

1,032,425.

Patented July 16, 1912.

2 SHEETS—SHEET 1.

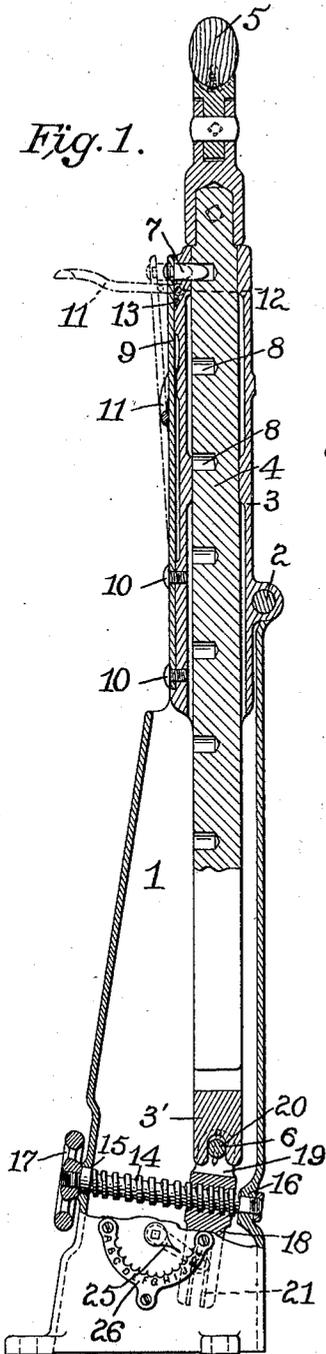


Fig. 1.

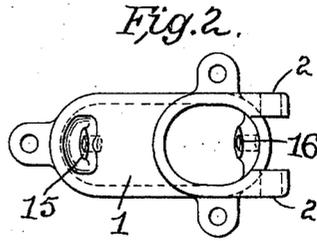


Fig. 2.

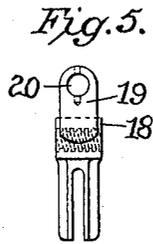


Fig. 5.

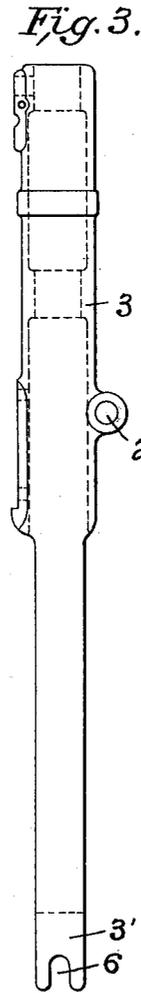


Fig. 3.

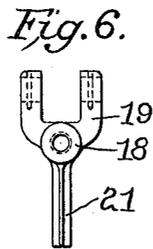


Fig. 6.

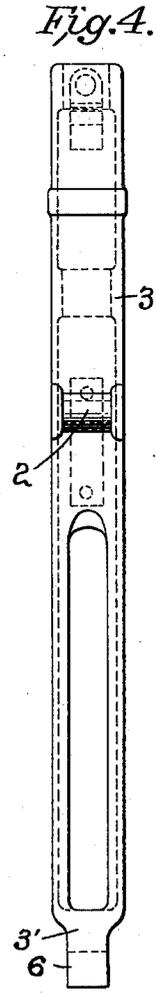


Fig. 4.

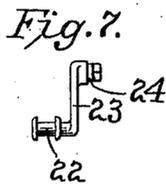


Fig. 7.

Attest:

Edw. R. Tolson,
Benj. M. Stahl,

Inventor:

