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2,484,153

EXERCISING DEVICE

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Fig. 1

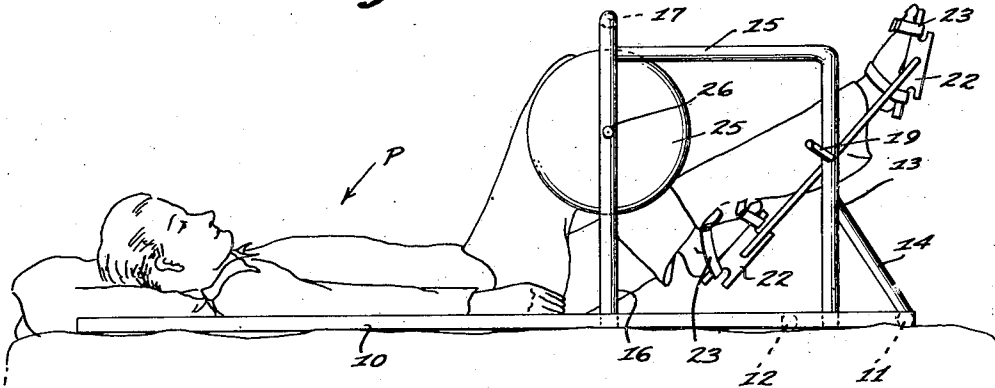


Fig. 2

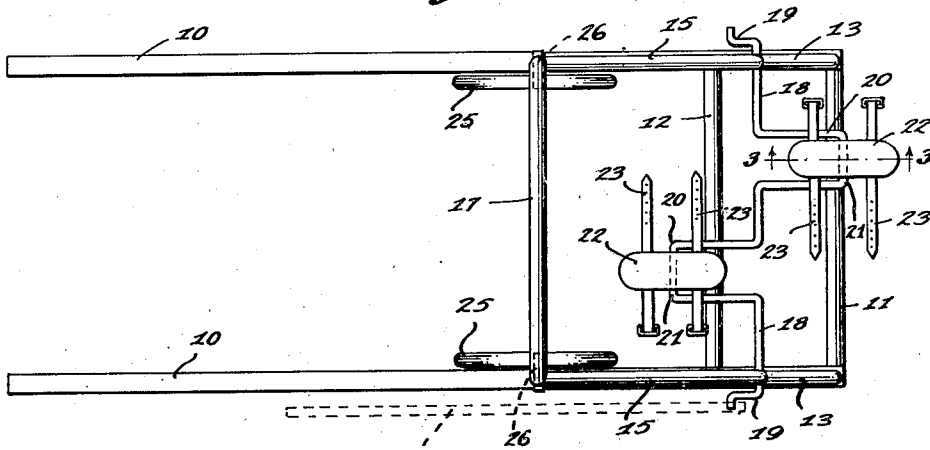


Fig. 3

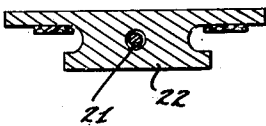


Fig. 4

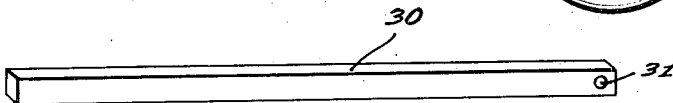
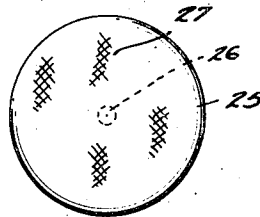


Fig. 5

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EXERCISING DEVICE

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3 Claims. (Cl. 272-73)

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This invention relates to an exercising device, and more particularly to such a device for exercising the limbs of bedridden patients.

A primary object of this invention is the provision of an improved exercising device adapted to afford facilities for exercise to the limbs, particularly the legs, of bedridden patients in weakened condition, such as may be the result of infantile paralysis, or the like.

A further object of the invention is the provision of a device of this character including a member adapted to be rotated or pedaled by the legs, and having provision whereby exercise may be obtained by the arms of the patient, in event that the legs are too weak.

A further object of the invention is the provision of a device of this character supplied with massaging elements for the sides of the legs.

A still further object of the invention is the provision of a device of this character which may be readily applied to and removed from the bed of a bedridden patient.

Other objects will in part be obvious and in part be pointed out as the description of the invention proceeds, and shown in the accompanying drawings, wherein there is disclosed a preferred embodiment of this inventive concept.

In the drawings:

Figure 1 is a side elevational view of one form of device embodying features of the instant invention, shown as applied to a bed and in use by a patient.

Figure 2 is a top plan view of the construction disclosed in Figure 1.

