Dec. 11, 1934. J. M. TOLCHIN 1,984,165

HEALTH APPARATUS

Filed Feb. 5, 1934

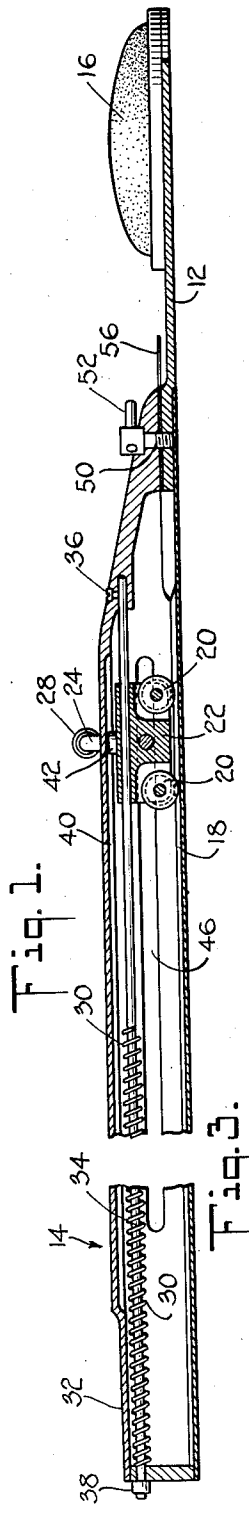


Fig. 1.

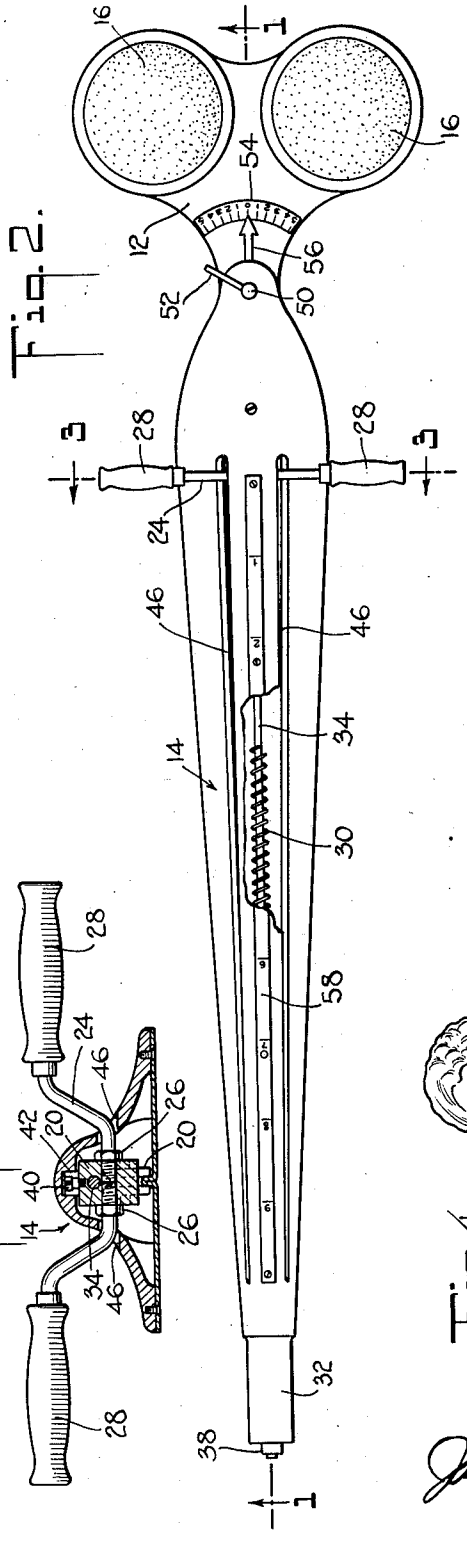


Fig. 2.

Fig. 3.

