certain details of construction as well as the arrangement of parts of the illustrative embodiment which is shown in the annexed drawing and which details include the platform or treadle and mounting means therefor, the resilient support for the platform, the arrangement of the electric motor on the platform, and the arrangement of an eccentrically rotated mass driven by the motor to set up vibrations in the platform.

In the drawing:

Fig. 1 is a perspective view of the entire coin-controlled vibrator unit;

Fig. 2 is a vertical section drawn to enlarged scale and taken along line 2—2 of the vibrator mechanism;

Fig. 3 is a transverse section through the vibrator mechanism looking in the direction of line 3—3 of Fig. 2;

Fig. 4 is a perspective of the vibrating mechanism with parts of the frame casting cut away.

The vibrator unit in its entirety is shown in perspective in Fig. 1 and includes a pedestal portion 10 on which is mounted a treadle or platform 11 and which also serves as a base for an upstanding housing 12. A control panel 13 is conveniently situated in the upper regions of the housing and includes a coin-freed control 14 adapted to actuate a switch (not shown) for

connecting the vibrator motor or driving means with a power circuit in the usual manner.

The vibrator mechanism is constructed as a compact unit, and as shown in Fig. 4, includes the base or pedestal portion 10 which is part of a base casting 15. The platform or treadle 11 is mounted on the pedestal at its outermost end, relative to the housing, for rocking movement about a substantially horizontal axis, such mounting being effected through the agency of bolts 16 passed through moderately enlarged holes 17 at opposite corners of the pedestal casting and threaded into bosses 18 on the underside of the platform with rubber, leather or other yieldable washer means 19 interposed between the head of the bolt and between the platform and the pedestal.

The clearance between the bolt 16 and the hole 17 is adequate to permit limited rocking movement, and in this sense the mounting means 16—19 constitutes a fulcrum suitable to permit vibratory motion of the platform and rendering the latter an excellent transmitting medium for vibratory impulses imparted to the platform at its end opposite the fulcrum.

Means for generating vibratory impulses for application to the platform, includes the provision of an electrically powered device such as the motor 20 which is rigidly secured as at 21 to a platform formed on a tongue portion 22 extended integrally from the end treadle platform opposite its fulcrum. The motor is provided with means, such as the block 23, constituting a mass to be displaced periodically or cyclically in a direction substantially normal (in this instance, nearly vertical) to the plane of the treadle or platform. The mass 23 is connected with the motor by the provision of a bore 24 therein, situated eccentrically of its center of mass and sweated onto the shaft 25 of the motor, a screw 26 being threaded into the block and constituting an eccentrically movable means for adjustably changing the eccentric load, and hence the intensity of vibration.

When the motor 20 is driven at moderately high speeds, the eccentrically disposed mass of the block 23 is periodically or cyclically moved toward and away from the platform 11 and sets up forces tending to rock the platform in opposite directions during each cycle of movement of the block, such forces being transmitted through the body of the motor and its rigid connection with the platform tongue.

In order to procure the optimum vibratory effect in the platform, the region of the same

opposite its fulcrum is resiliently supported by means such as the coil springs 30 (Fig. 3 also), the lower ends of which are engaged with studs 31 threaded into a member 32 supported on the underside of the base portion 15, while the upper ends of the springs are engaged with studs 33 threaded into the platform member 22 which supports the motor.

The base portion 15 is shaped to fit closely into the bottom of the housing 12, as illustrated particularly in Fig. 3, and is attached to the latter by means such as the bolts 36 passing through blocks at the bottom of the housing and engaged in the top flange portion of the base part 15 of the casting. Thus, the housing and control mechanism may be said to constitute one unit, while the vibrating mechanism constitutes another unit readily detachable from the housing structure.

In the operation of the device, the patron steps upon the treadle platform 11 and deposits a coin in the control device 14, manipulating the latter in the usual manner to actuate suitable switch mechanism and start the motor 20. The eccentric rotation of the mass 23 about an axis approximately parallel with the plane of the platform results in the transmission of rapid and vigorous vibrations into the platform, which vibrations are communicated with maximum effectiveness into the body of the patron as a result of the particular mounting of the platform, particularly with respect to the resilient or spring means 30 opposite the fulcrum. After a predetermined lapse of time, the switch mechanism will shut off automatically and stop the motor.

The various advantages and objects of the invention may be accomplished by modifications of the particular embodiment specifically described herein, and it is intended that the appended claims shall include all equivalent arrangements fairly coming within their call.

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

1. In a device of the class described comprising a base, a body supporting platform having an extended portion at one end thereof, a yieldable connection between the platform and the base at a point opposite the extended portion, a motor mounted on the extended portion on the top thereof remotely from the yieldable connection and including a shaft, resilient means providing a support between the extended portion and the base, an eccentric member on the shaft for transmitting vibratory action to the platform through the extended portion when said motor is operative, and a vertically disposed housing enclosing said extension and said motor, that portion of the said platform on which a body is adapted to be supported being located between said housing and the point of said yieldable connection between the platform and the base.

2. A body vibrator comprising a vertically disposed housing, a base having a portion thereof confined in said housing, a platform exterior of the housing and disposed over the exterior portion of said base and on which a person is adapted to stand and having an integral continuation extended into the housing providing an extended portion with the end of the extended portion substantially spaced from the adjacent end of the base, yieldable means providing a fulcrum between the exterior end portions of the platform and the base, spring means normally supporting the extended portion in said spaced relation with respect to the interior portion of the base, a driven member mounted on the extended portion on the top thereof within the housing and including a shaft, and an eccentric member on the shaft for transmitting vibratory action to the platform through the extended portion when said driven member is operative, said eccentric including a screw member adjustable radially with respect to the shaft for varying the degree of vibration transmitted to the said platform.

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