July 30, 1935. H. FISHER 2,009,730

EXERCISING CHAIR FOR INVALIDS

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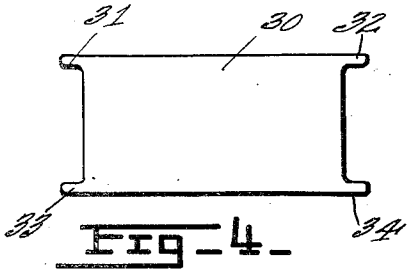


Fig. 4.

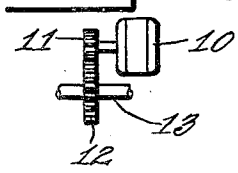


Fig. 3.

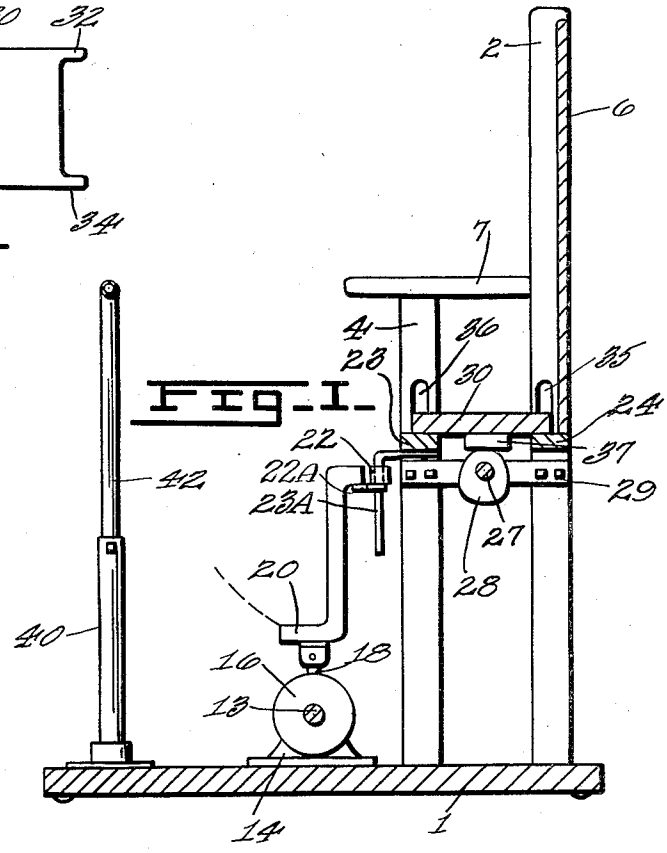


Fig. 1.

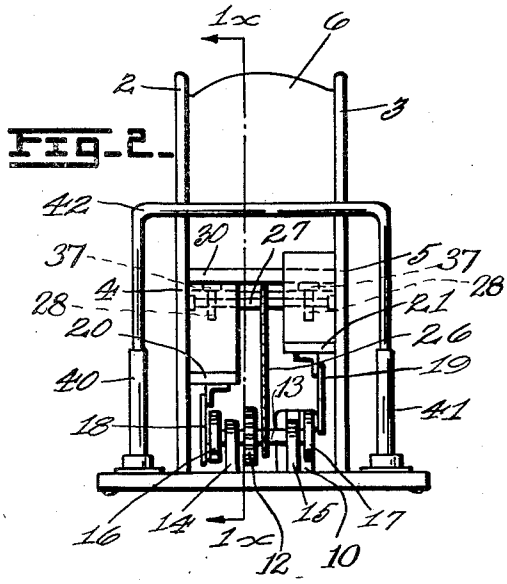


Fig. 2.

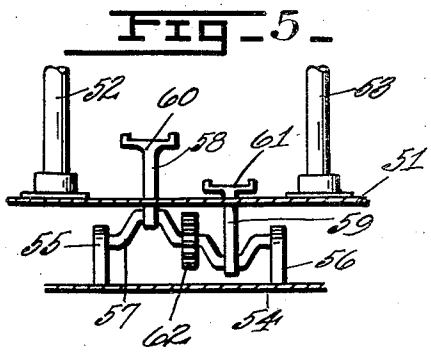


Fig. 5.

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EXERCISING CHAIR FOR INVALIDS

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Application December 20, 1930, Serial No. 503,736

2 Claims. (Cl. 128—33)

The object of this invention is to provide a new and improved form of exercising device for use by an invalid or by people advanced in years, although it can be used by young or able bodied people as well.

