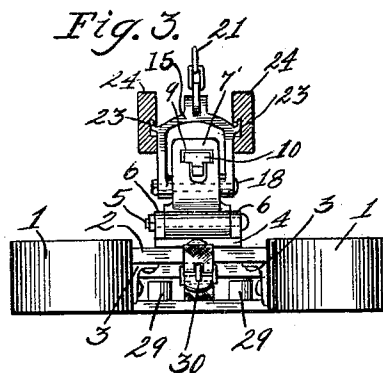
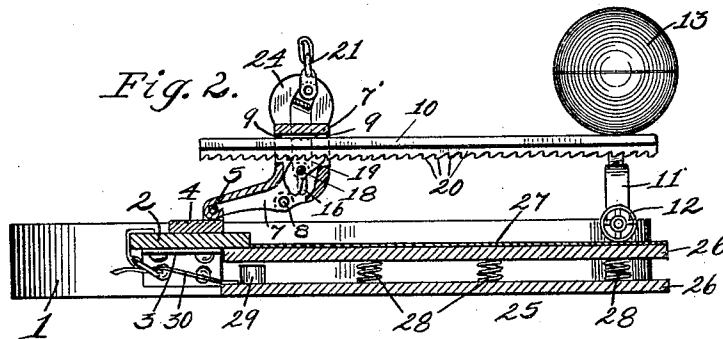
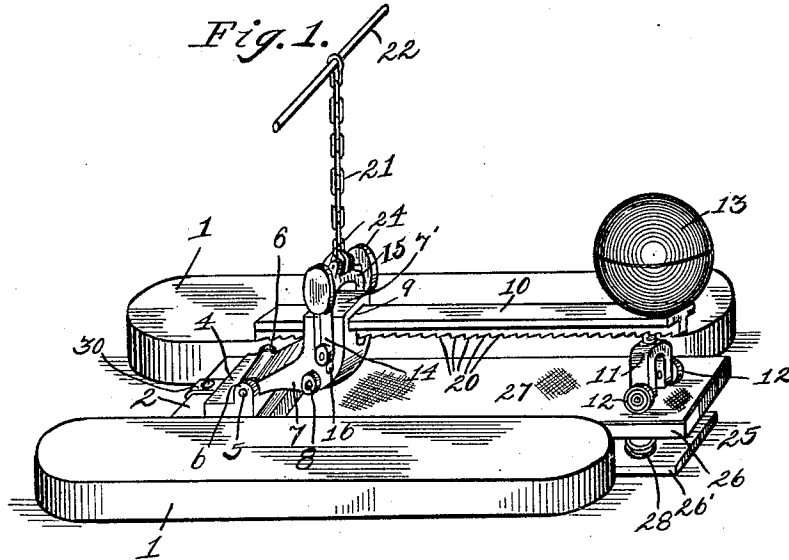


J. ERTL.  
EXERCISING APPARATUS.  
APPLICATION FILED OCT. 4, 1909.

954,790.

Patented Apr. 12, 1910.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 4.

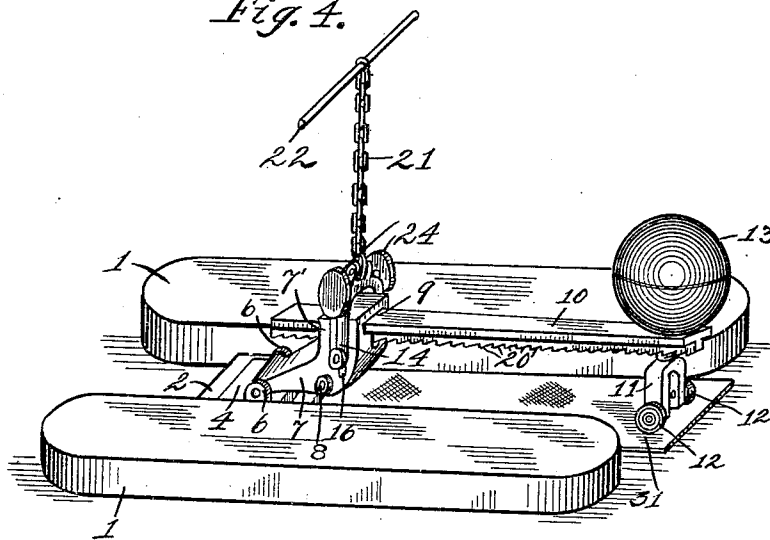


Fig. 5.