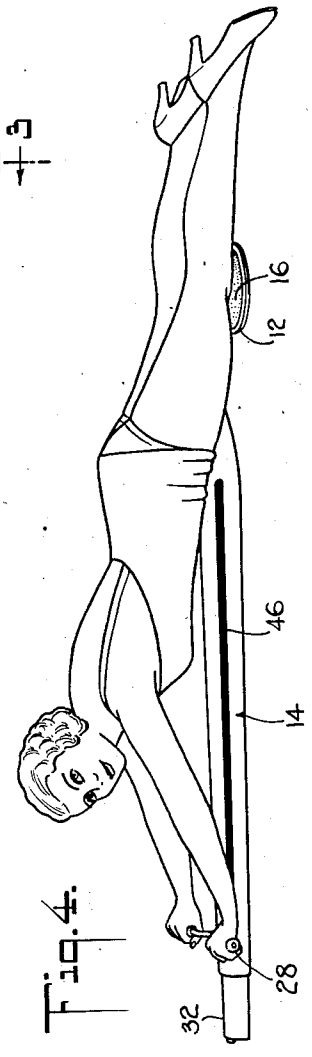


Fig. 4.

INVENTOR
John M. Tolchin
BY
Jones & Franklin
ATTORNEYS

Patented Dec. 11, 1934 1,984,165

UNITED STATES PATENT OFFICE

1,984,165

HEALTH APPARATUS

John M. Tolchin, New York, N. Y.

Application February 5, 1934, Serial No. 709,708

16 Claims. (Cl. 272—79)

This invention relates to apparatus for the improvement of bodily health, and more particularly to apparatus for the relief of constipation.

The primary and general object of the present invention is to provide an apparatus for quickly and effectively relieving constipation, particularly by creating natural contraction and relaxation of the intestinal tract to produce normal peristalsis, all without any tendency to dislodge or injure the abdominal organs. A secondary object of my invention is to reduce excessive weight or girth of the abdomen and other parts of the body in a healthful and beneficial manner.

A more particular object of my invention resides in the provision of apparatus of the character set forth, which will accomplish the desired result rapidly by localizing the physiological action to the torso, unaccompanied by exhaustion or over-development of the biceps. In other words, my apparatus is not an exercising machine in the ordinary sense, and does not offer excessive or even substantial resistance to the musculature of the arms and legs. Because of the short time over which the apparatus need be used, due to its effectiveness, and because it does not strain or exhaust the body, the apparatus is safe to use, and is continued in use instead of being abandoned or discarded after a short time.

To the accomplishment of the foregoing and such other objects as will hereinafter appear, my invention consists in the apparatus and the elements thereof and their relation one to another, as hereinafter are more particularly described in the specification and sought to be defined in the claims. The specification is accompanied by drawing, in which:

Fig. 1 is a vertical section taken through a preferred form of apparatus embodying features of my invention;

Fig. 2 is a plan view of the same;

Fig. 3 is a transverse section taken in the plane of the line 3—3 of Fig. 2; and

Fig. 4 shows the apparatus in use.

Referring to the drawing, the apparatus comprises a knee plate 12 and an elongated housing or extension 14 which is preferably pivotally connected to the knee plate. The knee plate 12 is provided with knee pads 16, and the complete apparatus is flat on the bottom or so designed as to rest directly upon the floor.

Extension 14 is provided with a rail 18 which receives the preferably matingly grooved wheels 20 of a trolley 22. The apparatus further includes a handle bar 24 which extends transversely of the rail 18 and is mounted on trolley 22, as by the use of nuts 26. Handle bar 24 carries handles 28 which are preferably made substantial in size and comfortable to grasp. In use the subject kneels upon knee pads 16 and grasps the handles 28. The apparatus is so dimensioned that, with the handles in position nearest the knee plate, the body is very closely crouched and is very completely relaxed, particularly the abdominal region. When the handles 28 are urged away from the knee plate, the body is stretched to fully extended position, somewhat as shown in Fig. 4, at which time the abdominal wall or musculature is drawn taut. It should be understood, therefore, that the track 18 is substantial in length and preferably dimensioned to permit full outstretching of even a tall person.