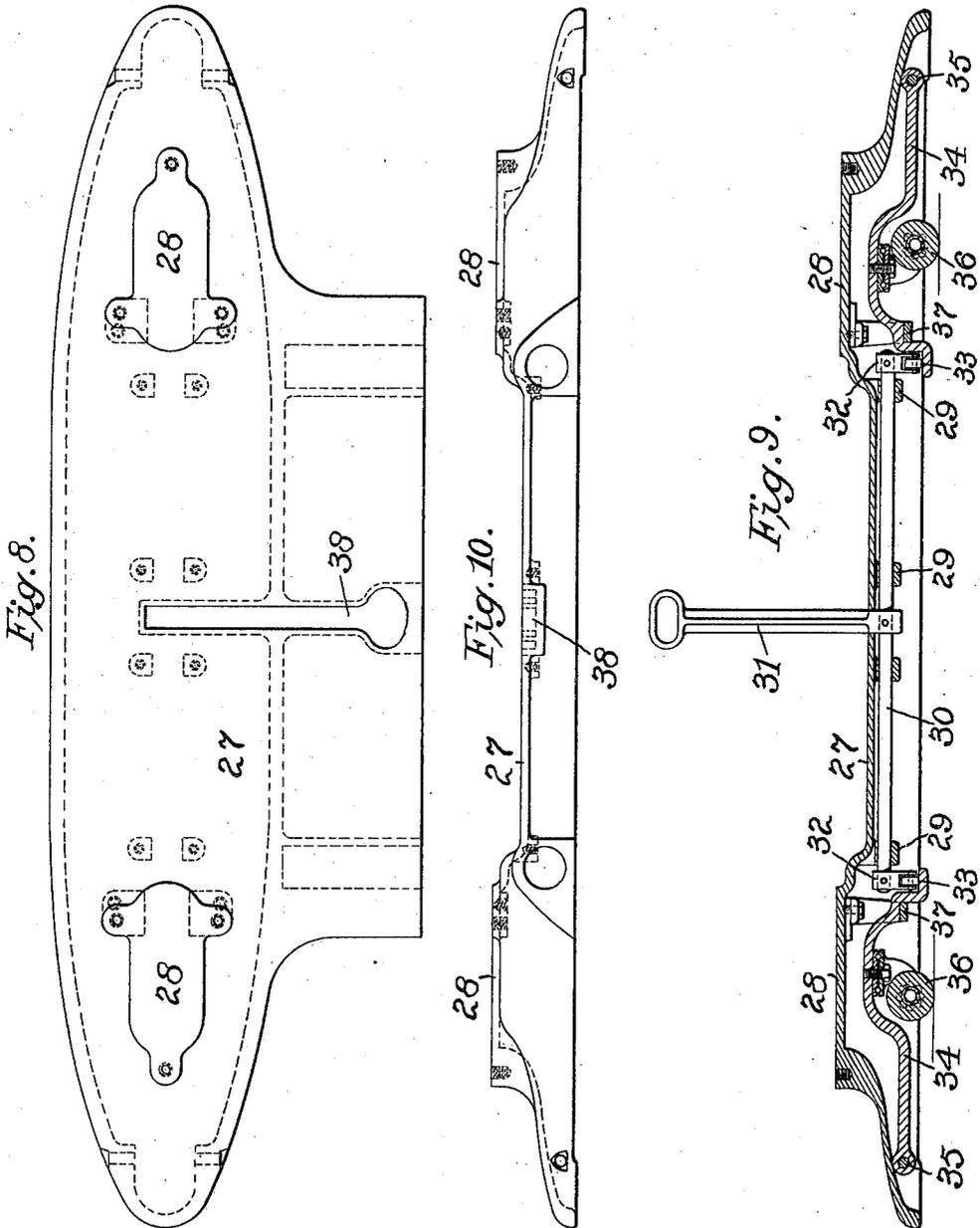
Milton B. Reach,
 by *Spear, Middleton, Donahue & Spear*
Attys.

M. B. REACH.
 PARALLEL BARS.
 APPLICATION FILED MAY 29, 1911.

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Patented July 16, 1912.

2 SHEETS-SHEET 2.



Attest:
Edw. R. Tolson
Ben. M. Hall

Inventor:
Milton B. Reach,
 by *Spear, Waddekin, Doolittle & Spear*
 Attys.

UNITED STATES PATENT OFFICE.

MILTON B. REACH, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO A. G. SPALDING & BROS. MAN'G CO., A CORPORATION OF MASSACHUSETTS.

PARALLEL BARS.

1,032,425.

Specification of Letters Patent.

Patented July 16, 1912.

Application filed May 29, 1911. Serial No. 629,999.

To all whom it may concern:

Be it known that I, MILTON B. REACH, citizen of the United States, residing at Springfield, Massachusetts, have invented certain new and useful Improvements in Parallel Bars, of which the following is a specification.