Another object of this invention is to provide a chair in which the invalid can sit at rest or in which he can exercise his legs, while remaining seated.

Another object is to make the seat movable so that it will rise and fall during the exercising of the legs.

This and other objects of the invention will be illustrated in the drawing, described in the specification and pointed out in the claims at the end thereof.

In the drawing:

Figure 1 is a sectional elevation of the chair and exercising device, the section being taken on the line 1*x*—1*x* of Figure 2.

Figure 2 is a front elevation of Figure 1 showing the parts on a smaller scale.

Figure 3 is a detail view of the electric motor and the gearing for driving the exercising device.

Figure 4 is a plan view of the seat.

Figure 5 is a modification of the apparatus shown in Figure 1 for use more especially to exercise the legs of a person in a standing position.

In the drawing like reference numerals indicate like parts.

In the drawing reference numeral 1 indicates the base of the chair having the long uprights 2 and 3 at the back and having the short uprights 4 and 5 at the front. The chair is also provided with a panel 6 at the back and the arm rests 7. On the base 1 is provided an electric motor 10 which drives a pinion 11. This pinion in turn meshes with the gear 12 carried on the shaft 13. This shaft 13 is mounted to rotate in bearings 14 and 15. On the end of the shaft are provided crank discs 16 and 17. These crank discs are each provided with wrist pins to which are connected the links 18 and 19. These links are attached to the under side of the foot rests or pedals, 20 and 21, which are pivotally mounted on the blocks 22 by a hinge 22A that slide on the guides 23A carried on the stationary cross piece 23 at the front of the chair.

As the shaft 13 revolves, the pedals 20 and 21 alternately swing back and forth and up and down in the arc of a circle as indicated by a dotted line in Figure 1. In this way exercise is given to the invalid's legs.

On the shaft 13 is provided a sprocket wheel driving a chain 26, which in turn drives another sprocket wheel on the shaft 27. Keyed on this shaft is a cam or eccentric 28 which revolves with the shaft and this shaft is mounted to rotate in bearings provided on the cross pieces 29.

In this chair is provided a seat 30, which is mounted to move up and down. At each corner of the seat is provided lugs 31, 32, 33 and 34 that engage in slots 35 and 36 in the uprights and by which the seat is guided and held in place in its up and down travel. Under the seat is a block 37 with which the eccentric 28 makes contact, and as the eccentric rotates it moves the seat up and down. At the same time, the pedals 20 and 21 are being moved up and down by the links 18 and 19, it being understood that the pedals and the seat are all moved from the same source of power and move in synchronism or with an unequal angular velocity of the shafts 13 and 27, as may be desired.

At the front of the base 1 is provided the standards 40 and 41 in which is carried a U shaped bar 42, the upper or horizontal portion of which forms a rail to which the invalid can hold while he is getting into or out of the chair.

In Figure 5 is shown a modification of this exercising device in which 51 indicates the base of the exercising device and 52 and 53 indicate the uprights which support the U shaped bar similar to that indicated at 42 in Figure 2. Below the base on the floor 54 is mounted the bearings 55 and 56 in which is carried the crank shaft 57. On this crank shaft is carried links 58 and 59 on top of which are provided the pedals 60 and 61. The links 58 and 59 are guided by the holes in the base through which they pass so that they are kept generally in an upright position. A gear wheel 62 is provided similar to the gear wheel 12 by which the crank shaft is driven by an electric motor or any other suitable source of power.

It will also be understood that if the chain 26 is taken off, the seat will remain stationary while the pedals move.

I claim:

1. In an exercising device the combination of a crank shaft having oppositely disposed crank discs thereon, a pedal on each crank disc, a link for each pedal, each link having one end connected to its pedal, a hinge device on the other end, guides on which the hinge devices slide, a chair, a cross bar thereon on which said guides are mounted, a seat on said chair, means for moving said seat up and down as the pedals are moved by said crank shaft.

2. In an exercising device the combination of a crank shaft having oppositely disposed crank discs thereon, a pedal on each crank disc, a link for each pedal, each link having one end connected to its pedal, a hinge device on the other end, guides on which the hinge devices slide, a chair, a cross bar thereon on which said guides are mounted, a seat on said chair.

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