Because of the fully extended or stretched position which the body assumes, it is difficult if not actually impossible for the ordinary person to come back to the first or crouching position. It is not the object of the present apparatus to force the subject to perform strenuous or acrobatic feats, and the desired restoration to relaxed or crouching position is accordingly encouraged and assisted by the apparatus itself. For this purpose I provide resilient means 30 tending normally to urge the trolley 22 from the remote end 32 of the extension toward the knee plate 12. As specifically illustrated in the present case, I employ a compression spring for the apparatus, and, in order to hold the spring in proper alignment, I preferably mount the same on a rod 34. This rod extends longitudinally of extension 14, being secured at one end by a lock screw 36, and being secured at the opposite end by a collar 38. It will be noted by reference to Figs. 1 and 2 that the spring 30 is preferably shorter than rod 34. It may also be explained that the spring 30 is characterized by only moderate resistance, for here again it may be emphasized that in the preferred form of my apparatus it is not intended that the subject have to push the handles forcibly against the resistance of spring 30. Instead the handles are readily moved outwardly, the spring 30 operating merely to buffer and soften the dropping movement of the body and to so balance the weight of the body as to facilitate drawing the handles backwardly to the initial crouched position.

The extension 14 is preferably a hollow housing having a flat bottom and curved sides, as is best brought out in Fig. 3. The top of the housing 14 is internally grooved or channeled to form a guide or track 40. Trolley 22 carries a roller 42 freely rotatable on a stud 44, which roller rides

in the track 40. This prevents tilting of the handle bar 24 when the apparatus is in use, even though only a single track 18 is used at the bottom of the extension. It will be appreciated that the trolley mechanism is employed primarily to eliminate friction while taking the weight of the body. The handle bar 24 projects outwardly from housing 14 through elongated slots 46 extending longitudinally of the housing. The housing is extended beyond the slots 46, as is indicated at 32, in order to provide room for spring 30 in compressed condition.

The connection between knee plate 12 and extension 14 is preferably made a pivotal one in order to permit sideward adjustment or inclination of the extension relative to the knee plate. In the present case the desired pivotal connection is made by means of a lock screw 50 which may be tightened or released by a handle 52. By swinging extension 14 to one side and thereupon operating the apparatus, the muscles at one side of the body are tightened while those at the other side are relaxed, and by swinging the extension to the opposite side, the opposite effect is produced.

The angular relation between knee plate 12 and extension 14 is preferably adjusted with reference to a calibration or scale 54 mounted on knee plate 12, and a pointer 56 projecting from the housing 14. This scale permits the subject to limit the angular relation of the parts of the apparatus to a small amount at first, this angle being increased after several days of use. The housing 14 may, if desired, also be provided with a scale 58 indicating the extent of movement of the handle bar 24. Here again it is contemplated that the subject may wish to at first limit the bodily stretch until some practice and experience have been gained.

It is believed that the mode of constructing and using as well as the many advantages of my improved health apparatus, will be apparent from the foregoing detailed description. The apparatus in the precise form described is primarily a specific for constipation. It provides relief in a natural manner by toning up the musculature of the abdomen and greatly increasing the circulation and blood supply to the abdominal region. Its action is very rapid and effective, and ordinarily the device need be used for only two minutes. Because of this fact and because of the fact that there is no consequent exhaustion, the subject is encouraged to continue regular use of the apparatus. At the same time, the absence of exhaustion makes the apparatus safe in use by elderly or obese persons and particularly by women. The relief of constipation is produced primarily by the alternate contraction and relaxation of the intestinal tract. This action is heightened by the angular movement produced, and the total effect is to create normal peristalsis. Of course the forward movement is preferably employed more than the sideward movements. In addition to immediate relief of constipation, there is a definite permanent relief of constipation caused by the strengthening and toning up of the layers of muscle of the abdomen.