My invention relates to exercising apparatus and particularly to parallel bars and the means employed for adjusting the parallel bars in relation to each other to increase or decrease the distance between them, and to a caster arrangement.

The invention consists in the features and combination and arrangement of parts hereinafter described and more particularly pointed out in the claims.

In the accompanying drawings Figure 1 is a vertical section through the support for the parallel bars with my improved adjusting means in connection therewith. I have thought it necessary to show only one bar and its support, it being understood that four supports and two bars are employed. Fig. 2 is a plan view of the supporting standard; Figs. 3 and 4 show respectively a side elevation and a front view of the laterally adjustable swinging bracket or support which is mounted in the standard and in which the vertical adjustable post is carried; Figs. 5 and 6 are views of the combined nut and fork forming one part of my improved adjusting means. Fig. 7 is a detail view. Figs. 8, 9 and 10 show the base and caster supports.

In carrying out my invention, I aim to provide a parallel bar structure in which the bars, when adjusted laterally toward or from each other, will be held securely in their adjusted position against movement in either direction, thus avoiding the possibility of accident to the person using the exercising apparatus.

In one form of apparatus as heretofore employed, the supports, when adjusted, required the attendant or the person using the machine to operate a setting device, as a set screw or bolt, in order to hold the support in its adjusted position. With this form of holding device reliance must be had for security and certainty upon the care exercised by the person adjusting the support in order that a firm holding may be secured. I design to provide such an ad-

justing device that will hold the support when adjusted without requiring any special setting action of said device or the exercise of any special care on the part of the operator, to lock this device after the proper position has been reached.

In the accompanying drawings, 1 indicates a hollow standard having pivotally mounted therein at 2 a swinging support 3 in which the post or bar 4 carrying the parallel bar 5 is vertically adjustable to raise and lower the said parallel bar as may be necessary to suit the height of the user. The swinging support 3 comprises a hollow or substantially tubular upper portion, as shown in Figs. 3 and 4, and a solid lower portion 3' which is of less width than the diameter of the upper tubular portion, the lower end of the said support terminating in a fork 6. The inner post or bar 4 is vertically adjustable within this swinging support, and may be held at any desired height by a locking pin 7 engaging either one of the sockets 8 in the bar or post, the said locking pin being carried by a spring 9 screwed to the swinging support 3 at 10, and being controlled by a lever 11 pivoted at 12 to the upper part of the swinging post and having a pin 13 which, when the lever is swung outwardly to the position shown in dotted lines, Fig. 1, will press the spring 9 laterally to withdraw the locking pin 7 from the socket 8, and then the supporting post or bar 4 may be adjusted vertically, as may be desired. For effecting the lateral adjustment of the swinging support 3 with the vertically adjustable post, the following mechanism is provided: A screw threaded bar or shaft 14 is mounted in bearings 15, 16, near the lower end of the standard, the said screw shaft or rod being slightly inclined upwardly. This shaft has on its forward end a hand wheel 17 and carries mounted thereon a nut 18 threaded to correspond with the threads of the screw shaft, the said nut having an upwardly projecting forked portion 19 embracing the lower end of the swinging support 3, and carrying a pin 20 passing through the fork thereof. This nut is also provided with a downwardly extending forked portion 21 which receives the cranked end 22 of an arm 23, which is pivotally mounted at 24 in the wall of the hollow standard and carries a pointer 25

on the outer end of its journal adapted to move over a scale 26 which bears thereon suitable numbers or letters to indicate certain readings of a chart which accompanies the apparatus, giving a certain distance between the parallel bars for certain heights. It will be seen from the structure described that it is simply necessary to turn the hand wheel and rotate the screw in order to effect the lateral adjustment of the parallel bar, the nut 18 being caused to travel on the said screw and carrying with it the swinging support because of the engagement of the fork thereof with the fork of the nut. The nut is guided or held from rotation by its upper fork engaging the sides of the swinging support. As the nut travels, it operates the pointer through the described connection to make it register with the different indications on the scale.

