Nov. 7, 1950 T. A. HALL 2,529,017

AMUSEMENT AND EXERCISING APPARATUS

Filed June 1, 1948

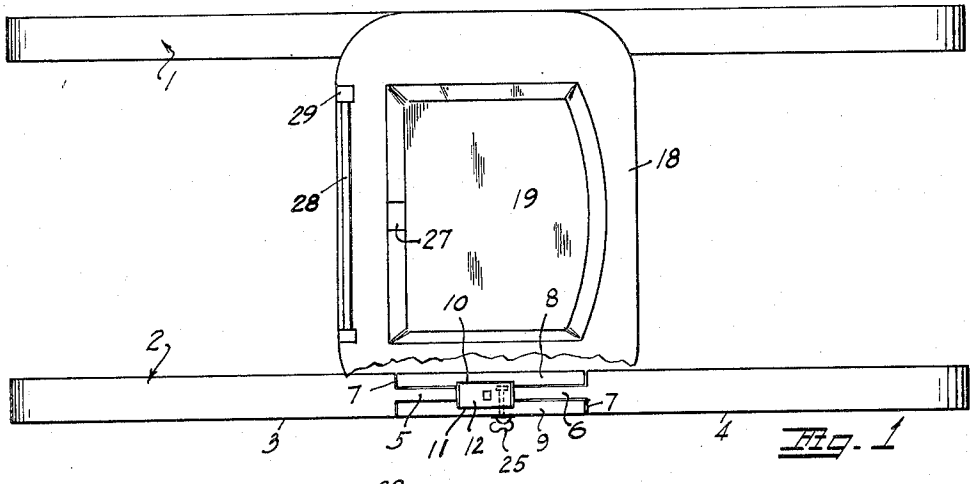


Fig. 1

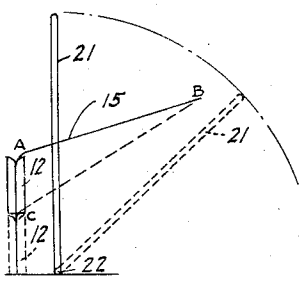


Fig. 5

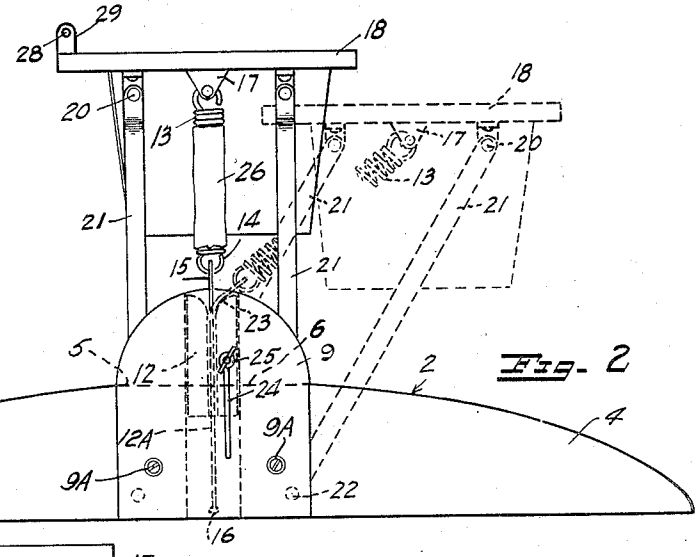


Fig. 2

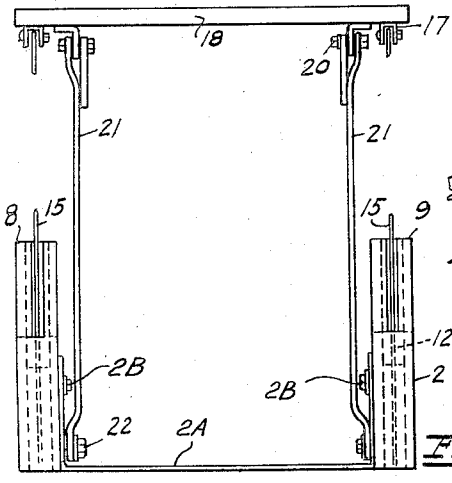


Fig. 3

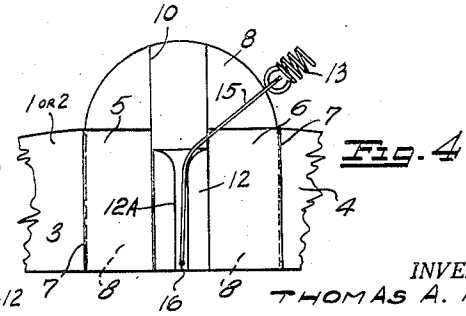


Fig. 4

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AMUSEMENT AND EXERCISING APPARATUS

Thomas A. Hall, Hillsdale, Oreg.

Application June 1, 1948, Serial No. 30,378

2 Claims. (Cl. 155—61)

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This invention relates to improvements in combination amusement and exercising devices of the type shown and described in my application filed November 9, 1944, under Serial No. 562,621 now abandoned.

It is one of the principal objects of the present invention to provide apparatus of this character which is of simple, efficient, durable and inexpensive construction, safe in its operation and conveniently adjustable to the weight of the occupant and to also vary its operative range in accordance with the loads applied to it by occupants of different weights.