The apparatus is also valuable for reduction of excessive weight. The known disadvantages of reducing by starvation and by dehydration are entirely avoided when reducing by activation and friction of the adjacent muscles. Besides reducing excessive abdominal girth, the present apparatus is useful for reducing fat on the hips, for in either case the region is alternately moved through its complete range of possible movement. In the case of women, the apparatus is effective to improve the breast contour because of strengthening of the pectoralis major and minor muscles. This indirect improvement by strengthening of the muscles in question is probably the only truly safe mode of treatment for the purpose. The apparatus results in erect posture, for the position assumed in use is itself a direct corrective for stooping shoulders. Continuous and regular use of my apparatus by women during pregnancy is also helpful in counteracting the adverse effects of physical inactivity in modern civilization, and thereby preparing women for childbirth.

It will be apparent that while I have shown and described my invention in preferred form, many changes and modifications may be made in the structure disclosed. It is possible, for example, to employ a trolley running on rails without utilizing a top rail or a guide rod. It is also possible to strengthen the guide rod and use that as the track or rail. In general, various combinations of the three forms of track or guide shown, as well as any one of the same, may be employed. A tension spring or other means may be employed to assist the return movement of the trolley in lieu of the compression spring shown. It is obviously not essential to employ a housing to fully enclose the mechanism, this being used merely for the sake of refinement and finish in construction and appearance.

Changes of this character may be made without departing from the spirit of the invention, defined in the following claims.

I claim:

1. An apparatus of the class described comprising a knee plate, an elongated extension or guide secured thereto, the resulting assembly being adapted to rest flat on the floor, a handle bar extending transversely of and being reciprocable along said extension, the parts being so dimensioned that the user kneeling on the knee plate can move the handle bar from a near position which brings the body into a crouch to a far position which stretches the body at full length.

2. An apparatus of the class described comprising a knee plate, an elongated extension or guide secured thereto, the resulting assembly being adapted to rest flat on the floor, a handle bar extending transversely of and being reciprocable along said extension, said apparatus including additional means influencing the movement of the handle bar along the extension.

3. An apparatus of the class described comprising a knee plate, an elongated extension or guide pivotally secured to said knee plate for sideward adjustment, the assembly of knee plate and extension being adapted to rest flat on the floor, a handle bar extending transversely of and being reciprocable along said extension, said extension including resilient means influencing the movement of the handle bar along the extension.

4. An apparatus of the class described including a knee plate, an elongated extension or guide secured to said knee plate and comprising a rod, a handle bar extending transversely of and being reciprocable along said rod, and a compression spring surrounding the rod and interposed between the handle bar and the remote end of the rod.

5. An apparatus of the class described including a knee plate, an elongated extension or guide pivotally secured to said knee plate for sideward adjustment and comprising a rod, the assembly of knee plate and rod being adapted to rest on

the floor, a handle bar with handles extending transversely of and reciprocable along said rod, and a compression spring surrounding the rod and interposed between the handle bar and the remote end of the rod.

6. An apparatus of the class described comprising a knee plate, an elongated extension or guide pivotally secured to said knee plate, manually operable means for locking the same in desired relative position, the assembly of knee plate and extension being adapted to rest flat on the floor, a handle bar with handles extending transversely of and being reciprocable along said extension, said extension including a rod relative to which the handle bar is reciprocable, and a compression spring surrounding the rod and interposed between the handle bar and the remote end of the extension.

7. An apparatus of the class described comprising a knee plate, an elongated extension secured to said knee plate, said knee plate and extension being adapted to rest on the floor, said extension including a guide rail extending therealong, a trolley with wheels adapted to run on said rail, a handle bar extending transversely of said rail and mounted on said trolley and resilient means influencing the movement of the trolley along the rail.

