

E. A. FRIEDLI.
EXERCISER.

APPLICATION FILED JAN. 14, 1914.

1,114,458.

Patented Oct. 20, 1914.

3 SHEETS-SHEET 1.

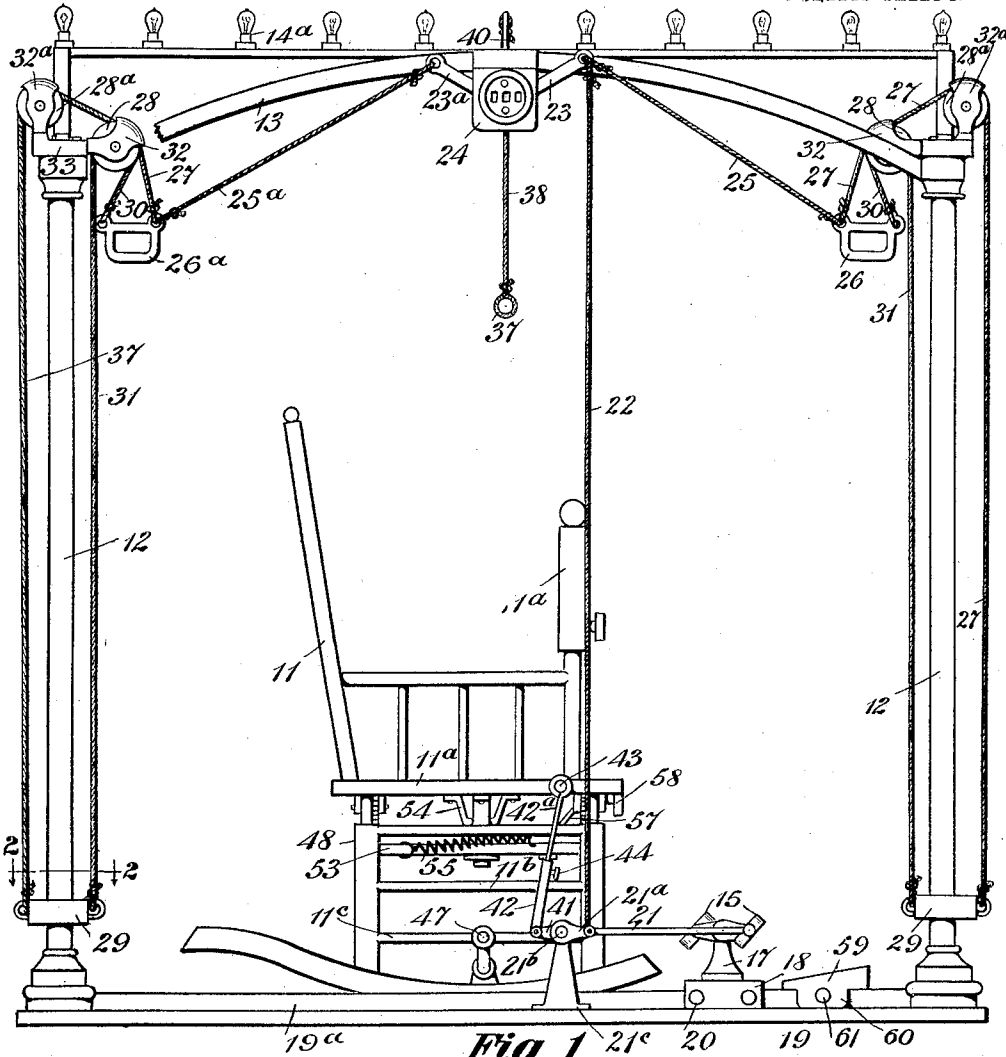
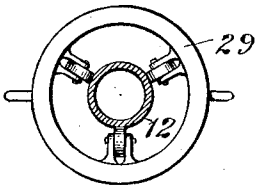


Fig. 1

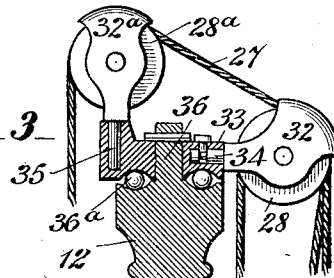
Fig. 2



WITNESSES

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Fig. 3



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3 SHEETS—SHEET 2.