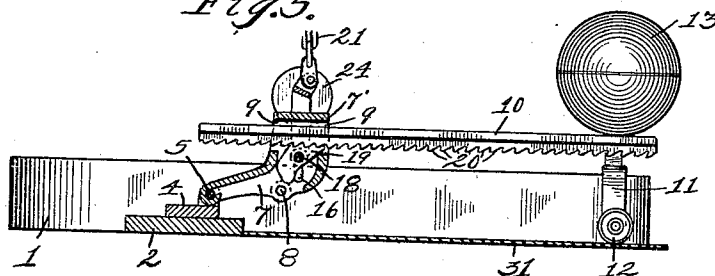
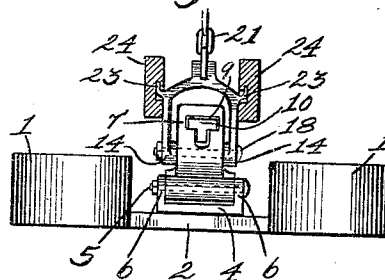


Fig. 6.



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# UNITED STATES PATENT OFFICE.

JOSEPH ERTL, OF CHICAGO, ILLINOIS.

## EXERCISING APPARATUS.

954,790.

Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed October 4, 1909. Serial No. 520,856.

*To all whom it may concern:*

Be it known that I, JOSEPH ERTL, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have  
5 invented certain new and useful Improvements in Exercising Apparatus, of which the following is a specification.

My invention relates to improvements in exercising apparatus.

10 The object of my invention is the provision of an exercising device by means of which the strength of a person as to his lifting power, may be exactly ascertained.

Another object is the provision of a device  
15 of the character mentioned which will be effectual when properly used and which will be of durable and economical construction.

Other objects will appear hereinafter.

With these objects in view my invention  
20 consists in a weight lifting device characterized as above mentioned and in certain details of construction and arrangement of parts all as will be hereinafter fully described and particularly pointed out in the  
25 appended claims.

My invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

30 Figure 1 is a perspective view of my device in its preferred form, Fig. 2 is a vertical longitudinal section, Fig. 3 is a rear end elevation thereof showing the detachable weights embodied therein in section, Fig. 4  
35 is a perspective view of a slightly modified form of my device, Fig. 5 is a view thereof similar to Fig. 2, and Fig. 6 is a view similar to Fig. 3.

Referring now to the drawings 1—1 indicate the parallelly disposed base members of the device the same as observed being preferably of comparatively great dimensions. Secured to and extending between the members 1—1 close to the rearward extremities  
45 thereof, is a cross member 2 the same being mounted close to the upper surfaces of said base members upon metallic supporting brackets 3. Mounted upon said cross member is a bearing bracket 4. Having its rearward  
50 extremity pivotally mounted upon a pin 5 the respective extremities of which detachably rest in ears 6 provided upon the bracket 4, is an angular pivotal housing or member 7. Transversely alining perforations 8 adapted to receive the pin 5 are provided in the forward portion of the side

walls of the member 7 whereby the latter, if desired, may be pivoted to the ears 6 with said perforations as the center of rotation. Formed in the front and rear walls of the  
60 substantially vertically disposed upper portion 7' of the member 7 are similar horizontally alining openings 9. Having its rearward end extending through said openings, the latter being of a form similar to the cross  
65 sectional form thereof but of slightly larger cross sectional dimensions effecting a sliding connection between the same and the member 7, is a substantially horizontally disposed weight lever 10. The forward extremity of  
70 the lever 10 is supported upon a depending fork 11 at the lower extremity of each of the limbs of which is provided a metallic wheel or roller 12. Mounted upon the forward end of the lever 10 directly above the sup-  
75 porting fork 11 is a member 13 preferably spherical in form and of any desired weight.

Arranged above the member 7, the ends 14 thereof depending at either side of the latter to embrace the same, is an inverted U-  
80 shaped member 15. Having its respective ends secured in the lower extremities of the arms 14, the same extending therebetween through vertically elongated slots 16 formed in the side walls of the member 7, is a bar or  
85 pin 18. Rockingly mounted upon the latter is a pawl 19 the upper end thereof being so formed as to adapt the same to engage the teeth 20 of a ratchet bar formed upon the under side of the lever 10. Said pawl is so  
90 formed that by its own gravity, the same normally rests in a vertically disposed position. Upon elevation of the member 15, said pawl will be brought first to engage the teeth 20. Upon further elevation, the upper  
95 end thereof will be rocked forwardly to a position as clearly shown in Figs. 2 and 5, causing the forward feeding or forcing of the lever 10 in its holder 7. It is therefore clear that upon each vertical actuation or  
100 reciprocation of the member 15 the lever 10 will be fed forwardly a certain distance, and upon sufficient upwardly directed lifting or force being applied thereto, that the weight will be elevated. A chain or other suitable  
105 connecting means 21 having its lower extremity secured to the member 15 and its upper extremity provided with a suitable grip or handle 22, provides means whereby the above described actuation may be man-  
110 ually effected.