These and other objects will apepar as my invention is more fully hereinafter described in the following specification, illustrated in the accompanying drawing, and finally pointed out in the appended claims.

In the drawing:

Figure 1 is a top plan view of an exercising and amusement device made in accordance with my invention and with a fragment broken away for convenience of illustration.

Figure 2 is a side elevation of Figure 1.

Figure 3 is an end elevation of Figure 2.

Figure 4 is a detail view of spring-tensioning means with one of its vertical cover plates removed for convenience of illustration.

Figure 5 is a diagrammatic view illustrating the spring-tensioning means in operation.

Referring now more particularly to the drawing:

The base of the device is made up of two longitudinal members indicated at 1 and 2 secured in parallel spaced relation to each other by one or more cross members indicated at 2A secured by bolts 2B to the longitudinal members. Each longitudinal member is made up of two aligned members 3 and 4—reduced in thickness at their inner ends as at 5 and 6 to form recesses 7 to receive two spaced apart vertical plates 8 and 9 which are secured by bolts 9A to the said reduced inner ends 5 and 6 of the longitudinal members. The plates are grooved vertically throughout their length to form opposing channels 10 and 11 within which is slidably mounted for vertical movement a block 12 for regulating the amount of tension on springs 13 whose one ends are attached as at 14 to one end of cables 15 which extend through the adjusting blocks 12 and anchored at their opposite ends as at 16 to the lower edge of the base. The opposite ends of the springs 13 are pivotally attached by means of brackets 17 to the underside of frame 18 from whose underside is suspended, by stapling, tacking or the like,

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any approved form of fabric seat generally indicated at 19. The frame 18 is pivotally mounted as at 20 to the upper ends of supporting columns 21 whose lowermost ends are pivotally attached to the base as at 22 whereby the frame and supporting columns at each side form three sides of a parallelogram swingably attached to the base for forward and rearward swinging motion with respect thereto about the pivot points 20 and 22 and whereby the frame and seat carried by it are maintained in a horizontal position throughout the entire operative range.

When the apparatus is in a position of rest with its parts in the positions shown in full lines in Figure 2, the springs 13 are fully relaxed for the reason that the cables 15 and the springs are in alignment with each other between the points of anchorage 16 of the cables and the spring supporting brackets 17. When, however, the seat or frame and the supporting columns 21 are moved in either direction to any degree off the vertical, the cables 15 (extending through the longitudinal bores 12A in the blocks and movable freely within the spaces between the upper portions of the plates 8 and 9) will be drawn over the slightly rounded upper ends 23 of the adjusting blocks 12 regardless of the position of the blocks. With the blocks in the uppermost positions, the distance between the point A (see Figure 5) and point B is less and hence the pull on the spring is greater than that applied to it when the blocks are in their lower positions, since the distance is greater between points C and B than between A and B. Accordingly, the blocks 12 are set in their uppermost positions for accommodating maximum loads and gradually lowered to accommodate loads of lesser weight. For locking the blocks in any of their adjusted positions, I provide a vertical slot 24 in each outside plate 9 through which extends a bolt 25 whose head is seated or secured within the block and whose outer end is provided with a wing nut and washer for locking the block within the channels 10 and 11.

As a safety measure, I encase each spring within a flexible tubular covering 26.

The apparatus is rendered collapsible into compact form for shipping or storing by merely disengaging the ends of the cables from the ends of the springs which, of course, will allow the supporting columns 21 and the frame 18 to be moved downwardly into substantially horizontal positions within the base members 1 and 2.

The board seat 19 is suspended from the frame 18 by any approved form of flexible material such

as canvas or the like and the forward end of the seat is provided with a dividing strap 27 whose one end is secured to the underside of the frame and its opposite end to the underside of the seat. As a convenience I may provide the forward end of the frame 18 which forms a tray with any approved type of hand rail 28 mounted between two supports 29.

While I have shown a particular form of embodiment of my invention, I am aware that many minor changes therein will readily suggest themselves to others skilled in the art, without departing from the spirit and scope of the invention. Having thus described the invention, what I claim as new and desire to protect by Letters Patent is:

1. Amusement and exercising apparatus comprising a base, parallel columns pivotally attached at their lower ends to said base and extending upwardly therefrom, a frame pivotally attached to the upper ends of said columns for to and fro motion with respect to the base, a seat carried by the frame, springs attached at their upper ends to said frame and at their opposite ends to flexible elements extending into the base through lateral spaces formed therein, and means slidably mounted for vertical adjustment within the base for forming adjustable bending points for said flexible elements within said spaces intermediate the ends of the flexible elements to vary the tension on said springs.

2. Amusement and exercising apparatus comprising a base, parallel columns pivotally attached at their lower ends to said base and extending upwardly therefrom, a frame pivotally attached to the upper ends of the columns for to and fro movement with respect to the base, resilient means attached at one of their ends to said frame and at their opposite ends to flexible elements terminating within the base and bendable to either side of a vertical position, said flexible elements extending through lateral spaces formed in the base and through elements slidable vertically for vertical adjustment within the base for varying the bending points of the flexible elements to vary the tension on said springs during said to and fro movement of said frame.

THOMAS A. HALL.

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