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Fig 4

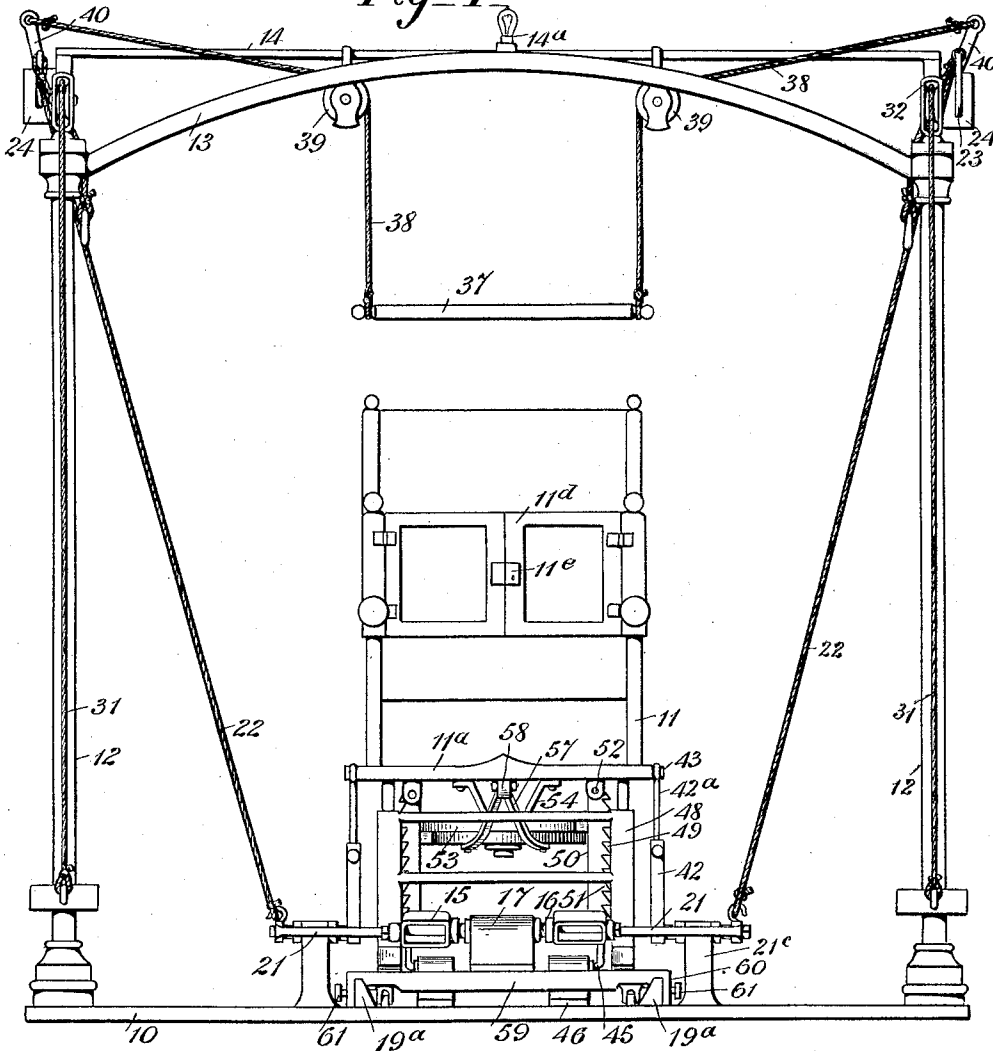
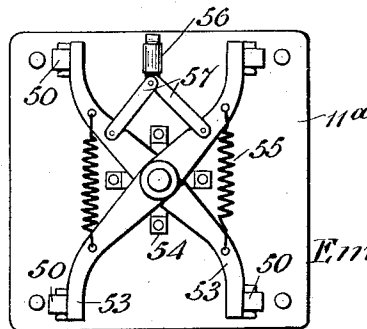


Fig 5



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3 SHEETS-SHEET 3.