8. An apparatus of the class described comprising a knee plate, an elongated extension pivotally secured to said knee plate, said extension including a guide rail extending therealong, a trolley with wheels adapted to run on said rail, a handle bar extending transversely of said rail and mounted on said trolley, and means causing the trolley to tend to move from the remote end of the rail toward the knee plate.

9. An apparatus of the class described comprising a knee plate, an elongated extension pivotally secured to said knee plate for sideward adjustment, said knee plate and extension being adapted to rest on the floor, said extension including a guide rail extending therealong, a trolley with wheels adapted to run on said rail, a handle bar extending transversely of said rail and mounted on said trolley, and a spring constantly urging the trolley along the rail toward the knee plate.

10. An apparatus of the class described including a knee plate, an extension secured to said knee plate and comprising a rail and a rod, said knee plate and extension being adapted to rest on the floor, a trolley with wheels adapted to run on said rail, a handle bar extending transversely of said rail and mounted on said trolley, said rod passing through a part of the trolley, and a compression spring around said rod between the trolley and the remote end of the extension.

11. An apparatus of the class described comprising a knee plate having knee pads thereon, an elongated housing or extension pivotally secured to said knee plate for sideward adjustment, said knee plate and housing being adapted to rest flat on the floor, the bottom of said housing including a guide rail extending therealong, a trolley with wheels adapted to run on said rail, a handle bar with handles extending transversely of said housing, said handle bar being secured to said trolley and projecting through side slots in said housing, whereby said trolley is adapted to take weight applied thereto, a rod extending longitudinally of the housing and passing through a part of the trolley, and a compression spring around said rod between the trolley and the remote end of the housing.

12. An apparatus of the class described comprising a knee plate, an elongated housing or extension secured to said knee plate, said knee plate and housing being adapted to rest flat on the floor, a trolley in said housing, a handle bar with handles extending transversely of said housing, said handle bar being secured to said trolley and projecting through side slots in said housing, a guide rail at the top of said housing, a roller on said trolley cooperating with said guide rail, a rod extending longitudinally of the housing and passing through a part of the trolley, and a compression spring around said rod between the trolley and the remote end of the housing.

13. An apparatus of the class described comprising a knee plate, an elongated housing or extension secured to said knee plate, the bottom of said housing including a guide rail extending therealong, a trolley with wheels adapted to run on said rail, a handle bar with handles extending transversely of said housing, said handle bar being secured to said trolley and projecting through side slots in said housing, whereby said trolley is adapted to take the weight applied to said handles, a guide rail at the top of said housing, means on said trolley cooperating with said guide rail to prevent tilting of the handle bar, and yieldable means in said housing tending to move the trolley from the remote end of the housing toward the knee plate.

14. An apparatus of the class described comprising a knee plate, an elongated housing or extension pivotally secured to said knee plate, manually operable means for locking the same in desired position, said knee plate and housing being adapted to rest flat on the floor, the bottom of said housing including a guide rail extending therealong, a trolley with wheels adapted to run on said rail, a handle bar with handles extending transversely of said housing, said handle bar being secured to said trolley and projecting through side slots in said housing, whereby said trolley is adapted to take the weight applied to said handles, a guide rail at the top of said housing, a roller on said trolley cooperating with said guide rail to prevent tilting of the handle bar, a rod extending longitudinally of the housing and passing through a part of the trolley, and a compression spring around said rod between the trolley and the remote end of the housing.

15. An apparatus of the class described comprising a rod, means at each end thereof supporting the same near the floor in an approximately horizontal position, a handle bar extending transversely of and being reciprocable along said rod, a handle at each end of said handle bar, said handles being at opposite sides of the rod and movable in unison along the rod, and a compression spring surrounding the rod and interposed between the handle bar and one end of the rod.

16. An apparatus of the class described comprising a track or guide, means supporting the same along the floor, a trolley with wheels movable along said guide, a handle bar mounted on said trolley and extending transversely of said guide, and resilient means urging said trolley from one end of said apparatus toward the other.

JOHN M. TOLCHIN.