In use the operator stands with his feet

on the base members 1 and raises weight 13 by means of handle 22, his own weight and the re-action from his pull serving to hold base members 1 in position.

5 With the provisions above described, it is evident, that, when the weight lever is positioned in the member 7 with the outer weighted end thereof close to the pivotal point of the latter, the force applied to the grip 22 required to lift said end of the lever will not be great. Upon each reciprocation of the member 7 however said weight lever, as before described, will be gradually fed outwardly, in which event the force needed to elevate the lever will evidently be correspondingly gradually increased. By providing two points of pivotal connection for the pivotal member 7 with the bracket 4, the range of the graduating forces required in the lifting of the weighted lever in the different positions at which the same may be arranged relative to its fulcrum, is evidently increased. It has been found in using the device that with each actuation of the lifting member 15, especially when the weight lever is close to its outer limit of movement in the holder 7, too great an increase is occasioned in the lifting force required to elevate the lever. Because of this, without further provision, the exact lifting strength or power of an operator of the device could not be ascertained. In order to make possible such ascertainment I provide the member 15, preferably at either side thereof, with projecting hooks 23 upon which may be hung weight members 24 of varying sizes. With such provision it is clear that in use, when the operator of the device has reached a point during the course of his exercising at which he cannot lift the weight lever, he may set back the latter to its immediate previous position in the holder or to a position at which it will be possible for him to lift the weight lever. Now by applying the members 24 as stated, the combined weights of the latter being less than the weight increase in the lever incident to the next feeding thereof as caused by the actuation of the member 15, the exact lifting strength of the operator may evidently be exactly ascertained.

Arranged between the base members 1—1 forward of the cross member 2, is a spring platform 25 provided for the support of the forward rolled end of the weight lever. Comprised in said platform are two parallelly disposed members 26 and 26' the former, which is covered upon its upper side with a resilient, preferably rubber mat 27, being supported upon compression springs 28 arranged upon the upper side of the latter. Blocks 29 prevent the depression of the rearward end of the latter. Said platform is held in position by a spring and buckle 30 arranged as shown.

With the provision of a platform as described all slamming or jarring of the weight lever in returning to normal position after elevation thereof will be eliminated. In the Figs. 4 and 5 is shown a slight modification in this regard. In this form the spring platform is dispensed with and merely a rubber or resilient mat 31 employed in its stead. This elimination evidently necessitates the lowering in position of the cross member 2 relative to the base members 1—1.

It will be observed that the base members 1 are adapted to lie flat against a floor or other supporting surface and furnish a convenient support for the feet of the operator. By this arrangement the reaction from the force applied by the operator is transmitted to said base members to maintain the apparatus in position during operation.

While I have shown what I deem to be the preferable form of my device, I do not wish to be limited thereto, as there might be various changes made in the details of construction and arrangement of parts without departing from the spirit of the invention comprehended within the scope of the appended claims.

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

1. An exercising machine comprising base members adapted to serve as foot rests for an operator, a housing fulcrumed on said base members, a weighted lever longitudinally slidable in said housing, supporting rollers carried by the weighted end of said lever, feeding mechanism carried by said housing and adapted to feed said lever there-through, and an operating handle connected with said feed mechanism, substantially as described.

2. An exercising machine comprising substantially parallelly disposed base members adapted to support the feet of the operator, a weighted lever pivoted to said base members so as to swing between the same, lifting means for said lever, feeding means for said lever operated by said lifting means, detachable weight members adapted to be hung so as to exert their weight upon said lifting means, rollers supporting the weighted end of said lever, and a resilient support for said rollers when said lever is in normal position, substantially as described.

3. An exercising machine comprising substantially parallelly disposed elongate base members adapted to support the feet of the operator, a cross member secured to and extending between said base members, a pivotal housing fulcrumed to said cross member, a weighted lever slidable in and extending through said housing, lifting means for said lever, feeding means for said lever mounted in said housing operated by said lifting means, weight members adapted to

be hung upon said lifting means, rollers supporting the weighted end of said lever, and a resilient support for said rollers, substantially as described.

- 5 4. The combination with an exercising machine comprising a fulcrumed weighted lever, lifting means for said lever and feeding means therefor operated by said lifting means, of a supporting base for the fulcrumed end of said lever, said base comprising  
10 parallelly disposed elongate members adapted to support the feet of the operator and a transversely disposed cross piece connecting the same, said lever being connected  
15 to said cross piece so as to swing in a vertical plane between said elongate base mem-

bers, rollers supporting the weighted end of said lever, a spring platform arranged between said base members forward of said cross piece adapted to serve as a support for  
20 said rollers, means connecting said platform with said cross piece, and movable weights adapted to be hung upon said lifting means, substantially as described.

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

JOSEPH ERTL.

Witnesses:

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JOSHUA R. H. POTTS.