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Fig. 6

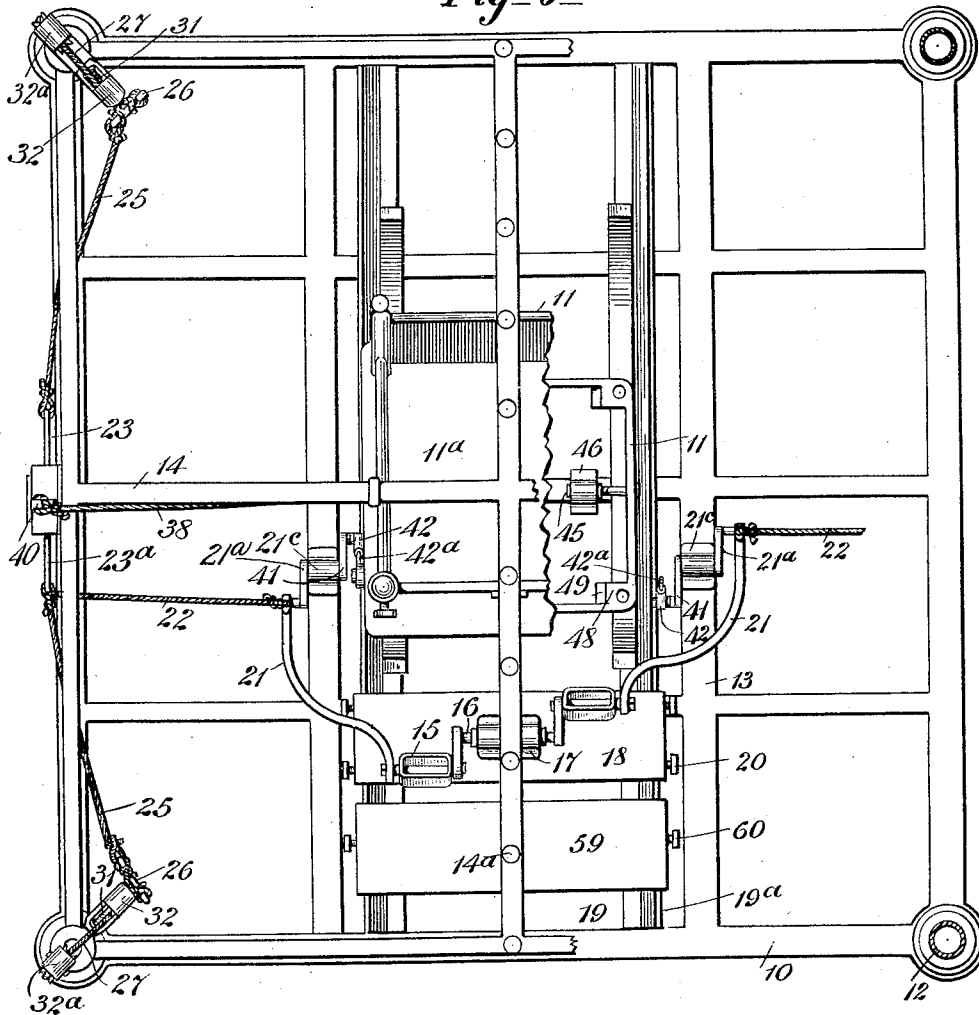
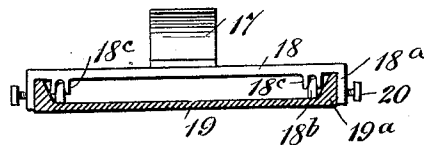


Fig. 7



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UNITED STATES PATENT OFFICE.

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EXERCISER.

1,114,458.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EMIL A. FRIEDLI, a citizen of the United States of America, and a resident of Canton, in the county of Stark and State of Ohio, have invented a new and Improved Exerciser, of which the following is a full, clear, and exact description.

An object of my invention is to provide a gymnasium exercising apparatus so arranged as to provide for a wide range of exercises.

A further object of the invention is to provide an exerciser that may be readily adapted to adults of both sexes, and for use by children.

In carrying out the objects of the invention use is made of a chair, and in convenient relation thereto, exercising media are arranged. Pedal devices are provided to be operated by a person seated in the chair, and to have movements in unison with the latter, and a flexible connection is made between the pedal devices and a register to register the motions. Hand holds are provided above the chair, both at the front and rear within reach of an occupant of the chair, and a flexible connection is made between the hand holds and a movable weight or other resisting means, connection being also established between the hand holds and the register. An overhead trapeze is provided directly above the chair and has connection with the register. The arrangement and assemblage of the parts are such that complete bodily exercise is possible.

The invention will be particularly explained in the specific description following.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of an exercising apparatus embodying my invention; Fig. 2 is a detail horizontal section on the line 2—2 of Fig. 1; Fig. 3 is a detail showing a sectional side view of the guiding means for the flexible connections between the hand holds and the weights; Fig. 4 is a front elevation; Fig. 5 is a detail showing in inverted plan view the adjusting devices at the underside of the chair seat, for effecting the vertical adjustment of the seat. Fig. 6 is a plan view with parts broken away; and Fig. 7 is a cross sectional detail

of the supporting means for a pedal device forming part of the apparatus.

In constructing an exerciser in accordance with the illustrated example, any suitable base 10 is provided, adapted to receive at the approximate center thereof, a rocking chair 11. Standards 12, here shown as four in number, are provided which support an overhead frame 13, there being auxiliary frame parts 14 to receive electric lamps 14^a.