It will be understood that the screw and nut construction will hold the swinging support securely in any position to which it may be adjusted, and no special care is necessary on the part of the operator to accomplish the holding of the support in the position to which it is moved. In other words, with my adjusting means it is not necessary for the operator to first adjust the support and then exercise care to fix it in this adjusted position, but, on the contrary, he need only see that the support is adjusted to its proper position and the screw will then hold it in this position without further attention from the operator.

I also provide a caster arrangement in which the casters are mounted on movable supports adapted to be pressed downwardly to elevate the base above the floor, and allow the apparatus to rest upon the casters so that it may be moved from place to place, and when the desired position has been reached the casters are adjusted to allow the base to rest firmly upon the floor, said casters then assuming a position within the base. As shown in Fig. 8, the base 27 has surfaces at 28 for receiving the standards 1 and on its under side, as shown in Fig. 9, it is provided with bearings 29 for a rock shaft 30, which is operated by a lever 31 extending up through the base. The rock shaft has arms 32 at its ends carrying rollers 33 to bear upon the ends of levers or carrier plates 34 pivoted within the hollow base at 35, these plates having mounted thereon the casters 36. The downward movement of the carriers or supports 34 for the casters is limited by brackets or stops 37 depending from the under side of the base. When the lever 31 is to be in the position shown in Fig. 9, the casters are thrown below the lower edge of the base, and the apparatus may then be rolled from place to place, but when it is desired to use the parallel bar structure for exercising, the levers 31 are

thrown down, there being one at each end of the apparatus, so that the base will then rest on the floor, the casters then being located within the base at or above its lower edge. It will be observed that by my arrangement a single operating lever 31 controls both of the casters at one end of the machine, for which purpose the rock shaft 30 extends laterally in respect to the apparatus, and a caster is controlled from each end of this rock shaft. The base plate arrangement 27, with the caster structure just described, is duplicated at the other end of the machine, suitable connecting means being provided between the base casting at one end and that at the other end of the apparatus. The levers 31, when in their lowermost position, fit in recesses 38 in the base castings, so that they will be entirely out of the way.

I claim as my invention:—

1. In combination in apparatus of the class described, a standard, a swinging support mounted therein and carrying the parallel bar, and means for adjusting the swinging support by imparting a movement thereto, said means serving also to hold the support in its adjusted position, substantially as described.
2. In apparatus of the class described, the combination of a standard, a swinging support, a screw rod or shaft mounted in the standard, a nut on the screw rod, and a connection between said nut and the swinging support, substantially as described.
3. In combination in apparatus of the class described, a standard, a swinging support having a forked lower end, a post or bar adjustable vertically in the swinging support, a screw shaft or rod mounted in the standard, and a nut thereon having a forked end embracing the lower end of the swinging support, with a pin passing through the fork thereof, substantially as described.
4. In apparatus of the class described, a standard, a swinging support, adjusting means connected with the lower end of the swinging support and mounted in the standard, a rotary indicator mounted in the standard, and a connection between the same and the adjusting means, substantially as described.
5. In combination in apparatus of the class described, a standard, a swinging support, a screw shaft mounted in the standard, a nut thereon connected with the swinging support, and an indicator also connected with the nut.
6. In combination a standard, a swinging support mounted therein, a screw shaft mounted in the standard, a nut thereon having a member engaging the lower end of the swinging support, an indicator mounted in the standard, the said nut having a fork,

and a crank arm between the said fork and indicator, substantially as described.

5 7. In combination in apparatus of the class described, a standard, a swinging support, and a screw rod in connection with the swinging support for imparting movement thereto, and for positively holding the swinging support in adjusted position, substantially as described.

10 8. In combination in apparatus of the class described, a base, a rock shaft supported in bearings on the base, casters at opposite ends of the rock shaft and means intermediate the rock shaft, and the casters, for
15 throwing the said casters at the opposite ends of the rock shaft, into use simulta-

neously when the shaft is turned, and means for turning the shaft.

9. In combination in apparatus of the class described, a base, a rock shaft mounted
20 in bearings on the base, a plate at each end of the rock shaft pivotally mounted, casters carried by said pivoted plates, and arms projecting from the rock shaft for operating
25 the pivoted plates simultaneously, substantially as described.

In testimony whereof, I affix my signature in presence of two witnesses.

MILTON B. REACH.

Witnesses:

BEATRICE BARTLETT,
E. P. FINIGAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."