Figure 3 is an enlarged sectional view taken substantially along the line 3-3 of Figure 2, as viewed in the direction indicated by the arrows.

Figure 4 is a plan view of a constructional detail.

Figure 5 is a perspective view of an element adapted to be alternatively utilized with the machine.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Referring now to the drawings, the device of the instant invention comprises two longitudinally extending base members 10, unconnected at their upper ends, in order that they may be positioned on opposite sides of a patient lying prone on a bed. The base members are connected at their foot ends by a transverse bar 11, reinforced by a supplemental bar 12 spaced inwardly therefrom and also extending transversely across the base members. Positioned between the

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transverse bars 11 and 12 are a pair of oppositely disposed, aligned uprights 13, from which angularly disposed reinforcing members 14 extend to the extremities of base members 10 adjacent transverse member 11. From the tops of uprights 13 longitudinally extending top members 15 extend to additional uprights 16 suitably secured to, or formed integral with, the base members 10, and positioned at a point substantially in transverse alignment with the patient's knees when the latter is in prone position.

The tops of the uprights 16 extend a slight distance above horizontal bars 15, and are connected by a transversely extending bar 17, which may serve as a gripping bar, either to enable the patient to sit upright while grasping the same, or as a handle for the device when placing it in position over a patient.

Journalled for rotation in uprights 13 is a crankshaft including oppositely disposed, aligned portions 18, terminating in crank portions 19 exteriorly of uprights 13, and provided with oppositely disposed crank portions 20 offset with respect to each other, and each including a transverse portion 21, upon which is pivotally mounted a foot pedal 22, of a dimension comfortably to engage the foot of a patient. Straps 23 are provided in association with each foot pedal at the front and rear, so as to enable the foot of a patient to be secured thereto.

Rotatably mounted on upright members 16 are a pair of relatively large discs 25, the mounting taking the form of stub axles 26 extending through the adjacent uprights. The discs are suitably covered by any desired soft material 27 (see Figure 4), in order to present a relatively smooth, flush inner surface, unbroken by protuberances, such as the axle above referred to.

From the foregoing, the operation of the device should now be readily understandable. The patient, in prone position, places his feet, or has them placed, upon the pedals 22 and strapped in position by the straps 23. Movement of the legs will now effect a pedaling action similar to that of a bicycle, and may be continued as long as is desired without tiring the patient. The discs 25 will, during such operation, effect a massaging action on the knees and outer sides of the adjacent leg muscles to further exercise the individual.

Under those conditions where the patient's legs are too weak to permit exercise, the same frame may be used, and handle members 30 provided at their extremities with apertures 31 may be positioned over the crank portions 19, as indi-

cated in dotted lines in Figure 2. Suitable cotter pins, or other means, may be utilized for securing the handles in position, and under such conditions, forward and backward movement of the arms grasping the handles 30 will exercise the muscles of the arms.

From the foregoing it will now be seen that there is herein provided an improved exercising device which accomplishes all the objects of this invention, and others, including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. An exercising device comprising a frame including a pair of transversely spaced apart longitudinal base members for extension on opposite sides of a reclining patient, a transverse connecting bar between said base members at one end thereof, an upright member on each of said base members adjacent said one end, a shaft rotatable between said upright members, a pair of oppositely extending cranks on said shaft between said upright members with which the feet of the patient are adapted to be engaged, a shaft rotating crank on said shaft outwardly of one of said upright members, and means operable by the patient for engaging said latter crank for rotating said shaft and said foot engaging cranks.

2. An exercising device comprising a frame including a pair of transversely spaced apart longitudinal base members for extension on opposite sides of a reclining patient, a transverse connecting bar between said base members at one end thereof, an upright member on each of

said base members adjacent said one end, a shaft rotatable between said upright members, a pair of oppositely extending cranks on said shaft between said upright members with which the feet of the patient are adapted to be engaged, a shaft rotating crank on said shaft outwardly of one of said upright members, and a bar extending along the length of said frame operable by the patient for engaging said latter crank for rotating said shaft and said foot engaging cranks.

3. An exercising device comprising a frame including a pair of transversely spaced apart longitudinal base members for engagement on opposite sides of a reclining patient, a transverse connecting bar between said base members, a shaft, a pair of cranks on said shaft on which the patient's feet are adapted to be engaged, means rotatably supporting said shaft on one end of said base members, a shaft rotating crank on said shaft, means operable by a patient and engaging said latter crank for rotating said shaft, a pair of disc members rotatably supported on opposite sides of said frame adjacent said one end for engagement with the outer side of the patient's knee and rotatable thereby upon movement of the patient's legs actuated by said shaft.

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