On the base 10 in front of the chair, pedals 15 are mounted on a transverse shaft 16 having bearings in a vertical bracket 17, the base 18 of which extends transversely and is slidably supported on the horizontal guide 19. As here shown, the guide 19 has flanges 19^a at the sides, which extend upwardly, and the base 18 has at the sides thereof, downwardly extending flanges 18^a embracing the flanges 19^a of the guide 19. There may be provided also, running wheels 18^b supported in depending lugs 18^c on the under side of the base 18, and running on the guide 19. Set screws 20, or any other suitable fastening means may be employed to bind the base 18 in the adjusted position.

The pedals 15 connect at their outer ends with side links 21, the opposite ends of which connect with crank arms 21^a on a shaft 21^b (Fig. 1) mounted on bearing standards 21^c, which shaft has operative connection with the chair, as hereinafter described, to produce pedal movements in unison with the rocking movements of the chair. A rope 22 or other flexible connection extends from the rear end of each link 21, or from the crank arms 21^a, upwardly to the operating arm 23 of any known form of register 24.

A flexible connection 25 extends from each register arm 23 forwardly and downwardly to a hand hold 26 in front of the chair, and above the latter. A flexible connection 27 runs from one end of each hand hold 26 over pulleys 28, 28^a, downwardly to a weight 29, one of said weights being provided on each front standard 12, so that each of the hand holds 26 will connect with a weight. A second flexible connection 30 extends from the opposite end of each hand hold 26 over the adjacent pulley 28, and downwardly to a connection with the opposite side of the weight 29. The arrangement is such that a pull on the hand holds will be communicated to the register arms 23 at each side of the

apparatus, and at the same time the pull will be resisted by the vertically sliding weights 29. At the rear of the chair and above the same, additional hand holds 26^a are provided and connected by a rope 25^a to a second register arm 23^a in operative connection with the register 24. The rear hand holds 26^a are the same in all respects as the front hand holds 26, being connected with weights 29 on the rear posts 12, by the described flexible connections 27, 30, which run over pulleys 28, 28^a, similarly to the front connection.

In order that the pulleys 28, 28^a may accommodate themselves to the varying angle of the pull on the hand holds, each pair of said pulleys is swiveled on its respective base, and each pulley is capable of individual swiveling movement, as seen best in Fig. 3. Thus the pulleys are mounted in housings 32, 32^a, presenting stems 34, 35, mounted to turn on their own axes in a rung 33, which is swiveled by a stud 36 on the post 12, there being ball bearings 36^a, if desired, beneath the rung 33.

Above the chair 11, between the front and rear hand holds is a transverse trapeze 37, the suspension ropes 38 of which run over pulleys 39, each rope 38 being connected to an arm 40 on the adjacent register 24. The arrangement is such that an occupant of the chair may readily reach the trapeze and the movements of the same will be indicated by the register 24. The connection between the crank shaft 21^b and the chair 11 may be effected through the medium of a crank arm 41 on the said shaft 21^b, the crank arm being pivoted at its outer end to the lower end of a link 42, the upper end of which is pivoted, as at 43, to the chair seat 11^a. A link 42 is provided at each side of the chair and is made in telescoping sections, the upper section sliding in the lower section, and there being a set screw 44 to hold the sections in adjusted position. Thus the links may be accommodated to the vertical adjustment of the chair seat. To prevent creeping of the chair as it is rocked, a crank shaft 45^a is mounted to rock in a bearing 46 at each side of the chair, and the crank arm 47 thereof has a bearing at 11^b in the chair rung 11^c.

In order to support the chair seat adjustably, the base 48 is provided with vertical series of ratchet teeth 49, and depending bars 50 have corresponding ratchet teeth 51 to engage the teeth 49. The bars 50 are pivoted at their upper ends, as at 52, to the chair seat 11^a, and a pair of crossed arms 53 are pivoted centrally to hangers 54. The arms 53 are connected by retractile springs 55 which tend to so turn the said arms as to cause the same to press outwardly against the backs of the depending pivoted bars 50, to maintain the latter in engagement with the teeth 49 on the base. To withdraw the

bars 50 out of engagement with the teeth 49 and permit the seat to be raised or lowered, a pull handle 56 is connected by links 57 with the respective arms 53.

On the guide 19 in front of the pedals 15 and base 18, a foot rest 59 is slidably supported, there being side lugs or flanges 60 on said foot rest, provided with set screws 61 adapted to engage the guide flanges 19^a of the guide 19. The said foot rest is also preferably provided with running wheels or rollers 59^a similar to the wheels 18^b on the base 18.

The chair 11 desirably is provided with hinged closures 11^d at the front, the closures being equipped with any suitable lock or latch 11^e.

By the described construction the necessary adjustments are provided to accommodate the apparatus to the size of the user. It will be observed that the apparatus makes possible not only effective pedal and arm exercises, but complete bodily movements, since the occupant of the chair in gripping the hand holds, or the trapeze, and utilizing the pedals or foot rest, may perform various body movements.

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

1. In an exerciser, a support, exercising means on the support at the front, exercising means on the support at the back, and a chair held on the support rockable back and forth between the respective exercising means, the exercising means being within the reach of a person seated in the chair.

2. In an exerciser, a support, vertically movable weights on the support at the front and at the rear, exercising elements at the front and rear, said elements being flexibly connected with the respective weights, and a rocking chair on the support below the exercising elements and adapted to rock back and forth between the latter, the exercising elements being within the reach of a person seated in the chair.

3. In an exerciser, a support, a rockable seat mounted on the support, exercising pedals revolvably mounted in front of the seat, and operative connections between the said pedals and seat to cause the seat and pedals to be moved in unison.

4. In an exerciser, a support, a rockable seat mounted on the support, exercising pedals rockably mounted on the support in front of the seat, rockable means connected with the chair, to be operated with the latter, connections between the said rockable means and the exercising pedals, a register, and means common to both the pedals and rockable means and establishing a connection between the same and the register.

5. In an exerciser, a support, a register, exercising pedals, a rocking chair, means

connecting the register with the pedals and chair, to be operated by either and connections between the pedals and chair to cause the same to move in unison.

5 6. In an exerciser, a support, exercising pedals, a rock shaft on the support, connections between the rock shaft and the pedals, a rocking chair, link connections between the chair and rock shaft, a register, and
10 means connecting the register and rock shaft.

7. In an exerciser, a support, a rockable chair on the support, a foot-operated exercising means on the support in front of the chair, a rockable connection between the chair
15 and support, and an operative connection between the said exercising means and rockable chair.

8. In an exerciser, a support, a chair on the support and exercising means on the support adjacent to the chair, the chair comprising a base rockably connected with the support to rock relatively to the exercising means, and a seat vertically adjustable relatively to the base and to the exercising
25 means, the exercising means being within reach of a person seated in the chair.

9. In an exerciser, a support, exercising means on the support, a chair base rockably connected with the support, to rock relatively to the exercising means, a chair seat vertically adjustable on the chair base, and adjustable connections between the chair seat and the exercising means.

10. In an exerciser, a support, exercising means on the support, a chair base rockably connected with the support, a chair seat connected with the exercising means to conform to the movements of said means, opposed, mating toothed bars on the seat and base, one of said bars being movable relatively to the other to move into or out of engagement with the latter, and means on the base movable to positions to press the movable bar into engagement with the other,
45 or to permit disengagement.

11. In an exerciser, a support, exercising means on the support, a chair base rockably connected with the support, a chair seat operatively connected with the exercising means, toothed uprights on the base, depending toothed bars pivoted to the seat and adapted to engage the uprights, pivoted crossed arms on the base, spring means associated with the arms, for pressing the
50 same against the pivoted bars, and means to

55 move said arms against the tension of the spring means.

12. In an exerciser, a support, a chair base rockably connected with the support, a chair seat, toothed uprights on the base, depending toothed bars on the seat movable to engage and disengage the uprights, spring-pressed means acting on the said depending bars for pressing the same into engagement with the uprights, exercising pedals, and operative connections between the pedals and seat to cause the same to move in unison.

13. In an exerciser, a support having a flanged member thereon at the bottom, an exercising means comprising a base, means to secure the base to the said flanged member, a bearing on the base, a shaft mounted on said bearing and exercising pedals on the shaft, a rocking chair, and means connecting the rocking chair with the shaft.
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14. In an exerciser, a support, a rocker chair, a rockable connection between the lower part of the chair and the support, rockable connections between the support and the chair at a point adjacent to the chair
80 seat, an exercising device, and operative connections between the exercising device and the rocking chair to cause the same to move in unison.

15. In an exerciser, a support, exercising means yieldingly mounted on the support at the front, exercising means yieldingly mounted on the support at the back, and a seat rockably mounted on the support and adapted to rock back and forth to and from the respective exercising means into positions for the said exercising means to be grasped and manipulated by a person seated in the chair.

16. In an exerciser, a support, a chair
95 rockably mounted on the support, a register, exercising pedals connected with the register, and a hand-operated exerciser connected with the register, the pedals and hand exerciser being arranged adjacent to
100 the chair.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EMIL A. FRIEDLI.

Witnesses:

WM. FELLER,

G. ZUR LINDEN.